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// SERVICE // MATERIAL PROCESSING // SURFACE PROTECTION // AUTOMOTIVE

## TIP TOP OBERFLAECHENSCHUTZ ELBE GMBH PRODUCT INFORMATION SURFACE PROTECTION

CHEMOLINE / CHEMONIT / COROFLAKE / LINING / TOPLINE  
REMACOAT / COROPUR / CHEMOKITT / ESKANOL / Asplit®





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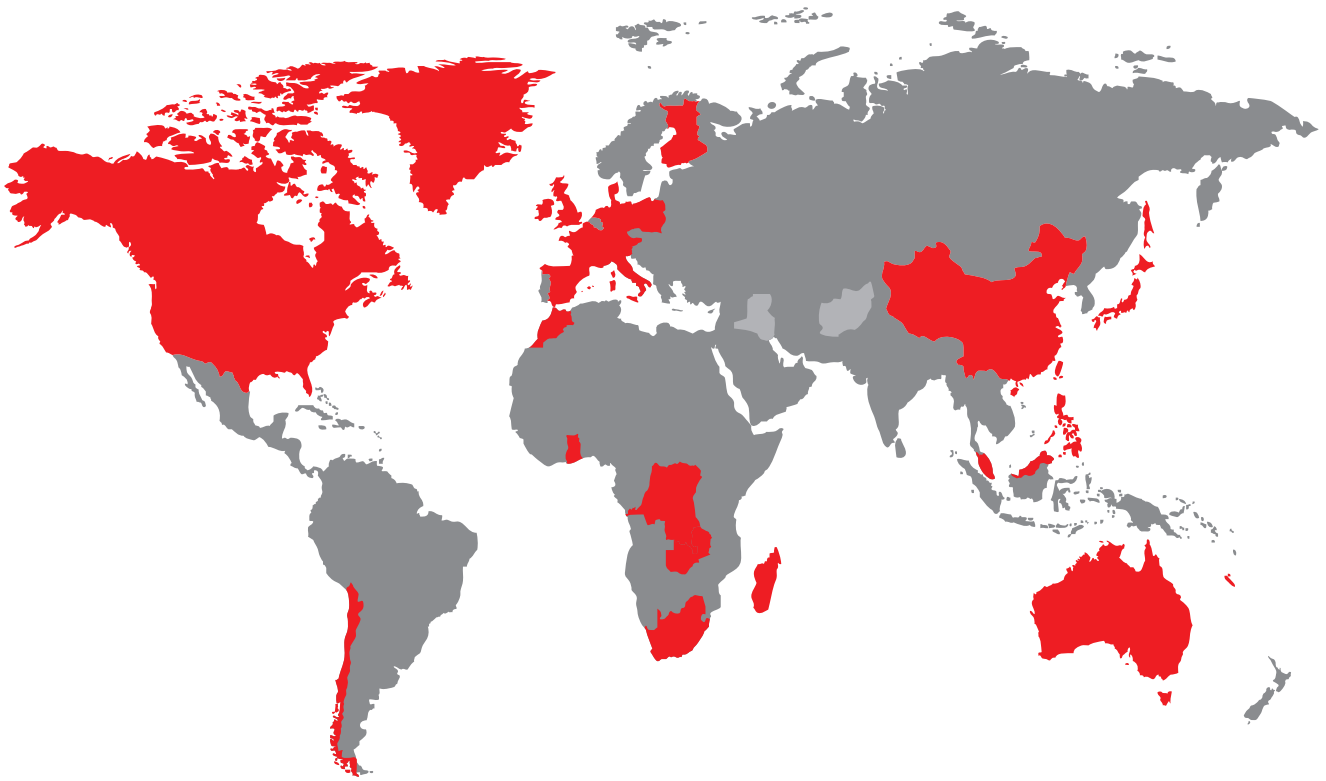
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• PRODUCT INFORMATION  
SURFACE PROTECTION

• REMA TIP TOP  
CORROSION PROTECTION SYSTEMS



■ REMA TIP TOP subsidiaries

■ REMA TIP TOP agents



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## DESCRIPTION

### BONDING SYSTEMS

Product	Product Description
<b>PRIMER HG 1 &amp; PRIMER HG 2</b>	The two-coat primer system <b>PRIMER HG 1 &amp; PRIMER HG 2</b> consists of the grey metal primer <b>PRIMER HG 1</b> and the black adhesive primer <b>PRIMER HG 2</b> .
<b>PRIMER PR 200</b>	<b>PRIMER PR 200</b> is a grey primer for pre-treatment of metal surfaces prior to soft rubber linings.
<b>PRIMER PR 304</b>	<b>PRIMER PR 304</b> is a red primer for pre-treatment of metal and concrete surfaces prior to soft rubber linings.
<b>PRIMER PR 500-1 &amp; PRIMER S 500-2</b>	The two-coat primer system <b>PRIMER PR 500-1 &amp; PRIMER S 500-2</b> consists of the grey metal primer <b>PRIMER PR 500-1</b> and the black adhesive primer <b>PRIMER S 500-2</b> .
<b>ADHESIVE CHEMO 8 SOLUTION</b>	<b>ADHESIVE CHEMO 8 SOLUTION</b> is a colourless adhesive based on Chlorosulfonated Polyethylene (CSM).
<b>ADHESIVE PARA SOLUTION</b>	<b>ADHESIVE PARA SOLUTION</b> is a beige coloured adhesive based on Natural rubber (NR).
<b>ADHESIVE REMACLAVE SOLUTION</b>	<b>ADHESIVE REMACLAVE SOLUTION</b> is a black coloured adhesive based on Natural rubber (NR).
<b>ADHESIVE SH-3A SOLUTION</b>	<b>ADHESIVE SH-3A SOLUTION</b> is a pink coloured adhesive based on Natural rubber (NR).
<b>ADHESIVE SH-3E SOLUTION</b>	<b>ADHESIVE SH-3E SOLUTION</b> is a pink coloured adhesive based on Natural rubber (NR), which is exclusively offered for overseas export (marine transport).
<b>ADHESIVE TC 5000</b>	<b>ADHESIVE TC 5000</b> is a black coloured adhesive based on Bromobutyl rubber (BIIR).
<b>ADHESIVE TC 5002</b>	<b>ADHESIVE TC 5002</b> is a black coloured adhesive based on co-polymerised Bromobutyl rubber (BIIR).
<b>ADHESIVE TC 6000</b>	<b>ADHESIVE TC 6000</b> is a yellow coloured adhesive based on Chlorosulfonated Polyethylene (CSM).
<b>CEMENT BC 3004</b>	<b>CEMENT BC 3004</b> is a blue two-component adhesive based on Chloroprene rubber (CR).
<b>CEMENT SC 4000</b>	<b>CEMENT SC 4000</b> is a two-component adhesive based on Chloroprene rubber (CR).

Information given in the fact sheet above corresponds to the current knowledge available to us regarding our products at the time of its drafting and is intended as a guideline for informational purposes. However, because of the multiple possibilities regarding possible applications, processing and on site conditions, any information given in the fact sheet above is not legally binding, in particular, without being limited to, such information shall not be interpreted as a warranty of merchantability or of fitness for a particular purpose. Customer therefore is advised to conduct its own testing or make an inquiry with our technical department before ordering. We reserve the right to change the product at any time, in particular, without being limited to, minor changes because of advancements in technology. If by way of exception, the information given in the fact sheet above is incorporated by reference into any contract concluded with us under German Law, such information, shall only be interpreted as determining the specific requirements of the contractual products as set out in § 434 BGB (German Civil Code) and shall not be interpreted as constituting a guarantee of condition.

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<b>TIP TOP Oberflächenschutz Elbe GmbH</b>	<b>BONDING SYSTEMS</b>	Revision 1.00 - 26.03.2015
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# OVERVIEW

## BONDING SYSTEMS

Product	Polymer	Colour	Solvent	Application		Primer
				Roll	Brush	
<b>PRIMER HG 1 &amp; PRIMER HG 2</b>	-	Grey & Black	MIBK / Xylene	X	X	-
<b>PRIMER PR 200</b>	-	Grey	MIBK / Xylene	X	X	-
<b>PRIMER PR 304</b>	-	Red	Xylene / MIBK / MEK	X	X	-
<b>PRIMER PR 500-1 &amp; PRIMER S 500-2</b>	-	Grey & Black	MIBK / Xylene	X	X	-
<b>ADHESIVE CHEMO 8 SOLUTION</b>	CSM	Transparent	Ethyl Acetate / Toluene / Xylene	X	-	-
<b>ADHESIVE PARA SOLUTION</b>	NR	Beige	Special Benzine 65/95	X	-	-
<b>ADHESIVE REMACLAVE SOLUTION</b>	NR	Black	Special Benzine 100/140	X	-	<b>PRIMER PR 500-1 &amp; PRIMER S 500-2</b>
<b>ADHESIVE SH-3A SOLUTION</b>	NR	Pink	Special Benzine 100/140	X	-	<b>PRIMER HG 1 &amp; PRIMER HG 2</b>
<b>ADHESIVE SH-3E SOLUTION</b>	NR	Pink	Special Benzine 140/165	X	-	<b>PRIMER HG 1 &amp; PRIMER HG 2</b>
<b>ADHESIVE TC 5000</b>	BIIR	Black	Xylene	X	X	<b>PRIMER PR 500-1 &amp; PRIMER S 500-2</b>
<b>ADHESIVE TC 5002</b>	BIIR	Black	Toluene	X	X	<b>PRIMER HG 1 &amp; PRIMER HG 2</b>
<b>ADHESIVE TC 6000</b>	CSM	Yellow	Ethyl Acetate / Toluene / Xylene	X	X	<b>PRIMER HG 1 &amp; PRIMER HG 2</b>
<b>CEMENT BC 3004</b>	CR	Blue	Cyclohexane / Ethyl Acetate	X	X	<b>PRIMER PR 304</b>
<b>CEMENT SC 4000</b>	CR	Various	Cyclohexane / Ethyl Acetate	X	X	<b>PRIMER PR 200</b>

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# PRODUCT INFORMATION

## PRIMER HG 1 & PRIMER HG 2

### PRODUCT DESCRIPTION

The two-coat primer system **PRIMER HG 1 & PRIMER HG 2** consists of the grey metal primer **PRIMER HG 1** and the black adhesive primer **PRIMER HG 2**.

### ADHESIVE SYSTEM

Hard rubber linings are bonded onto steel substrates, in combination with **ADHESIVE SH-3A SOLUTION**.

**CHEMOLINE 8** is bonded onto steel substrates in combination with **ADHESIVE TC 6000** and **CHEMOLINE RT** in combination with **ADHESIVE TC 5002**.

### FIELDS OF APPLICATION

**PRIMER HG 1 & PRIMER HG 2** is used for the bonding of hard and soft rubber linings onto steel substrates.

**PRIMER HG 1 & PRIMER HG 2** can alternatively be used for the **PRIMER PR 500-1 & PRIMER S 500-2** in combination with **ADHESIVE TC 5000** or **ADHESIVE REMACLAVE SOLUTION**.

### FEATURES

- Good workability
- High productivity
- Excellent adhesion of rubber to metal
- Good resistance to temperature changes
- High thermal stability

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of non-ferrous metals, cast iron, ferrite or austenitic steel. Components to be rubber lined shall be designed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

Surfaces to be rubber lined must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 50 microns (soft rubber linings) and Rz ≥ 60 microns (hard rubber linings) is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate or the component must be air conditioned.

### ENVIRONMENTAL CONDITIONS

Throughout the rubber lining process, the temperatures of the substrate and rubber lining materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### APPLICATION

During the application of the product, the application instruction must always be observed.

**PRIMER HG 1 & PRIMER HG 2** must be mixed thoroughly prior to use. During primer application **PRIMER HG 1 & PRIMER HG 2** must be covering the surfaces to be rubber lined. If **PRIMER HG 1** is applied by airless spray, **PRIMER HG 1** must be diluted with MEK or MIBK in a mixing ratio of 1:0.4 - 1:0.6.

### APPLICATION METHOD UND CONSUMPTION

Coat	Product	Application Method	Coverage [g/m²]
1. Coat steel	<b>PRIMER HG 1</b>	Brush / Roll / Spray	ca. 150
2. Coat steel	<b>PRIMER HG 2</b>	Brush	ca. 150

### CONTACT LIFE (OPEN TIME)

Coat	Minimal	Maximal
1. Coat steel with <b>PRIMER HG 1</b>	ca. 1 h	ca. 14 Days
2. Coat steel with <b>PRIMER HG 2</b>	ca. 1 h	ca. 7 Days

Note: The Contact Life depends on the ambient temperature.

### CLEANING

Clean all equipment with **SOLVENT CF-CE** immediately after use.

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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## PRIMER HG 1 & PRIMER HG 2

### PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
PRIMER HG 1	0.75 kg	525 2949
PRIMER HG 1	4.5 kg	525 3050
PRIMER HG 1	9 kg	525 2956
PRIMER HG 2	0.75 kg	525 2970
PRIMER HG 2	9 kg	525 2987
SOLVENT CF-CE	10 l	595 9163

### STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
PRIMER HG 1	5 - 20°C	12 Months
PRIMER HG 2	5 - 20°C	12 Months
SOLVENT CF-CE	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Information given in the fact sheet above corresponds to the current knowledge available to us regarding our products at the time of its drafting and is intended as a guideline for informational purposes. However, because of the multiple possibilities regarding possible applications, processing and on site conditions, any information given in the fact sheet above is not legally binding, in particular, without being limited to, such information shall not be interpreted as a warranty of merchantability or of fitness for a particular purpose. Customer therefore is advised to conduct its own testing or make an inquiry with our technical department before ordering. We reserve the right to change the product at any time, in particular, without being limited to, minor changes because of advancements in technology. If by way of exception, the information given in the fact sheet above is incorporated by reference into any contract concluded with us under German Law, such information, shall only be interpreted as determining the specific requirements of the contractual products as set out in § 434 BGB (German Civil Code) and shall not be interpreted as constituting a guarantee of condition.

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# PRODUCT INFORMATION

## PRIMER PR 200

### PRODUCT DESCRIPTION

**PRIMER PR 200** is a grey primer for pre-treatment of metal surfaces prior to soft rubber linings.

### ADHESIVE SYSTEM

Soft rubber linings are bonded onto steel substrates in combination with **CEMENT SC 4000**.

Alternatively, **PRIMER PR 304** can replace **PRIMER PR 200** and can be used in combination with **CEMENT SC 4000**.

### FIELDS OF APPLICATION

**PRIMER PR 200** is used in combination with **CEMENT SC 4000** for the bonding of soft rubber linings onto steel substrates. **PRIMER PR 200** can alternatively be used for the **PRIMER PR 304** in combination with **CEMENT BC 3004** on steel substrates.

### FEATURES

- Good workability
- High productivity
- Excellent adhesion of rubber to metal

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of non-ferrous metals, cast iron, ferrite or austenitic steel. Components to be rubber lined shall be designed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

Surfaces to be rubber lined must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 50 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate or the component must be air conditioned.

### ENVIRONMENTAL CONDITIONS

Throughout the rubber lining process, the temperatures of the substrate and rubber lining materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### APPLICATION

During the application of the product, the application instruction must always be observed.

**PRIMER PR 200** has to be mixed thoroughly prior to use. During primer application **PRIMER PR 200** must be covering the surfaces to be rubber lined.

### APPLICATION METHOD UND CONSUMPTION

Coat	Product	Application Method	Coverage [g/m²]
1. Coat steel	<b>PRIMER PR 200</b>	Brush / Roll	ca. 100

### CONTACT LIFE (OPEN TIME)

Coat	Minimal	Maximal
1. Coat steel with <b>PRIMER PR 200</b>	ca. 2 h	ca. 7 Days

Note: The Contact Life depends on the ambient temperature.

### CLEANING

Clean all equipment with **SOLVENT CF-CE** immediately after use.

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# PRIMER PR 200

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
PRIMER PR 200	0.75 kg	525 2406
PRIMER PR 200	9 kg	525 2451
SOLVENT CF-CE	10 l	595 9163

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
PRIMER PR 200	5 - 25°C	12 Months
SOLVENT CF-CE	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

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# PRODUCT INFORMATION

## PRIMER PR 304

### PRODUCT DESCRIPTION

**PRIMER PR 304** is a red primer for pre-treatment of metal and concrete surfaces prior to soft rubber linings.

### ADHESIVE SYSTEM

Soft rubber linings are bonded onto steel or concrete substrates in combination with **CEMENT BC 3004**. Alternatively, **PRIMER PR 200** or **PRIMER HG 1** can replace **PRIMER PR 304** and can be used in combination with **CEMENT BC 3004**.

### FIELDS OF APPLICATION

**PRIMER PR 304** is used in combination with **CEMENT BC 3004** for the bonding of the soft rubber linings: **CHEMOLINE 3**, **CHEMOLINE 3 CN**, **CHEMOLINE 3 F CN**, **CHEMOLINE 4 CN**, **CHEMOLINE 8 CN**, **CHEMOLINE 10**, **CHEMOLINE 10 M**, **CHEMOLINE 12 CN**, **CHEMOLINE 18 CN**, **CHEMOLINE 55 CN**, **CHEMOLINE 70 CN** and **CHEMOLINE RT CN** onto metal or concrete surfaces. **PRIMER PR 304** can alternatively be used for the **PRIMER PR 200** in combination with **CEMENT SC 4000**.

### FEATURES

- Good resistance against atmospheric attacks (ozone, humidity)
- Good workability
- High productivity
- Excellent adhesion of rubber to metal

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of non-ferrous metals, cast iron, ferrite or austenitic steel, concrete, screed or plaster. Components to be rubber lined shall be designed and manufactured in accordance with EN 14879-1. For components made of concrete, screed or plaster DIN 1045 must also be observed.

### SURFACE PRE-TREATMENT

#### C-STEEL

Surfaces to be rubber lined must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 50 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate or the component must be air conditioned.

### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup> and minimum compressive strength of 25 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%. Generally the concrete surface must be smoothed prior to rubber lining application by applying an Epoxy resin based mortar coat. This coat should be conductive to enable a subsequent spark test (**REMAFIX C**).

### ENVIRONMENTAL CONDITIONS

Throughout the rubber lining process, the temperatures of the substrate and rubber lining materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### APPLICATION

During the application of the product, the application instruction must always be observed.

**PRIMER PR 304** has to be mixed thoroughly prior to use. During primer application **PRIMER PR 304** must be covering the surfaces to be rubber lined.

If **PRIMER PR 304** is applied by airless spray, **PRIMER PR 304** must be diluted with **SOLVENT CF-CE** in a mixing ratio of 1:1.

### APPLICATION METHOD UND CONSUMPTION

Coat	Product	Application Method	Coverage [g/m <sup>2</sup> ]
1. Coat steel	<b>PRIMER PR 304</b>	Brush / Roll / Spray	ca. 200

### CONTACT LIFE (OPEN TIME)

Coat	Minimal	Maximal
1. Coat steel with <b>PRIMER PR 304</b>	ca. 2 h	ca. 7 Days

**Note:** The Contact Life depends on the ambient temperature.

### CLEANING

Clean all equipment with **SOLVENT CF-CE** immediately after use.

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# PRIMER PR 304

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
PRIMER PR 304	0.75 kg	525 4112
PRIMER PR 304	10 kg	525 4150
SOLVENT CF-CE	10 l	595 9163

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
PRIMER PR 304	5 - 25°C	12 Months
SOLVENT CF-CE	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

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# PRODUCT INFORMATION

## PRIMER PR 500-1 & PRIMER S 500-2

### PRODUCT DESCRIPTION

The two-coat primer system **PRIMER PR 500-1 & PRIMER S 500-2** consists of the grey metal primer **PRIMER PR 500-1** and the black adhesive primer **PRIMER S 500-2**.

### ADHESIVE SYSTEM

The soft rubber linings **CHEMOLINE 4 A**, **CHEMOLINE 4 B**, **CHEMOLINE 5 B** and **CHEMOLINE 13** are bonded onto steel substrates in combination with **ADHESIVE TC 5000**.

**CHEMOLINE 55** is bonded onto steel substrates in combination with **ADHESIVE REMACLAVE SOLUTION**.

Alternatively, the two-coat priming system **PRIMER HG 1 & PRIMER HG 2** can replace **PRIMER PR 500-1 & PRIMER S 500-2** and can be used in combination with **ADHESIVE TC 5000** as well as with **ADHESIVE REMACLAVE SOLUTION**.

### FIELDS OF APPLICATION

**PRIMER PR 500-1 & PRIMER S 500-2** is used in combination with **ADHESIVE TC 5000** or **ADHESIVE REMACLAVE SOLUTION** for the bonding soft rubber linings onto steel substrates.

### FEATURES

- Good workability
- High productivity
- Excellent adhesion of rubber to metal
- Good resistance to temperature changes
- High thermal stability

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of non-ferrous metals, cast iron, ferrite or austenitic steel. Components to be rubber lined shall be designed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

Surfaces to be rubber lined must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 50 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate or the component must be air conditioned.

### ENVIRONMENTAL CONDITIONS

Throughout the rubber lining process, the temperatures of the substrate and rubber lining materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### APPLICATION

During the application of the product, the application instruction must always be observed.

**PRIMER PR 500-1 & PRIMER S 500-2** must be mixed thoroughly prior to use. During primer application **PRIMER PR 500-1 & PRIMER S 500-2** must be covering the surfaces to be rubber lined. If **PRIMER PR 500-1** is applied by airless spray, **PRIMER PR 500-1** must be diluted with MEK or Toluene in a mixing ratio of 1:0.3 - 1:0.5.

### APPLICATION METHOD UND CONSUMPTION

Coat	Product	Application Method	Coverage [g/m²]
1. Coat steel	<b>PRIMER PR 500-1</b>	Brush / Roll / Spray	ca. 150
2. Coat steel	<b>PRIMER S 500-2</b>	Brush	ca. 120

### CONTACT LIFE (OPEN TIME)

Coat	Minimal	Maximal
1. Coat steel with <b>PRIMER PR 500-1</b>	ca. 2 h	ca. 14 Days
2. Coat steel with <b>PRIMER S 500-2</b>	ca. 2 h	ca. 7 Days

Note: The Contact Life depends on the ambient temperature.

### CLEANING

Clean all equipment with **SOLVENT CF-CE** immediately after use.

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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## PRIMER PR 500-1 & PRIMER S 500-2

### PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
PRIMER PR 500-1	0.75 kg	525 2303
PRIMER PR 500-1	9 kg	525 2327
PRIMER PR 500-1	4.5 kg	525 2470
PRIMER PR 500-1	25 kg	525 2334
PRIMER S 500-2	0.75 kg	525 2310
PRIMER S 500-2	9 kg	525 2341
PRIMER S 500-2	25 kg	525 2358
SOLVENT CF-CE	10 l	595 9163

### STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
PRIMER PR 500-1	5 - 20°C	12 Months
PRIMER S 500-2	5 - 20°C	12 Months
SOLVENT CF-CE	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

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# ADHESIVE CHEMO 8 SOLUTION

## PRODUCT DESCRIPTION

**ADHESIVE CHEMO 8 SOLUTION** is a colourless adhesive based on Chlorosulfonated Polyethylene (CSM).

## FIELDS OF APPLICATION

**ADHESIVE CHEMO 8 SOLUTION** is used exclusively for application onto seams of the uncured soft rubber lining **CHEMOLINE 8**.

## FEATURES

- High tack
- Good workability
- High adhesive strength
- Good chemical resistance

## CHEMICAL RESISTANCE

Information on the chemical request is available on request.

## SUBSTRATE

Substrates are components made of non-ferrous metals, cast iron, ferrite or austenitic steel. Components to be rubber lined shall be designed and manufactured in accordance with EN 14879-1.

## SURFACE PRE-TREATMENT

Surfaces to be rubber lined must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 50 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate or the component must be air conditioned.

## ENVIRONMENTAL CONDITIONS

Throughout the rubber lining process, the temperatures of the substrate and rubber lining materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

## APPLICATION

During the application of the product, the application instruction must always be observed.

**ADHESIVE CHEMO 8 SOLUTION** has to be stirred thoroughly prior to use.

## APPLICATION METHOD UND CONSUMPTION

Coat	Product	Application Method	Coverage [g/m <sup>2</sup> ]
1. Coat rubber	<b>ADHESIVE CHEMO 8 SOLUTION</b>	Brush	ca. 150

## CONTACT LIFE (OPEN TIME)

Coat	Minimal	Maximal
1. Coat rubber	ca. 15 min	ca. 60 min

**Note:** The Contact Life depends on the ambient temperature.

## CLEANING

Clean all equipment with **SOLVENT CF-CE** immediately after use.

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
<b>ADHESIVE CHEMO 8 SOLUTION</b>	4.5 kg	525 4190
<b>ADHESIVE CHEMO 8 SOLUTION</b>	9 kg	525 4167
<b>SOLVENT CF-CE</b>	10 l	595 9163

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
<b>ADHESIVE CHEMO 8 SOLUTION</b>	≤ +20°C	12 Months
<b>SOLVENT CF-CE</b>	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

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# PRODUCT INFORMATION

## ADHESIVE PARA SOLUTION

### PRODUCT DESCRIPTION

**ADHESIVE PARA SOLUTION** is a beige coloured adhesive based on Natural rubber (NR).

### ADHESIVE SYSTEM

The two-coat primer system **PRIMER HG 1 & PRIMER HG 2** must be applied onto steel surfaces prior to adhesive in case of vulcanisation with steam or hot water. **ADHESIVE SH-3A SOLUTION** must be applied onto the primed steel surface. **ADHESIVE PARA SOLUTION** is used for brushing the rubber sheet.

### FIELDS OF APPLICATION

**ADHESIVE PARA SOLUTION** is used in combination with **ADHESIVE SH-3A SOLUTION** for the bonding of the hard rubber linings:

**CHEMONIT 3 B, CHEMONIT 18HT, CHEMONIT 31, CHEMONIT 33, CHEMONIT 35, CHEMONIT 20 KTW** and **CHEMONIT 181** onto the steel surfaces.

### FEATURES

- No addition of hardener, therefore longer pot life
- Very long open time (wet / contact life)
- High tack
- Good workability
- High productivity
- High adhesion strength
- Good thermal stability

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of non-ferrous metals, cast iron or ferrite steel. Components to be rubber lined shall be designed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

Surfaces to be rubber lined must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 60 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate or the component must be air conditioned.

### ENVIRONMENTAL CONDITIONS

Throughout the rubber lining process, the temperatures of the substrate and rubber lining materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### APPLICATION

During the application of the product, the application instruction must always be observed.

**ADHESIVE PARA SOLUTION** has to be stirred thoroughly prior to use.

### APPLICATION METHOD UND CONSUMPTION

Coat	Product	Application Method	Coverage [g/m <sup>2</sup> ]
1. Coat rubber	<b>ADHESIVE PARA SOLUTION</b>	Brush	ca. 150

### CONTACT LIFE (OPEN TIME)

Coat	Minimal	Maximal
1. Coat rubber	ca. 10 min	ca. 2 h

**Note:** The Contact Life depends on the ambient temperature.

### CLEANING

Clean all equipment with **SOLVENT CF-CE** immediately after use.

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# ADHESIVE PARA SOLUTION

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
ADHESIVE PARA SOLUTION	6 kg	538 1504
ADHESIVE PARA SOLUTION	9 kg	538 1460
SOLVENT CF-CE	10 l	595 9163

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
ADHESIVE PARA SOLUTION	≤ +20°C	12 Months
SOLVENT CF-CE	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

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# PRODUCT INFORMATION

## ADHESIVE REMACLAVE SOLUTION

### PRODUCT DESCRIPTION

**ADHESIVE REMACLAVE SOLUTION** is a black coloured adhesive based on Natural rubber (NR).

### ADHESIVE SYSTEM

The application of **ADHESIVE REMACLAVE SOLUTION** onto the steel surfaces is carried out in combination with the two-coat primer system **PRIMER PR 500-1 & PRIMER S 500-2**. Alternatively, **PRIMER PR 500-1 & PRIMER S 500-2** can be replaced by the two-coat primer system **PRIMER HG 1 & PRIMER HG 2** in combination with **ADHESIVE REMACLAVE SOLUTION**.

### FIELDS OF APPLICATION

**ADHESIVE REMACLAVE SOLUTION** has been specially designed for the bonding of the soft rubber lining **CHEMOLINE 55** onto the steel substrates.

### FEATURES

- High tack
- Good workability
- High adhesive strength

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of non-ferrous metals, cast iron, ferrite or austenitic steel. Components to be rubber lined shall be designed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

Surfaces to be rubber lined must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 50 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate or the component must be air conditioned.

### ENVIRONMENTAL CONDITIONS

Throughout the rubber lining process, the temperatures of the substrate and rubber lining materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### APPLICATION

During the application of the product, the application instruction must always be observed.

**ADHESIVE REMACLAVE SOLUTION** has to be stirred thoroughly prior to use.

### APPLICATION METHOD UND CONSUMPTION

Coat	Product	Application Method	Coverage [g/m <sup>2</sup> ]
1. Coat steel	<b>ADHESIVE REMACLAVE SOLUTION</b>	Brush	ca. 100
2. Coat steel	<b>ADHESIVE REMACLAVE SOLUTION</b>	Brush	ca. 100
1. Coat rubber	<b>ADHESIVE REMACLAVE SOLUTION</b>	Brush	ca. 100

### CONTACT LIFE (OPEN TIME)

Coat	Minimal	Maximal
1. Coat steel	ca. 1 h	ca. 24h
2. Coat steel	ca. 20 min	ca. 60 min
1. Coat rubber	ca. 20 min	ca. 60 min

**Note:** The Contact Life depends on the ambient temperature.

### CLEANING

Clean all equipment with **SOLVENT CF-CE** immediately after use.

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# ADHESIVE REMACLAVE SOLUTION

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
ADHESIVE REMACLAVE SOLUTION	3.5 kg	538 1610
ADHESIVE REMACLAVE SOLUTION	7 kg	538 1620
ADHESIVE REMACLAVE SOLUTION	21 kg	538 1630
SOLVENT CF-CE	10 l	595 9163

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
ADHESIVE REMACLAVE SOLUTION	5 - 20°C	12 Months
SOLVENT CF-CE	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

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# PRODUCT INFORMATION

## ADHESIVE SH-3A SOLUTION

### PRODUCT DESCRIPTION

**ADHESIVE SH-3A SOLUTION** is a pink coloured adhesive based on Natural rubber (NR).

### ADHESIVE SYSTEM

The two-coat primer system **PRIMER HG 1 & PRIMER HG 2** must be applied onto steel surfaces prior to adhesive in case of vulcanisation with steam or hot water. **ADHESIVE SH-3A SOLUTION** must be applied onto the primed steel surface. **ADHESIVE PARA SOLUTION** is used for brushing the rubber sheet.

### FIELDS OF APPLICATION

**ADHESIVE SH-3A SOLUTION** is used in combination with **ADHESIVE PARA SOLUTION** for the bonding of the hard rubber linings:

**CHEMONIT 3 B, CHEMONIT 18HT, CHEMONIT 31, CHEMONIT 33, CHEMONIT 35, CHEMONIT 20 KTW** and **CHEMONIT 181** onto steel surfaces.

### FEATURES

- Very long open time (wet / contact life)
- High tack
- Good workability
- High productivity
- High adhesion strength
- Good thermal stability (max. +120°C)

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of non-ferrous metals, cast iron or ferrite steel. Components to be rubber lined shall be designed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

Surfaces to be rubber lined must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 60 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate or the component must be air conditioned.

### ENVIRONMENTAL CONDITIONS

Throughout the rubber lining process, the temperatures of the substrate and rubber lining materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### APPLICATION

During the application of the product, the application instruction must always be observed.

**ADHESIVE SH-3A SOLUTION** has to be stirred thoroughly prior to use.

### APPLICATION METHOD UND CONSUMPTION

Coat	Product	Application Method	Coverage [g/m²]
1. Coat steel	<b>ADHESIVE SH-3A SOLUTION</b>	Brush	ca. 200 - 250
2. Coat steel	<b>ADHESIVE SH-3A SOLUTION</b>	Brush	ca. 200 - 250

### CONTACT LIFE (OPEN TIME)

Coat	Minimal	Maximal
1. Coat steel	ca. 3 h	ca. 14 Days
2. Coat steel	ca. 6 h	ca. 7 Days

**Note:** The Contact Life depends on the ambient temperature.

### CLEANING

Clean all equipment with **SOLVENT CF-CE** immediately after use.

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# ADHESIVE SH-3A SOLUTION

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
ADHESIVE SH-3A SOLUTION	4 kg	538 1410
ADHESIVE SH-3A SOLUTION	8 kg	538 1511
ADHESIVE SH-3A SOLUTION	21 kg	538 1430
SOLVENT CF-CE	10 l	595 9163

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
ADHESIVE SH-3A SOLUTION	5 - 20°C	12 Months
SOLVENT CF-CE	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

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# PRODUCT INFORMATION

## ADHESIVE SH-3E SOLUTION

### PRODUCT DESCRIPTION

**ADHESIVE SH-3E SOLUTION** is a pink coloured adhesive based on Natural rubber (NR), which is exclusively offered for overseas export (marine transport).

### ADHESIVE SYSTEM

The two-coat primer system **PRIMER HG 1 & PRIMER HG 2** must be applied onto steel surfaces prior to adhesive in case of vulcanisation with steam or hot water. **ADHESIVE SH-3E SOLUTION** must be applied onto the primed steel surface. **ADHESIVE PARA SOLUTION** is used for brushing the rubber sheet.

### FIELDS OF APPLICATION

**ADHESIVE SH-3E SOLUTION** is used in combination with **ADHESIVE PARA SOLUTION** for the bonding of the hard rubber linings:

**CHEMONIT 3 B, CHEMONIT 18HT, CHEMONIT 31, CHEMONIT 33, CHEMONIT 35, CHEMONIT 20 KTW** and **CHEMONIT 181** onto steel surfaces.

### FEATURES

- Very long open time (wet / contact life)
- High tack
- Good workability
- High productivity
- High adhesion strength
- Good thermal stability (max. +120°C)

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of non-ferrous metals, cast iron or ferrite steel. Components to be rubber lined shall be designed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

Surfaces to be rubber lined must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 60 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate or the component must be air conditioned.

### ENVIRONMENTAL CONDITIONS

Throughout the rubber lining process, the temperatures of the substrate and rubber lining materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### APPLICATION

During the application of the product, the application instruction must always be observed.

**ADHESIVE SH-3E SOLUTION** has to be stirred thoroughly prior to use.

### APPLICATION METHOD UND CONSUMPTION

Coat	Product	Application Method	Coverage [g/m²]
1. Coat steel	<b>ADHESIVE SH-3E SOLUTION</b>	Brush	ca. 200 - 250
2. Coat steel	<b>ADHESIVE SH-3E SOLUTION</b>	Brush	ca. 200 - 250

### CONTACT LIFE (OPEN TIME)

Coat	Minimal	Maximal
1. Coat steel	ca. 3 h	ca. 14 Days
2. Coat steel	ca. 6 h	ca. 7 Days

Note: The Contact Life depends on the ambient temperature.

### CLEANING

Clean all equipment with **SOLVENT CF-CE** immediately after use.

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# ADHESIVE SH-3E SOLUTION

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
ADHESIVE SH-3E SOLUTION	8 kg	538 1513
SOLVENT CF-CE	10 l	595 9163

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
ADHESIVE SH-3E SOLUTION	5 - 20°C	12 Months
SOLVENT CF-CE	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

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# PRODUCT INFORMATION

## ADHESIVE TC 5000

### PRODUCT DESCRIPTION

**ADHESIVE TC 5000** is a black coloured adhesive based on Bromobutyl rubber (BIIR).

### ADHESIVE SYSTEM

The application of **ADHESIVE TC 5000** onto steel surfaces is carried out in combination with the two-coat primer system **PRIMER PR 500-1** & **PRIMER S 500-2**. Alternatively, **PRIMER PR 500-1** & **PRIMER S 500-2** can be replaced with the two-coat primer system **PRIMER HG 1** & **PRIMER HG 2** in combination with **ADHESIVE TC 5000**.

### FIELDS OF APPLICATION

**ADHESIVE TC 5000** has been specially designed for use on construction sites and in workshops where larger components or surfaces need to be lined with uncured soft rubber linings based on Bromobutyl (BIIR) such as **CHEMOLINE 4 A**, **CHEMOLINE 4 B**, **CHEMOLINE 5 B** and **CHEMOLINE 13**.

### FEATURES

- Extended pot life
- Very long open time (wet / contact life)
- High tack
- Good workability
- High adhesion strength
- Good thermal stability (max. +110°C)
- Good chemical resistance

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of non-ferrous metals, cast iron, ferrite or austenitic steel. Components to be rubber lined shall be designed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

Surfaces to be rubber lined must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 50 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate or the component must be air conditioned.

### ENVIRONMENTAL CONDITIONS

Throughout the rubber lining process, the temperatures of the substrate and rubber lining materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### APPLICATION

During the application of the product, the application instruction must always be observed.

**ADHESIVE TC 5000** has to be stirred thoroughly prior to use.

### APPLICATION METHOD UND CONSUMPTION

Coat	Product	Application Method	Coverage [g/m <sup>2</sup> ]
1. Coat steel	<b>ADHESIVE TC 5000</b>	Roll	ca. 200
2. Coat steel	<b>ADHESIVE TC 5000</b>	Brush	ca. 200
1. Coat rubber	<b>ADHESIVE TC 5000</b>	Brush	ca. 200

### CONTACT LIFE (OPEN TIME)

Coat	Minimal	Maximal
1. Coat steel	ca. 4 h	ca. 14 Days
2. Coat steel	ca. 1 h	ca. 4 h
1. Coat rubber	ca. 60 min	ca. 2 h

Note: The Contact Life depends on the ambient temperature.

### CLEANING

Clean all equipment with **SOLVENT CF-CE** immediately after use.

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# ADHESIVE TC 5000

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
ADHESIVE TC 5000	9 kg	525 2286
ADHESIVE TC 5000	25 kg	525 2224
SOLVENT CF-CE	10 l	595 9163

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
ADHESIVE TC 5000	5 - 20°C	12 Months
SOLVENT CF-CE	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

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# PRODUCT INFORMATION

## ADHESIVE TC 5002

### PRODUCT DESCRIPTION

**ADHESIVE TC 5002** is a black coloured adhesive based on co-polymerised Bromobutyl rubber (BIIR).

### ADHESIVE SYSTEM

The application of **ADHESIVE TC 5002** onto steel surfaces is carried out in combination with the two-coat primer system **PRIMER HG 1 & PRIMER HG 2**.

### FIELDS OF APPLICATION

**ADHESIVE TC 5002** has been specially designed for the use of high temperature and strong chemical resistant soft rubber lining **CHEMOLINE RT**.

### FEATURES

- Extended pot life
- Very long open time (wet / contact life)
- High tack
- Good workability
- High adhesion strength
- Good thermal stability (max. +120°C)
- Good chemical resistance

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of non-ferrous metals, cast iron, ferrite or austenitic steel. Components to be rubber lined shall be designed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

Surfaces to be rubber lined must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 50 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate or the component must be air conditioned.

### ENVIRONMENTAL CONDITIONS

Throughout the rubber lining process, the temperatures of the substrate and rubber lining materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### APPLICATION

During the application of the product, the application instruction must always be observed.

**ADHESIVE TC 5002** has thixotropic properties and must be stirred thoroughly prior to use. (min. 5 minutes).

### APPLICATION METHOD UND CONSUMPTION

Coat	Product	Application Method	Coverage [g/m²]
1. Coat steel	<b>ADHESIVE TC 5002</b>	Roll	ca. 200
2. Coat steel	<b>ADHESIVE TC 5002</b>	Brush	ca. 200
1. Coat rubber	<b>ADHESIVE TC 5002</b>	Brush	ca. 200

### CONTACT LIFE (OPEN TIME)

Coat	Minimal	Maximal
1. Coat steel	ca. 2 h	ca. 7 Days
2. Coat steel	ca. 2 h	ca. 8 h
1. Coat rubber	ca. 90 min	ca. 2 h

**Note:** The Contact Life depends on the ambient temperature.

### CLEANING

Clean all equipment with **SOLVENT CF-CE** immediately after use.

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# ADHESIVE TC 5002

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
ADHESIVE TC 5002	9 kg	525 2810
ADHESIVE TC 5002	23 kg	525 2790
SOLVENT CF-CE	10 l	595 9163

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
ADHESIVE TC 5002	5 - 25°C	6 Months
SOLVENT CF-CE	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

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# PRODUCT INFORMATION

## ADHESIVE TC 6000

### PRODUCT DESCRIPTION

**ADHESIVE TC 6000** is a yellow coloured adhesive based on Chlorosulfonated Polyethylene (CSM).

### ADHESIVE SYSTEM

The application of **ADHESIVE TC 6000** onto steel surfaces is carried out in combination with the two-coat priming system **PRIMER HG 1 & PRIMER HG 2**.

### FIELDS OF APPLICATION

**ADHESIVE TC 6000** has been specially designed for the bonding of the strong chemical resistant soft rubber lining **CHEMOLINE 8** onto steel substrates.

### FEATURES

- Extended pot life
- High tack
- Good workability
- High adhesion strength
- Good thermal stability (max. +80°C)
- Good chemical resistance

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of non-ferrous metals, cast iron, ferrite or austenitic steel. Components to be rubber lined shall be designed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

Surfaces to be rubber lined must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 50 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate or the component must be air conditioned.

### ENVIRONMENTAL CONDITIONS

Throughout the rubber lining process, the temperatures of the substrate and rubber lining materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### APPLICATION

During the application of the product, the application instruction must always be observed.

**ADHESIVE TC 6000** has to be stirred thoroughly prior to use.

### APPLICATION METHOD UND CONSUMPTION

Coat	Product	Application Method	Coverage [g/m <sup>2</sup> ]
1. Coat steel	<b>ADHESIVE TC 6000</b>	Roll	ca. 200
2. Coat steel	<b>ADHESIVE TC 6000</b>	Brush	ca. 200
1. Coat rubber	<b>ADHESIVE TC 6000</b>	Brush	ca. 200

### CONTACT LIFE (OPEN TIME)

Coat	Minimal	Maximal
1. Coat steel	ca. 2 h	ca. 48 h
2. Coat steel	ca. 20 min	ca. 30 min
1. Coat rubber	ca. 20 min	ca. 30 min

**Note:** The Contact Life depends on the ambient temperature.

### CLEANING

Clean all equipment with **SOLVENT CF-CE** immediately after use.

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# ADHESIVE TC 6000

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
ADHESIVE TC 6000	9 kg	525 2200
SOLVENT CF-CE	10 l	595 9163

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
ADHESIVE TC 6000	5 - 25°C	3 Months
SOLVENT CF-CE	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

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# PRODUCT INFORMATION

## CEMENT BC 3004

### PRODUCT DESCRIPTION

**CEMENT BC 3004** is a blue two-component adhesive based on Chloroprene rubber (CR).

### ADHESIVE SYSTEM

The application of **CEMENT BC 3004** onto steel or concrete surfaces is carried out in combination with **PRIMER PR 304**. Alternatively, **PRIMER PR 304** can be replaced by **PRIMER PR 200** or **PRIMER PR 500-1** in combination with **CEMENT BC 3004** onto steel substrates.

### FIELDS OF APPLICATION

**CEMENT BC 3004** has been specially designed for rubber lining of larger components or surfaces on construction sites and in workshops, where a long contact bonding time is required.

**CEMENT BC 3004** is mainly used to bond the TIP TOP soft rubber linings:

**CHEMOLINE 3, CHEMOLINE 3 CN, CHEMOLINE 3 F CN, CHEMOLINE 4 CN, CHEMOLINE 8 CN, CHEMOLINE 10, CHEMOLINE 10 M, CHEMOLINE 12 CN, CHEMOLINE 18 CN, CHEMOLINE 55 CN, CHEMOLINE 70 CN and CHEMOLINE RT CN.**

**CEMENT BC 3004** is particularly applicable for rubber to rubber, rubber to metal and rubber to concrete bonds.

### FEATURES

- Extended pot life
- Very long open time (wet / contact life)
- High tack
- Good workability
- High adhesion strength and high dynamic load ability of the bonding

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of non-ferrous metals, cast iron, ferrite or austenitic steel, concrete, screed or plaster. Components to be rubber lined shall be designed and manufactured in accordance with EN 14879-1. For components made of concrete, screed or plaster DIN 1045 must also be observed.

### SURFACE PRE-TREATMENT

#### C-STEEL

Surfaces to be rubber lined must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 50 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate or the component must be air conditioned.

### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup> and minimum compressive strength of 25 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%. Generally the concrete surface must be smoothed prior to rubber lining application by applying an Epoxy resin based mortar coat. This coat should be conductive to enable a subsequent spark test (**REMAFIX C**).

### ENVIRONMENTAL CONDITIONS

Throughout the rubber lining process, the temperatures of the substrate and rubber lining materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### APPLICATION

During the application of the product, the application instruction must always be observed.

**CEMENT BC 3004** must be mixed with 4 % **HARDENER E 40** intensively until a uniform mixture is achieved. The pot life of the adhesive-hardener mixture is max. 4 hours @ 20°C.

### APPLICATION METHOD UND CONSUMPTION

Coat	Product	Application Method	Coverage [g/m <sup>2</sup> ]
1. Coat steel (roughened rubber sheet)	<b>CEMENT BC 3004</b>	Roll	ca. 200 (300)
2. Coat steel (roughened rubber sheet)	<b>CEMENT BC 3004</b>	Brush	ca. 200 (300)
1. Coat on unvulcanised rubber or CN-bonding layer	<b>CEMENT BC 3004</b>	Brush	ca. 200

### CONTACT LIFE (OPEN TIME)

Coat	Minimal	Maximal
1. Coat steel	ca. 2 h	ca. 7 Days
2. Coat steel	ca. 30 min	ca. 2 h
1. Coat rubber	ca. 30 min	ca. 60 min

**Note:** The Contact Life depends on the ambient temperature.

### CLEANING

Clean all equipment with **SOLVENT CF-CE** immediately after use.

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# CEMENT BC 3004

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
CEMENT BC 3004	4.5 kg	525 4095
CEMENT BC 3004	9 kg	525 4143
CEMENT BC 3004	18 kg	525 4130
CEMENT BC 3004	190 kg	525 4105
HARDENER E 40	30 g	525 1067
SOLVENT CF-CE	10 l	595 9163

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
CEMENT BC 3004	5 - 25°C	24 Months
SOLVENT CF-CE	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

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# PRODUCT INFORMATION

## CEMENT SC 4000

### PRODUCT DESCRIPTION

**CEMENT SC 4000** is a two-component adhesive based on Chloroprene rubber (CR).

### ADHESIVE SYSTEM

The application of **CEMENT SC 4000** onto steel surfaces is carried out in combination with **PRIMER PR 200**. Alternatively, **PRIMER PR 200** can be replaced by **PRIMER PR 304** in combination with **CEMENT SC 4000** onto the steel substrates.

### FIELDS OF APPLICATION

**CEMENT SC 4000** is used especially for the soft rubber lining of the large areas either on site or in the workshop. **CEMENT SC 4000** is in particular applicable for rubber to rubber, rubber to metal, rubber to fabric and fabric to fabric bonding.

### FEATURES

- High adhesive strength
- High dynamic load ability of the bonding

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of non-ferrous metals, cast iron, ferrite or austenitic steel. Components to be rubber lined shall be designed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

Surfaces to be rubber lined must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 50 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate or the component must be air conditioned.

### ENVIRONMENTAL CONDITIONS

Throughout the rubber lining process, the temperatures of the substrate and rubber lining materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### APPLICATION

During the application of the product, the application instruction must always be observed.

**CEMENT SC 4000** must be mixed with 4 % **HARDENER E 40** intensively until a uniform mixture is achieved. The pot life of the adhesive-hardener mixture is max. 2 hours @ 20°C.

### APPLICATION METHOD UND CONSUMPTION

Coat	Product	Application Method	Coverage [g/m <sup>2</sup> ]
1. Coat steel, CN-bonding layer (roughened rubber sheet / fabric)	<b>CEMENT SC 4000</b>	Roll	ca. 200 (300 / 400)
2. Coat steel (roughened rubber sheet / fabric)	<b>CEMENT SC 4000</b>	Brush	ca. 200 (300 / 400)
1. Coat on unvulcanised rubber	<b>CEMENT SC 4000</b>	Brush	ca. 300

### CONTACT LIFE (OPEN TIME)

Coat	Minimal	Maximal
1. Coat steel	ca. 60 min	ca. 7 Days
2. Coat steel	ca. 30 min	ca. 2 h
1. Coat rubber	ca. 30 min	ca. 60 min

**Note:** The Contact Life depends on the ambient temperature.

### CLEANING

Clean all equipment with **SOLVENT CF-CE** immediately after use.

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# CEMENT SC 4000

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
CEMENT SC 4000 green	0.7 kg	525 2509
CEMENT SC 4000 green	4.5 kg	525 2516
CEMENT SC 4000 black	0.35 kg	525 2592
CEMENT SC 4000 black	0.7 kg	525 2602
CEMENT SC 4000 black	4.5 kg	525 2619
CEMENT SC 4000 black	9 kg	525 2657
CEMENT SC 4000 white	0.7 kg	525 2704
HARDENER E 40	30 g	525 1067
SOLVENT CF-CE	10 l	595 9163

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
CEMENT SC 4000	5 - 25°C	24 Months
SOLVENT CF-CE	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

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# DESCRIPTION

## CHEMOLINE

Product	Product Description
CHEMOLINE 3	CHEMOLINE 3 is a black soft rubber lining based on Chloroprene rubber (CR)
CHEMOLINE 3 CN	CHEMOLINE 3 CN is an already vulcanised black soft rubber lining based on Chloroprene rubber (CR), which is equipped with an easy to bond, reactive bonding layer. CHEMOLINE 3 CN can be loaded directly without further vulcanisation.
CHEMOLINE 3 F CN	CHEMOLINE 3 F CN is an already vulcanised, harder adjusted, black soft rubber lining based on Chloroprene rubber (CR), which is equipped with an easy to bond, reactive bonding layer. CHEMOLINE 3 F CN can be loaded directly without further vulcanisation.
CHEMOLINE 4 A	CHEMOLINE 4 A is a black soft rubber lining based on Bromobutyl rubber (BIIR).
CHEMOLINE 4 B	CHEMOLINE 4 B is a self-vulcanizing black rubber lining based on Bromobutyl rubber (BIIR).
CHEMOLINE 4 CN	CHEMOLINE 4 CN is an already vulcanised black soft rubber lining based on Bromobutyl rubber (BIIR), which is equipped with an easy to bond, reactive bonding layer. CHEMOLINE 4 CN can be loaded directly without further vulcanisation.
CHEMOLINE 5 B	CHEMOLINE 5 B is a self-vulcanising black soft rubber lining based on Bromobutyl and Chloroprene rubber (BIIR / CR).
CHEMOLINE 8	CHEMOLINE 8 is a brown soft rubber lining based on Chlorosulfonated Poly Ethylene and Polyvinyl Chloride (CSM / PVC). CHEMOLINE 8 is ideal for frequently changing chemicals.
CHEMOLINE 8 CN	CHEMOLINE 8 CN is an already vulcanised brown soft rubber lining based on Chlorosulfonated Polyethylene and Polyvinyl Chloride (CSM / PVC), which is equipped with an easy to bond, reactive bonding layer. CHEMOLINE 8 CN can be loaded directly without further vulcanisation.
CHEMOLINE 8 FL	CHEMOLINE 8 FL is a brown soft rubber lining for flange sealing surfaces based on Chlorosulfonated Polyethylene and Polyvinyl Chloride (CSM / PVC).
CHEMOLINE 10	CHEMOLINE 10 is a pre-vulcanised black soft rubber lining based on Chlorobutyl and Chloroprene rubber (CIIR / CR). CHEMOLINE 10 can be loaded directly without further vulcanisation.
CHEMOLINE 10 M	CHEMOLINE 10 M is an unvulcanised soft rubber lining based on Chlorobutyl and Chloroprene rubber (CIIR / CR)
CHEMOLINE 12	CHEMOLINE 12 is a black soft rubber lining based on Chlorobutyl rubber (CIIR).
CHEMOLINE 12 CN	CHEMOLINE 12 CN is an already vulcanised black soft rubber lining based on Chlorobutyl rubber (CIIR), which is equipped with an easy to bond, reactive bonding layer. CHEMOLINE 12 CN can be loaded directly without further vulcanisation.
CHEMOLINE 13	CHEMOLINE 13 is a black soft rubber lining based on Bromobutyl rubber (BIIR). CHEMOLINE 13 shows excellent chemical resistance against concentrated hydrochloric acid and hypochlorite.
CHEMOLINE 18 CN	CHEMOLINE 18 CN is an already vulcanised black soft rubber lining based on Bromobutyl rubber (BIIR), which is equipped with an easy to bond, reactive bonding layer. CHEMOLINE 18 CN can be loaded directly without further vulcanisation.
CHEMOLINE 55	CHEMOLINE 55 is a black soft rubber lining based on Natural rubber (NR) which shows excellent properties against wear.
CHEMOLINE 55 CN	CHEMOLINE 55 CN is an already vulcanised black soft rubber lining based on Natural rubber (NR) with excellent properties against wear and which is equipped with an easy to bond, reactive bonding layer. CHEMOLINE 55 CN can be loaded directly without further vulcanisation.
CHEMOLINE 70 CN	CHEMOLINE 70 CN is an already vulcanised black soft rubber lining based on Chlorobutyl rubber and Polyvinyl Chloride (CIIR / PVC), which is equipped with an easy to bond, reactive bonding layer. CHEMOLINE 70 CN shows excellent resistance against concentrated hydrochloric acid at temperatures up to +60°C. CHEMOLINE 70 CN can be loaded directly without further vulcanisation.
CHEMOLINE RT	CHEMOLINE RT is a black soft rubber lining based on a co-polymerised Bromobutyl rubber (BIIR) with high chemical and thermal resistance.
CHEMOLINE RT CN	CHEMOLINE RT CN is an already vulcanised black soft rubber lining based on a co-polymerised Bromobutyl rubber (BIIR), which is equipped with an easy to bond, reactive bonding layer. CHEMOLINE RT CN can be loaded directly without further vulcanisation.

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# OVERVIEW CHEMOLINE

Product	Polymer	Primer	Hardener	Adhesive	Application	
					On Site	Workshop
CHEMOLINE 3	CR	PRIMER PR 304	HARDENER E 40	CEMENT BC 3004	X	X
CHEMOLINE 3 CN	CR	PRIMER PR 304	HARDENER E 40	CEMENT BC 3004	X	-
CHEMOLINE 3 F CN	CR	PRIMER PR 304	HARDENER E 40	CEMENT BC 3004	X	-
CHEMOLINE 4 A	BIIR	PRIMER PR 500-1 & PRIMER S 500-2	-	ADHESIVE TC 5000	-	X
CHEMOLINE 4 B	BIIR	PRIMER PR 500-1 & PRIMER S 500-2	-	ADHESIVE TC 5000	X	X
CHEMOLINE 4 CN	BIIR	PRIMER PR 304	HARDENER E 40	CEMENT BC 3004	X	-
CHEMOLINE 5 B	BIIR / CR	PRIMER PR 500-1 & PRIMER S 500-2	-	ADHESIVE TC 5000	X	-
CHEMOLINE 8	CSM / PVC	PRIMER HG 1 & PRIMER HG 2	-	ADHESIVE TC 6000	-	X
CHEMOLINE 8 CN	CSM / PVC	PRIMER PR 304	HARDENER E 40	CEMENT BC 3004	X	-
CHEMOLINE 8 FL	CSM / PVC	PRIMER HG 1 & PRIMER HG 2	-	ADHESIVE TC 6000	-	X
CHEMOLINE 10	CIIR / CR	PRIMER PR 304	HARDENER E 40	CEMENT BC 3004	X	-
CHEMOLINE 10 M	CIIR / CR	PRIMER PR 304	HARDENER E 40	CEMENT BC 3004	X	-
CHEMOLINE 12	CIIR	PRIMER PR 500-1 & PRIMER S 500-2	-	ADHESIVE TC 5000	-	X
CHEMOLINE 12 CN	CIIR	PRIMER PR 304	HARDENER E 40	CEMENT BC 3004	X	-
CHEMOLINE 13	BIIR	PRIMER PR 500-1 & PRIMER S 500-2	-	ADHESIVE TC 5000	X	X
CHEMOLINE 18 CN	BIIR	PRIMER PR 304	HARDENER E 40	CEMENT BC 3004	X	-
CHEMOLINE 55	NR	PRIMER PR 500-1 & PRIMER S 500-2	-	ADHESIVE REMACLAVE SOLUTION	-	X
CHEMOLINE 55 CN	NR	PRIMER PR 304	HARDENER E 40	CEMENT BC 3004	X	-
CHEMOLINE 70 CN	CIIR / PVC	PRIMER PR 304	HARDENER E 40	CEMENT BC 3004	X	-
CHEMOLINE RT	BIIR	PRIMER HG 1 & PRIMER HG 2	-	ADHESIVE TC 5002	-	X
CHEMOLINE RT CN	BIIR	PRIMER PR 304	HARDENER E 40	CEMENT BC 3004	X	-

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# PHYSICAL DATA CHEMOLINE

Product	Polymer Type	Abrasion	Vulcanisation Density	Contact Resistance	Max. Surface Pressure	Hardness Shore A	Max. Continuous Operating Temperature	Temperature Range	Elongation at Break	Tensile Strength	Impact Resilience	Peel Strength to Steel	Water Vapour Permeability
	ISO 1629	ISO 4649 ASTM D5963	EN ISO 1183-1	DIN IEC 60093	-	ISO 7619-1 ASTM D2240	°C	°C	DIN 53504 ASTM D412	DIN 53504 ASTM D412	DIN 53512 ASTM D1054	ISO 813	DIN 53122
	-	[mm <sup>3</sup> ]	[g/cm <sup>3</sup> ]	[Ω · cm]	[N/mm <sup>2</sup> ]	-	[°C]	[°C]	[%]	[N/mm <sup>2</sup> ]	[%]	[N/mm]	[g/m <sup>2</sup> ·d]
CHEMOLINE 3	CR	≤ 200*	1.45 ± 0.02	---	---	62 ± 5**	+85	-30 up to +85	≥ 360***	≥ 8***	≥ 25*	≥ 4	0.25***
CHEMOLINE 3 CN	CR	≤ 200*	1.45 ± 0.02	---	2	60 ± 7**	+85	-30 up to +85	≥ 300***	≥ 6***	≥ 25	≥ 4	0.25***
CHEMOLINE 3 F CN	CR	≤ 200*	1.48 ± 0.02	---	2	70 ± 5**	+85	-30 up to +85	≥ 200***	≥ 10***	≥ 20	≥ 4	---
CHEMOLINE 4 A	BIIR	≤ 320*	1.25 ± 0.02	---	2	55 ± 5**	+110	-40 up to +110	≥ 600***	≥ 5***	≥ 6*	≥ 4	0.04***
CHEMOLINE 4 B	BIIR	≤ 320*	1.25 ± 0.02	---	---	55 ± 5**** / 60 ± 5*****	+110	-40 up to +110	≥ 600***	≥ 5***	≥ 6*	≥ 4	0.04***
CHEMOLINE 4 CN	BIIR	≤ 320*	1.25 ± 0.02	---	2	55 ± 5**	+90	-40 up to +90	≥ 370***	≥ 4***	---	≥ 4	0.04***
CHEMOLINE 5 B	BIIR / CR	≤ 225	1.32 ± 0.02	---	---	60 ± 5****	+90	-30 up to +90	≥ 250***	≥ 4***	---	≥ 4	0.1***
CHEMOLINE 8	CSM / PVC	---	1.20 ± 0.02	1.5 x 10 <sup>11</sup>	2	65 ± 5**	+80	-20 up to +80	≥ 300***	≥ 8***	≥ 20*	≥ 4	---
CHEMOLINE 8 CN	CSM / PVC	---	1.20 ± 0.02	---	2	65 ± 5**	+80	-20 up to +80	≥ 300***	≥ 6***	≥ 20	≥ 4	---
CHEMOLINE 8 FL	CSM / PVC	---	1.22 ± 0.02	1.5 x 10 <sup>11</sup>	3	85 ± 5**	+80	-20 up to +80	≥ 200***	≥ 6***	≥ 20*	≥ 4	---
CHEMOLINE 10	CIIR / CR	---	1.30 ± 0.02	5.0 x 10 <sup>7</sup>	1	50 ± 5**	+85	-40 up to +85	≥ 400***	≥ 2***	≥ 18	≥ 3	---
CHEMOLINE 10 M	CIIR / CR	---	1.30 ± 0.02	5.0 x 10 <sup>7</sup>	2	60 ± 5****	+85	-40 up to +85	≥ 300***	≥ 4***	---	≥ 3	---
CHEMOLINE 12	CIIR	≤ 300*	1.08 ± 0.02	---	2	50 ± 5**	+85	-40 up to +85	≥ 300***	≥ 8***	≥ 8*	≥ 4	---
CHEMOLINE 12 CN	CIIR	≤ 300*	1.08 ± 0.02	---	2	50 ± 5**	+70	-40 up to +70	≥ 150***	≥ 6***	≥ 6	≥ 4	---
CHEMOLINE 13	BIIR	≤ 250*	1.24 ± 0.02	---	2	60 ± 5**	+115	-40 up to +115	≥ 450***	≥ 8***	≥ 8	≥ 4	0.08***

# PHYSICAL DATA CHEMOLINE

Product	Polymer Type	Abrasion	Vulcanisation Density	Contact Resistance	Max. Surface Pressure	Hardness Shore A	Max. Continuous Operating Temperature	Temperature Range	Elongation at Break	Tensile Strength	Impact Resilience	Peel Strength to Steel	Water Vapour Permeability
	ISO 1629	ISO 4649 ASTM D5963	EN ISO 1183-1	DIN IEC 60093	-	ISO 7619-1 ASTM D2240	-	-	DIN 53504 ASTM D412	DIN 53504 ASTM D412	DIN 53512 ASTM D1054	ISO 813	DIN 53122
	-	[mm <sup>3</sup> ]	[g/cm <sup>3</sup> ]	[Ω · cm]	[N/mm <sup>2</sup> ]	-	[°C]	[°C]	[%]	[N/mm <sup>2</sup> ]	[%]	[N/mm]	[g/m <sup>2</sup> ·d]
CHEMOLINE 18 CN	BIIR	≤ 300	1.38 ± 0.02	---	2	46 ± 5	+75	-40 up to +75	≥ 350***	≥ 7***	---	---	---
CHEMOLINE 55	NR	≤ 100	1.11 ± 0.02	3.0 x 10 <sup>11</sup>	2	55 ± 5**	+60	-40 up to +60	≥ 520***	≥ 22***	≥ 63	≥ 4	---
CHEMOLINE 55 CN	NR	≤ 100	1.11 ± 0.02	---	2	55 ± 5**	+60	-40 up to +60	≥ 520***	≥ 22***	≥ 63	≥ 4	---
CHEMOLINE 70 CN	CIIR / PVC	---	1.18 ± 0.02	1.5 x 10 <sup>11</sup>	2	57 ± 5**	+80	-30 up to +80	≥ 400***	≥ 3***	---	≥ 4	---
CHEMOLINE RT	BIIR	≤ 250*	1.23 ± 0.02	7.0 x 10 <sup>10</sup>	2	65 ± 5**	+120	-40 up to +120	≥ 150***	≥ 8***	≥ 8*	≥ 4	---
CHEMOLINE RT CN	BIIR	≤ 270	1.23 ± 0.02	---	2	60 ± 5**	+85	-40 up to +85	≥ 150***	≥ 6***	≥ 8	≥ 4	---

\* Press vulcanisation \*\* Autoclave vulcanisation \*\*\* 4 mm rubber \*\*\*\* After pressure less vulcanisation (sample plates) \*\*\*\*\* After complete vulcanisation under operating conditions \*\*\*\*\* After complete curing

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**CHEMOLINE**  
 PHYSICAL DATA

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# TEST VOLTAGE CHEMOLINE

## VULCANISED

Product	Test Voltage [kV / mm]	Max. Voltage [kV]
CHEMOLINE 3	2.5	12.5
CHEMOLINE 3 CN	3.0	15.0
CHEMOLINE 3 F CN	2.5	12.5
CHEMOLINE 4 A	4.0	20.0
CHEMOLINE 4 B	4.0	20.0
CHEMOLINE 4 CN	4.0	20.0
CHEMOLINE 5 B	2.5	12.5
CHEMOLINE 8	5.0	20.0
CHEMOLINE 8 CN	5.0	20.0
CHEMOLINE 8 FL	5.0	20.0
CHEMOLINE 9	4.0	25.0
CHEMOLINE 10	2.5	12.5
CHEMOLINE 10 M	2.5	-
CHEMOLINE 12	3.0	15.0
CHEMOLINE 12 CN	3.0	15.0
CHEMOLINE 13	3.0	15.0
CHEMOLINE 18 CN	4.0	20.0
CHEMOLINE 55	5.0	20.0
CHEMOLINE 55 CN	5.0	20.0
CHEMOLINE 70 CN	4.0	20.0
CHEMOLINE RT	3.0	15.0
CHEMOLINE RT CN	3.0	15.0

## UNVULCANISED

Product	Test Voltage [kV / mm]	Max. Voltage [kV]
CHEMOLINE 3	2.5	12.5
CHEMOLINE 4 A	4.0	20.0
CHEMOLINE 4 B	4.0	20.0
CHEMOLINE 5 B	2.5	12.5
CHEMOLINE 8	5.0	20.0
CHEMOLINE 8 FL	5.0	20.0
CHEMOLINE 9	4.0	25.0
CHEMOLINE 10 M	2.5	-
CHEMOLINE 12	3.0	15.0
CHEMOLINE 13	3.0	15.0
CHEMOLINE 55	5.0	20.0
CHEMOLINE RT	3.0	15.0

**Note:** The spark test (holiday test) of new rubber linings is carried out according EN 14879-4 by using a high voltage tester. For carrying out the spark test, only the high voltage testers of Elmed model Isotest II RT or P as well as the test pistols of Wegener model WEG 20 or 22 or 100 are allowed.

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# PRODUCT INFORMATION

## CHEMOLINE 3

### PRODUCT DESCRIPTION

**CHEMOLINE 3** is a black soft rubber lining based on Chloroprene rubber (CR)

### FIELDS OF APPLICATION

**CHEMOLINE 3 B** is ideal for on-site and workshop rubber linings of steel components which are exposed to abrasive conditions and chemical loads. The field of applications are chemical plants, chlorine and steel industries, mineral processing plants and environmental protection plants. Some typical examples of applications are the rubber linings of storage tanks, agitated tanks and pipelines.

### FEATURES

- Strong chemical resistance against mineral acids, bases, and aromatic oils
- Outstanding resistance against media containing a high percentage of solids
- Application onto steel components
- On site rubber lining

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of non-ferrous metals, cast iron, ferrite or austenitic steel. Components to be rubber lined shall be designed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

Surfaces to be rubber lined must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 50 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate or the component must be air conditioned.

### ENVIRONMENTAL CONDITIONS

Throughout the rubber lining process, the temperatures of the substrate and rubber lining materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### ADHESIVE SYSTEM

**CHEMOLINE 3** is bonded on steel by using the primer system **PRIMER PR 304** in combination with the adhesive system **CEMENT BC 3004** with 4% **HARDENER E 40**.

### APPLICATION METHOD UND CONSUMPTION

During the application of the product, the application instruction must always be observed.

Coat	Product	Application Method	Coverage [g/m <sup>2</sup> ]
1. Coat steel	<b>PRIMER PR 304</b>	Roll / Spray	ca. 150
2. Coat steel	<b>CEMENT BC 3004</b>	Roll	ca. 200
3. Coat steel	<b>CEMENT BC 3004</b>	Brush	ca. 200
1. Coat rubber	<b>CEMENT BC 3004</b>	Brush	ca. 200

If **PRIMER PR 304** is applied by airless spray, **PRIMER PR 304** must be diluted with **SOLVENT CE** in a mixing ratio of 1:1

### CLEANING

Clean all equipment with **SOLVENT CF-CE** immediately after use.

### VULCANISATION

The details given in the application instruction must be observed during vulcanisation.

Place	Vulcanisation Method
On Site	Self-vulcanisation at ambient temperature (T > +25°C) within 3 - 4 month.
On Site	Vulcanisation with medium under operating conditions. This vulcanisation method is only allowed after consultation with the Application Technology Department of TIP TOP.
On Site	At higher operating temperatures and vacuum loads vulcanisation is carried out by means of steam (pressure) or hot water.
Workshop	Vulcanisation in an autoclave under pressure by means hot air or steam.

### SPARK TEST

The spark test (holiday test) of new rubber linings is carried out according EN 14879-4 by using a high voltage tester. For carrying out the spark test, only the high voltage testers of Elmed model Isotest II RT or P as well as the test pistols of Wegener model WEG 20 or 22 or 100 are allowed.

CHEMOLINE 3	Test Voltage [kV/mm]	Max. Test Voltage [kV]
unvulcanised	2.5	12.5
vulcanised	2.5	12.5

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# CHEMOLINE 3

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
CEMENT BC 3004	4.5 kg	525 4095
CEMENT BC 3004	9 kg	525 4143
CEMENT BC 3004	18 kg	525 4130
HARDENER E 40	30 g	525 1067
PRIMER PR 304	0.75 kg	525 4112
PRIMER PR 304	10 kg	525 4150
SOLVENT CF-CE	10 l	595 9163

## PACKAGING OF RUBBER SHEETS

The rubber sheets are wrapped with PE-separating sheets on cardboard cores, and packed freely suspend in stable, stackable card boxes, to avoid pressure points.

**CHEMOLINE 3** is manufactured by extrusion in the following standard sizes:

Size (Tolerances according EN 14879-4)	Product-No.
2 mm x 1100 mm x 10000 mm	528 2531
3 mm x 1100 mm x 10000 mm	528 2579
4 mm x 1100 mm x 10000 mm	528 2610
5 mm x 1100 mm x 10000 mm	528 2658
6 mm x 1100 mm x 10000 mm	528 2696

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. The rubber sheets must be stored free of pressure, best in the original packaging. The rubber sheets may not receive any pressure points. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
CEMENT BC 3004	5 - 25°C	24 Months
CHEMOLINE 3	≤ +5°C	6 Months
CHEMOLINE 3	≤ +25°C	1 Month
PRIMER PR 304	5 - 25°C	12 Months
SOLVENT CF-CE	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Polymer Base	ISO 1629	-	CR
Abrasion	ISO 4649 (ASTM D5963)	mm <sup>3</sup>	≤ 200*
Density	EN ISO 1183-1	g/cm <sup>3</sup>	1.45 ± 0.02
Hardness Shore A	ISO 7619-1 (ASTM D2240)	-	62 ± 5**
Elongation at Break	DIN 53504 (ASTM D412)	%	≥ 360***
Tensile Strength	DIN 53504 (ASTM D412)	N/mm <sup>2</sup>	≥ 8***
Impact Resilience	DIN 53512 (ASTM D1054)	%	≥ 25*
Peel Strength to Steel	ISO 813	N/mm	≥ 4
Water Vapour Permeability	DIN 53122	g/m <sup>2</sup> ·d	0.25***
Max. Continuous Operating Temperature	-	°C	+85
Temperature Range	-	°C	-30 up to +85

\* Press vulcanisation \*\* Autoclave vulcanisation \*\*\* 4 mm rubber

**Note:** The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## CHEMOLINE 3 CN

### PRODUCT DESCRIPTION

**CHEMOLINE 3 CN** is an already vulcanised black soft rubber lining based on Chloroprene rubber (CR), which is equipped with an easy to bond, reactive bonding layer. **CHEMOLINE 3 CN** can be loaded directly without further vulcanisation.

### FIELDS OF APPLICATION

**CHEMOLINE 3 CN** is used mainly for on-site rubber linings of steel and concrete components which are exposed to abrasive conditions and chemical loads. The field of applications are chemical plants, chlorine and steel industries, mineral processing plants and environmental protection plants. Some typical examples of applications are the lining of storage tanks, agitated tanks and pipelines.

### FEATURES

- Strong chemical resistance against mineral acids, bases, and aromatic oils
- Outstanding resistance against media containing a high percentage of solids
- Application onto steel and concrete components
- On site rubber lining

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of non-ferrous metals, cast iron, ferrite or austenitic steel, concrete, screed or plaster. Components to be rubber lined shall be designed and manufactured in accordance with EN 14879-1. For components made of concrete, screed or plaster DIN 1045 must also be observed.

### SURFACE PRE-TREATMENT

#### C-STEEL

Surfaces to be rubber lined must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 50 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate or the component must be air conditioned.

#### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup> and minimum compressive strength of 25 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%. Generally the concrete surface must be smoothed prior to rubber lining application by applying an Epoxy resin based mortar coat. This coat should be conductive to enable a subsequent spark test (**REMAFIX C**).

### ENVIRONMENTAL CONDITIONS

Throughout the rubber lining process, the temperatures of the substrate and rubber lining materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### ADHESIVE SYSTEM

**CHEMOLINE 3 CN** is bonded on steel or concrete components by using the primer system **PRIMER PR 304** in combination with the adhesive system **CEMENT BC 3004** with 4% **HARDENER E 40**.

### APPLICATION METHOD UND CONSUMPTION

During the application of the product, the application instruction must always be observed.

Coat	Product	Application Method	Coverage [g/m <sup>2</sup> ]
1. Coat steel	<b>PRIMER PR 304</b>	Roll / Spray	ca. 150
2. Coat steel	<b>CEMENT BC 3004</b>	Roll	ca. 200
3. Coat steel	<b>CEMENT BC 3004</b>	Brush	ca. 200
1. Coat rubber	<b>CEMENT BC 3004</b>	Brush	ca. 200

If **PRIMER PR 304** is applied by airless spray, **PRIMER PR 304** must be diluted with **SOLVENT CE** in a mixing ratio of 1:1

### CLEANING

Clean all equipment with **SOLVENT CF-CE** immediately after use.

### VULCANISATION

Due to the already completed vulcanisation at the workshop, no further thermal treatment is longer necessary.

### SPARK TEST

The spark test (holiday test) of new rubber linings is carried out according EN 14879-4 by using a high voltage tester. For carrying out the spark test, only the high voltage testers of Elmed model Isotest II RT or P as well as the test pistols of Wegener model WEG 20 or 22 or 100 are allowed.

CHEMOLINE 3 CN	Test Voltage [kV/mm]	Max. Test Voltage [kV]
vulcanised	3.0	15.0

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# CHEMOLINE 3 CN

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
CEMENT BC 3004	4.5 kg	525 4095
CEMENT BC 3004	9 kg	525 4143
CEMENT BC 3004	18 kg	525 4130
HARDENER E 40	30 g	525 1067
PRIMER PR 304	0.75 kg	525 4112
PRIMER PR 304	10 kg	525 4150
SOLVENT CF-CE	10 l	595 9163

## PACKAGING OF RUBBER SHEETS

The rubber sheets are wrapped with PE-separating sheets on cardboard cores, and packed freely suspend in stable, stackable card boxes, to avoid pressure points.

CHEMOLINE 3 CN is manufactured by extrusion in the following standard sizes:

Size (Tolerances according EN 14879-4)	Product-No.
2 mm x 1100 mm x 10000 mm	528 7835
3 mm x 1100 mm x 10000 mm	528 7842
4 mm x 1100 mm x 10000 mm	528 7859
5 mm x 1100 mm x 10000 mm	528 7866
6 mm x 1100 mm x 10000 mm	528 7873

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. The rubber sheets must be stored free of pressure, best in the original packaging. The rubber sheets may not receive any pressure points. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
CEMENT BC 3004	5 - 25°C	24 Months
CHEMOLINE 3 CN	≤ +30°C	24 Months
PRIMER PR 304	5 - 25°C	12 Months
SOLVENT CF-CE	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Polymer Base	ISO 1629	-	CR
Abrasion	ISO 4649 (ASTM D5963)	mm <sup>3</sup>	≤ 200*
Density	EN ISO 1183-1	g/cm <sup>3</sup>	1.45 ± 0.02
Hardness Shore A	ISO 7619-1 (ASTM D2240)	-	60 ± 7**
Max. Surface Pressure	-	N/mm <sup>2</sup>	2
Elongation at Break	DIN 53504 (ASTM D412)	%	≥ 300***
Tensile Strength	DIN 53504 (ASTM D412)	N/mm <sup>2</sup>	≥ 6***
Impact Resilience	DIN 53512 (ASTM D1054)	%	≥ 25
Peel Strength to Steel	ISO 813	N/mm	≥ 4
Thermal Conductivity	DIN 51046	W / m K	0.32
Water Vapour Permeability	DIN 53122	g/m <sup>2</sup> ·d	0.25***
Max. Continuous Operating Temperature	-	°C	+85
Temperature Range	-	°C	-30 up to +85

\* Press vulcanisation \*\* Autoclave vulcanisation \*\*\* 4 mm rubber

**Note:** The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## CHEMOLINE 3 F CN

### PRODUCT DESCRIPTION

**CHEMOLINE 3 F CN** is an already vulcanised, harder adjusted, black soft rubber lining based on Chloroprene rubber (CR), which is equipped with an easy to bond, reactive bonding layer. **CHEMOLINE 3 F CN** can be loaded directly without further vulcanisation.

### FIELDS OF APPLICATION

The main application field of **CHEMOLINE 3 F CN** is the rubber lining of flange surfaces.

### FEATURES

- Strong chemical resistance against mineral acids, bases, and aromatic oils
- Outstanding resistance against media containing a high percentage of solids
- Application onto steel components
- Can be exposed to the operation conditions right after the application

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of non-ferrous metals, cast iron, ferrite or austenitic steel, concrete, screed or plaster. Components to be rubber lined shall be designed and manufactured in accordance with EN 14879-1. For components made of concrete, screed or plaster DIN 1045 must also be observed.

### SURFACE PRE-TREATMENT

Surfaces to be rubber lined must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 50 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate or the component must be air conditioned.

### ENVIRONMENTAL CONDITIONS

Throughout the rubber lining process, the temperatures of the substrate and rubber lining materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### ADHESIVE SYSTEM

**CHEMOLINE 3 F CN** is bonded on steel components by using the primer system **PRIMER PR 304** in combination with the adhesive system **CEMENT BC 3004** with 4% **HARDENER E 40**.

### APPLICATION METHOD UND CONSUMPTION

During the application of the product, the application instruction must always be observed.

Coat	Product	Application Method	Coverage [g/m <sup>2</sup> ]
1. Coat steel	<b>PRIMER PR 304</b>	Roll / Spray	ca. 150
2. Coat steel	<b>CEMENT BC 3004</b>	Roll	ca. 200
3. Coat steel	<b>CEMENT BC 3004</b>	Brush	ca. 200
1. Coat rubber	<b>CEMENT BC 3004</b>	Brush	ca. 200

If **PRIMER PR 304** is applied by airless spray, **PRIMER PR 304** must be diluted with **SOLVENT CE** in a mixing ratio of 1:1

### CLEANING

Clean all equipment with **SOLVENT CF-CE** immediately after use.

### VULCANISATION

Due to the already completed vulcanisation at the workshop, no further thermal treatment is longer necessary.

### SPARK TEST

The spark test (holiday test) of new rubber linings is carried out according EN 14879-4 by using a high voltage tester. For carrying out the spark test, only the high voltage testers of Elmed model Isotest II RT or P as well as the test pistols of Wegener model WEG 20 or 22 or 100 are allowed.

CHEMOLINE 3 F CN	Test Voltage [kV/mm]	Max. Test Voltage [kV]
vulcanised	2.5	12.5

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

### PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
<b>CEMENT BC 3004</b>	4.5 kg	525 4095
<b>CEMENT BC 3004</b>	9 kg	525 4143
<b>CEMENT BC 3004</b>	18 kg	525 4130
<b>HARDENER E 40</b>	30 g	525 1067
<b>PRIMER PR 304</b>	0.75 kg	525 4112
<b>PRIMER PR 304</b>	10 kg	525 4150
<b>SOLVENT CF-CE</b>	10 l	595 9163

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# CHEMOLINE 3 F CN

## PACKAGING OF RUBBER SHEETS

The rubber sheets are wrapped with PE-separating sheets on cardboard cores, and packed freely suspended in stable, stackable card boxes, to avoid pressure points.

**CHEMOLINE 3 F CN** is manufactured by extrusion in the following standard sizes:

Size (Tolerances according EN 14879-4)	Product-No.
2 mm x 1100 mm x 10000 mm	528 7086
3 mm x 1100 mm x 10000 mm	528 7093
4 mm x 1100 mm x 10000 mm	528 7103
6 mm x 1100 mm x 10000 mm	528 7110

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. The rubber sheets must be stored free of pressure, best in the original packaging. The rubber sheets may not receive any pressure points. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
<b>CEMENT BC 3004</b>	5 - 25°C	24 Months
<b>CHEMOLINE 3 F CN</b>	≤ +30°C	24 Months
<b>PRIMER PR 304</b>	5 - 25°C	12 Months
<b>SOLVENT CF-CE</b>	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Polymer Base	ISO 1629	-	CR
Abrasion	ISO 4649 (ASTM D5963)	mm <sup>3</sup>	≤ 200*
Density	EN ISO 1183-1	g/cm <sup>3</sup>	1.48 ± 0.02
Hardness Shore A	ISO 7619-1 (ASTM D2240)	-	70 ± 5**
Max. Surface Pressure	-	N/mm <sup>2</sup>	2
Elongation at Break	DIN 53504 (ASTM D412)	%	≥ 200***
Tensile Strength	DIN 53504 (ASTM D412)	N/mm <sup>2</sup>	≥ 10***
Impact Resilience	DIN 53512 (ASTM D1054)	%	≥ 20
Peel Strength to Steel	ISO 813	N/mm	≥ 4
Max. Continuous Operating Temperature	-	°C	+85
Temperature Range	-	°C	-30 up to +85

\* Press vulcanisation \*\* Autoclave vulcanisation \*\*\* 4 mm rubber

**Note:** The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## CHEMOLINE 4 A

### PRODUCT DESCRIPTION

**CHEMOLINE 4 A** is a black soft rubber lining based on Bromobutyl rubber (BIIR).

### FIELDS OF APPLICATION

**CHEMOLINE 4 A** is used mainly for the workshop rubber lining of steel components which are exposed to chemical loads. The field of applications are chemical plants, chlorine and steel industries, fertilizer manufacturing plants, phosphoric acid plants, mineral processing plants, power plants and environmental protection plants. Some typical examples of applications are the lining of storage tanks, agitated tanks, crystallization and condensation reactors and pipelines in flue gas desulphurisation (FGD) plants.

### APPROVALS

**CHEMOLINE 4 A** is approved (**Z-59.22-162**) by the German Institute of Construction Technology (DIBt) for steel storage vessels.

### FEATURES

- Strong chemical resistance against mineral acids, bases, polar solvents and salt solutions
- Outstanding diffusion resistance to sulphur dioxide and saturated water vapour
- High thermal stability (max. +110°C)
- Application onto steel components
- Workshop rubber lining

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of non-ferrous metals, cast iron, ferrite or austenitic steel. Components to be rubber lined shall be designed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

Surfaces to be rubber lined must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 50 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate or the component must be air conditioned.

### ENVIRONMENTAL CONDITIONS

Throughout the rubber lining process, the temperatures of the substrate and rubber lining materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### ADHESIVE SYSTEM

**CHEMOLINE 4 A** is bonded onto steel components by using the two-coat primer system **PRIMER PR 500-1** & **PRIMER S 500-2** in combination with **ADHESIVE TC 5000**.

### APPLICATION METHOD UND CONSUMPTION

During the application of the product, the application instruction must always be observed.

Coat	Product	Application Method	Coverage [g/m <sup>2</sup> ]
1. Coat steel	<b>PRIMER PR 500-1</b>	Roll / Spray	ca. 150
2. Coat steel	<b>PRIMER S 500-2</b>	Brush	ca. 125
3. Coat steel	<b>ADHESIVE TC 5000</b>	Roll	ca. 200
4. Coat steel	<b>ADHESIVE TC 5000</b>	Brush	ca. 200
1. Coat rubber	<b>ADHESIVE TC 5000</b>	Brush	ca. 200

### CLEANING

Clean all equipment with **SOLVENT CF-CE** immediately after use.

### VULCANISATION

The details given in the application instruction must be observed during vulcanisation.

Place	Vulcanisation Method
Workshop	Vulcanisation in an autoclave under pressure by means hot air or steam.

### SPARK TEST

The spark test (holiday test) of new rubber linings is carried out according EN 14879-4 by using a high voltage tester. For carrying out the spark test, only the high voltage testers of Elmed model Isotest II RT or P as well as the test pistols of Wegener model WEG 20 or 22 or 100 are allowed.

CHEMOLINE 4 A	Test Voltage [kV/mm]	Max. Test Voltage [kV]
unvulcanised	4.0	20.0
vulcanised	4.0	20.0

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# CHEMOLINE 4 A

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
ADHESIVE TC 5000	9 kg	525 2286
ADHESIVE TC 5000	25 kg	525 2224
PRIMER PR 500-1	0.75 kg	525 2303
PRIMER PR 500-1	4.5 kg	525 2470
PRIMER PR 500-1	9 kg	525 2327
PRIMER PR 500-1	25 kg	525 2334
PRIMER S 500-2	0.75 kg	525 2310
PRIMER S 500-2	9 kg	525 2341
PRIMER S 500-2	25 kg	525 2358
SOLVENT CF-CE	10 l	595 9163

## PACKAGING OF RUBBER SHEETS

The rubber sheets are wrapped with PE-separating sheets on cardboard cores, and packed freely suspend in stable, stackable card boxes, to avoid pressure points.

**CHEMOLINE 4 A** is manufactured by extrusion in the following standard sizes:

Size (Tolerances according EN 14879-4)	Product-No.
2 mm x 1100 mm x 10000 mm	528 2720
3 mm x 1100 mm x 10000 mm	528 2768
4 mm x 1100 mm x 10000 mm	528 2809
5 mm x 1100 mm x 10000 mm	528 2847
6 mm x 1100 mm x 10000 mm	528 2885

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. The rubber sheets must be stored free of pressure, best in the original packaging. The rubber sheets may not receive any pressure points. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
ADHESIVE TC 5000	5 - 20°C	12 Months
CHEMOLINE 4 A	≤ +25°C	6 Months
CHEMOLINE 4 A	≤ +5°C	12 Months
PRIMER PR 500-1	5 - 20°C	12 Months
PRIMER S 500-2	5 - 20°C	12 Months
SOLVENT CF-CE	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Polymer Base	ISO 1629	-	BIIR
Abrasion	ISO 4649 (ASTM D5963)	mm <sup>3</sup>	≤ 320*
Density	EN ISO 1183-1	g/cm <sup>3</sup>	1.25 ± 0.02
Hardness Shore A	ISO 7619-1 (ASTM D2240)	-	55 ± 5**
Max. Surface Pressure	-	N/mm <sup>2</sup>	2
Surface Resistance	DIN IEC 60093	Ω	≥ 10 <sup>12</sup>
Elongation at Break	DIN 53504 (ASTM D412)	%	≥ 600***
Tensile Strength	DIN 53504 (ASTM D412)	N/mm <sup>2</sup>	≥ 5***
Impact Resilience	DIN 53512 (ASTM D1054)	%	≥ 6*
Peel Strength to Steel	ISO 813	N/mm	≥ 4
Thermal Conductivity	DIN 51046	W / m K	0.33
Water Vapour Permeability	DIN 53122	g/m <sup>2</sup> ·d	0.04***
Max. Continuous Operating Temperature	-	°C	+110
Temperature Range	-	°C	-40 up to +110

\* Press vulcanisation \*\* Autoclave vulcanisation \*\*\* 4 mm rubber

**Note:** The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## CHEMOLINE 4 B

### PRODUCT DESCRIPTION

**CHEMOLINE 4 B** is a self-vulcanizing black rubber lining based on Bromobutyl rubber (BIIR).

### FIELDS OF APPLICATION

**CHEMOLINE 4 B** used mainly for on-site rubber linings of steel components which are exposed to chemical loads. The field of applications are chemical plants, chlorine and steel industries, fertilizer manufacturing plants, phosphoric acid plants, mineral processing plants, power plants and environmental protection plants. Some typical examples of applications are the lining of storage tanks, agitated tanks, thickeners, as well as structural components of flue gas desulphurisation (FGD) plants such as absorbers, process tanks, clean gas tanks and chimneys.

### APPROVALS

**CHEMOLINE 4 B** is approved (**Z-59.22-159**) by the German Institute of Construction Technology (DIBt) for steel storage vessels.

### FEATURES

- Strong chemical resistance against mineral acids, bases, polar solvents and salt solutions
- Outstanding diffusion resistance to sulphur dioxide and saturated water vapour
- High thermal stability (max. +110°C)
- Application onto steel components
- On site rubber lining

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of non-ferrous metals, cast iron, ferrite or austenitic steel. Components to be rubber lined shall be designed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

Surfaces to be rubber lined must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 50 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate or the component must be air conditioned.

### ENVIRONMENTAL CONDITIONS

Throughout the rubber lining process, the temperatures of the substrate and rubber lining materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### ADHESIVE SYSTEM

**CHEMOLINE 4 B** is bonded onto steel components by using the two-coat primer system **PRIMER PR 500-1** & **PRIMER S 500-2** in combination with **ADHESIVE TC 5000**. This bonding system requires a subsequent thermal treatment with a temperature of ≥ +45°C. In particular cases, and only with the verification of TIP TOP Application Technologies, the cold bonding system **PRIMER PR 304** / **CEMENT BC 3004** with 4% **HARDENER E 40** can be used alternatively. When using the cold bonding system, the service temperature is limited to max. +90°C.

### APPLICATION METHOD UND CONSUMPTION

During the application of the product, the application instruction must always be observed.

Coat	Product	Application Method	Coverage [g/m²]
1. Coat steel	<b>PRIMER PR 500-1</b>	Roll / Spray	ca. 150
2. Coat steel	<b>PRIMER S 500-2</b>	Brush	ca. 125
3. Coat steel	<b>ADHESIVE TC 5000</b>	Roll	ca. 200
4. Coat steel	<b>ADHESIVE TC 5000</b>	Brush	ca. 200
1. Coat rubber	<b>ADHESIVE TC 5000</b>	Brush	ca. 200

### CLEANING

Clean all equipment with **SOLVENT CF-CE** immediately after use.

### VULCANISATION

The details given in the application instruction must be observed during vulcanisation.

Place	Vulcanisation Method
On Site	Self-vulcanisation at ambient temperature (T > +25°C) within 3 - 4 month.
On Site	Vulcanisation with medium under operating conditions. This vulcanisation method is only allowed after consultation with the Application Technology Department of TIP TOP.
On Site	At higher operating temperatures and vacuum loads vulcanisation is carried out by means of steam (pressure) or hot water.

### SPARK TEST

The spark test (holiday test) of new rubber linings is carried out according EN 14879-4 by using a high voltage tester. For carrying out the spark test, only the high voltage testers of Elmed model Isotest II RT or P as well as the test pistols of Wegener model WEG 20 or 22 or 100 are allowed.

CHEMOLINE 4 B	Test Voltage [kV/mm]	Max. Test Voltage [kV]
unvulcanised	4.0	20.0
vulcanised	4.0	20.0

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# CHEMOLINE 4 B

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
ADHESIVE TC 5000	9 kg	525 2286
ADHESIVE TC 5000	25 kg	525 2224
PRIMER PR 500-1	4.5 kg	525 2470
PRIMER PR 500-1	9 kg	525 2327
PRIMER PR 500-1	25 kg	525 2334
PRIMER S 500-2	9 kg	525 2341
PRIMER S 500-2	25 kg	525 2358
SOLVENT CF-CE	10 l	595 9163

## PACKAGING OF RUBBER SHEETS

The rubber sheets are wrapped with PE-separating sheets on cardboard cores, and packed freely suspended in stable, stackable card boxes, to avoid pressure points.

**CHEMOLINE 4 B** is manufactured by extrusion in the following standard sizes:

Size (Tolerances according EN 14879-4)	Product-No.
2 mm x 1100 mm x 10000 mm	528 2933
3 mm x 1100 mm x 10000 mm	528 2971
4 mm x 1100 mm x 10000 mm	528 3011

Size (Tolerances according EN 14879-4)	Product-No.
5 mm x 1100 mm x 10000 mm	528 3059
6 mm x 1100 mm x 10000 mm	528 3097

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. The rubber sheets must be stored free of pressure, best in the original packaging. The rubber sheets may not receive any pressure points. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
ADHESIVE TC 5000	5 - 20°C	12 Months
CHEMOLINE 4 B	≤ +5°C	6 Months
CHEMOLINE 4 B	≤ +25°C	1 Month
PRIMER PR 500-1	5 - 20°C	12 Months
PRIMER S 500-2	5 - 20°C	12 Months
SOLVENT CF-CE	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Polymer Base	ISO 1629	-	BIIR
Abrasion	ISO 4649 (ASTM D5963)	mm <sup>3</sup>	≤ 320*
Density	EN ISO 1183-1	g/cm <sup>3</sup>	1.25 ± 0.02
Hardness Shore A	ISO 7619-1 (ASTM D2240)	-	55 ± 5**** / 60 ± 5*****
Surface Resistance	DIN IEC 60093	Ω	≥ 10 <sup>12</sup>
Elongation at Break	DIN 53504 (ASTM D412)	%	≥ 600***
Tensile Strength	DIN 53504 (ASTM D412)	N/mm <sup>2</sup>	≥ 5***
Impact Resilience	DIN 53512 (ASTM D1054)	%	≥ 6*
Peel Strength to Steel	ISO 813	N/mm	≥ 4
Thermal Conductivity	DIN 51046	W / m K	0.33
Water Vapour Permeability	DIN 53122	g/m <sup>2</sup> ·d	0.04***
Max. Continuous Operating Temperature	-	°C	+110
Temperature Range	-	°C	-40 up to +110

\* Press vulcanisation \*\*\* 4 mm rubber \*\*\*\* After pressure less vulcanisation (sample plates) \*\*\*\*\* After complete vulcanisation under operating conditions

**Note:** The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## CHEMOLINE 4 CN

### PRODUCT DESCRIPTION

**CHEMOLINE 4 CN** is an already vulcanised black soft rubber lining based on Bromobutyl rubber (BIIR), which is equipped with an easy to bond, reactive bonding layer. **CHEMOLINE 4 CN** can be loaded directly without further vulcanisation.

### FIELDS OF APPLICATION

**CHEMOLINE 4 CN** is used mainly for on-site rubber linings of steel and concrete components which are exposed to chemical loads. The field of applications are chemical plants, chlorine and steel industries, fertilizer manufacturing plants, power plants, mineral processing plants and environmental protection plants. Some typical examples of applications are the lining of storage tanks, agitated tanks, crystallization and condensation reactors, thickeners, pipe spools, containment buildings in nuclear power plants and process tanks in flue gas desulphurisation (FGD) plants.

### APPROVALS & CERTIFICATES

- **CHEMOLINE 4 CN** is approved (**Z-59.22-149**) by the German Institute of Construction Technology (DIBt) for steel storage vessels.
- Approval for nuclear power plants according AVS D 6.1/50 Rev. A

### FEATURES

- Strong chemical resistance against mineral acids, bases, polar solvents and salt solutions
- Outstanding diffusion resistance to sulphur dioxide and saturated water vapour
- Application onto steel and concrete components
- Can be exposed to the operation conditions right after the application
- On site rubber lining

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of non-ferrous metals, cast iron, ferrite or austenitic steel, concrete, screed or plaster. Components to be rubber lined shall be designed and manufactured in accordance with EN 14879-1. For components made of concrete, screed or plaster DIN 1045 must also be observed.

### SURFACE PRE-TREATMENT

#### C-STEEL

Surfaces to be rubber lined must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 50 microns is required. To prevent flash rust, the primer must be applied

immediately after the blasting and cleaning of the substrate or the component must be air conditioned.

#### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup> and minimum compressive strength of 25 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%. Generally the concrete surface must be smoothed prior to rubber lining application by applying an Epoxy resin based mortar coat. This coat should be conductive to enable a subsequent spark test (**REMAFIX C**).

### ENVIRONMENTAL CONDITIONS

Throughout the rubber lining process, the temperatures of the substrate and rubber lining materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### ADHESIVE SYSTEM

**CHEMOLINE 4 CN** is bonded on steel or concrete components by using the primer system **PRIMER PR 304** in combination with the adhesive system **CEMENT BC 3004** with 4% **HARDENER E 40**.

### APPLICATION METHOD UND CONSUMPTION

During the application of the product, the application instruction must always be observed.

Coat	Product	Application Method	Coverage [g/m <sup>2</sup> ]
1. Coat steel	<b>PRIMER PR 304</b>	Roll / Spray	ca. 150
2. Coat steel	<b>CEMENT BC 3004</b>	Roll	ca. 200
3. Coat steel	<b>CEMENT BC 3004</b>	Brush	ca. 200
1. Coat rubber	<b>CEMENT BC 3004</b>	Brush	ca. 200

If **PRIMER PR 304** is applied by airless spray, **PRIMER PR 304** must be diluted with **SOLVENT CE** in a mixing ratio of 1:1

### CLEANING

Clean all equipment with **SOLVENT CF-CE** immediately after use.

### VULCANISATION

Due to the already completed vulcanisation at the workshop, no further thermal treatment is longer necessary.

### SPARK TEST

The spark test (holiday test) of new rubber linings is carried out according EN 14879-4 by using a high voltage tester. For carrying out the spark test, only the high voltage testers of Elmed model Isotest II RT or P as well as the test pistols of Wegener model WEG 20 or 22 or 100 are allowed.

CHEMOLINE 4 CN	Test Voltage [kV/mm]	Max. Test Voltage [kV]
vulcanised	4.0	20.0

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# CHEMOLINE 4 CN

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
CEMENT BC 3004	4.5 kg	525 4095
CEMENT BC 3004	9 kg	525 4143
CEMENT BC 3004	18 kg	525 4130
HARDENER E 40	30 g	525 1067
PRIMER PR 304	0.75 kg	525 4112
PRIMER PR 304	10 kg	525 4150
SOLVENT CF-CE	10 l	595 9163

## PACKAGING OF RUBBER SHEETS

The rubber sheets are wrapped with PE-separating sheets on cardboard cores, and packed freely suspended in stable, stackable card boxes, to avoid pressure points.

**CHEMOLINE 4 CN** is manufactured by extrusion in the following standard sizes:

Size (Tolerances according EN 14879-4)	Product-No.
2 mm x 1100 mm x 10000 mm	528 7880
3 mm x 1100 mm x 10000 mm	528 7897
4 mm x 1100 mm x 10000 mm	528 7907
5 mm x 1100 mm x 10000 mm	528 7914
6 mm x 1100 mm x 10000 mm	528 7921

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. The rubber sheets must be stored free of pressure, best in the original packaging. The rubber sheets may not receive any pressure points. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
CEMENT BC 3004	5 - 25°C	24 Months
CHEMOLINE 4 CN	≤ +30°C	24 Months
PRIMER PR 304	5 - 25°C	12 Months
SOLVENT CF-CE	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Polymer Base	ISO 1629	-	BIIR
Abrasion	ISO 4649 (ASTM D5963)	mm <sup>3</sup>	≤ 320*
Density	EN ISO 1183-1	g/cm <sup>3</sup>	1.25 ± 0.02
Hardness Shore A	ISO 7619-1 (ASTM D2240)	-	55 ± 5**
Max. Surface Pressure	-	N/mm <sup>2</sup>	2
Surface Resistance	DIN IEC 60093	Ω	≥ 10 <sup>12</sup>
Elongation at Break	DIN 53504 (ASTM D412)	%	≥ 370***
Tensile Strength	DIN 53504 (ASTM D412)	N/mm <sup>2</sup>	≥ 4***
Peel Strength to Steel	ISO 813	N/mm	≥ 4
Water Vapour Permeability	DIN 53122	g/m <sup>2</sup> ·d	0.04***
Max. Continuous Operating Temperature	-	°C	+90
Temperature Range	-	°C	-40 up to +90

\* Press vulcanisation \*\* Autoclave vulcanisation \*\*\* 4 mm rubber

**Note:** The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## CHEMOLINE 5 B

### PRODUCT DESCRIPTION

**CHEMOLINE 5 B** is a self-vulcanising black soft rubber lining based on Bromobutyl and Chloroprene rubber (BIIR / CR).

### FIELDS OF APPLICATION

**CHEMOLINE 5 B** is used mainly for on-site rubber linings of steel components which are exposed to chemical loads. The field of applications are chemical plants, steel industries, power plants and mineral processing plants. Some typical examples of applications are the lining of storage and process tanks.

### FEATURES

- Strong chemical resistance against mineral acids, bases and polar solvents
- Outstanding diffusion resistance to sulphur dioxide and saturated water vapour
- Application onto steel components
- On site rubber lining

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of non-ferrous metals, cast iron, ferrite or austenitic steel. Components to be rubber lined shall be designed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

Surfaces to be rubber lined must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 50 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate or the component must be air conditioned.

### ENVIRONMENTAL CONDITIONS

Throughout the rubber lining process, the temperatures of the substrate and rubber lining materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### ADHESIVE SYSTEM

**CHEMOLINE 5 B** is bonded onto steel components by using the two-coat primer system **PRIMER PR 500-1** & **PRIMER S 500-2** in combination with **ADHESIVE TC 5000**. This bonding system requires a subsequent thermal treatment with a temperature of ≥ +45°C. In particular cases, and only with the verification of TIP TOP Application Technologies, the cold bonding system **PRIMER PR 304** / **CEMENT BC 3004** with 4% **HARDENER E 40** can be used alternatively. When

using the cold bonding system, the service temperature is limited to max. +90°C.

### APPLICATION METHOD UND CONSUMPTION

During the application of the product, the application instruction must always be observed.

Coat	Product	Application Method	Coverage [g/m²]
1. Coat steel	<b>PRIMER PR 500-1</b>	Roll / Spray	ca. 150
2. Coat steel	<b>PRIMER S 500-2</b>	Brush	ca. 125
3. Coat steel	<b>ADHESIVE TC 5000</b>	Roll	ca. 200
4. Coat steel	<b>ADHESIVE TC 5000</b>	Brush	ca. 200
1. Coat rubber	<b>ADHESIVE TC 5000</b>	Brush	ca. 200

### CLEANING

Clean all equipment with **SOLVENT CF-CE** immediately after use.

### VULCANISATION

The details given in the application instruction must be observed during vulcanisation.

Place	Vulcanisation Method
On Site	Self-vulcanisation at ambient temperature (T > +25°C) within 3 - 4 month.
On Site	Vulcanisation with medium under operating conditions. This vulcanisation method is only allowed after consultation with the Application Technology Department of TIP TOP.
On Site	At higher operating temperatures and vacuum loads vulcanisation is carried out by means of steam (pressure) or hot water.
Workshop	Vulcanisation in an autoclave under pressure by means hot air or steam.

### SPARK TEST

The spark test (holiday test) of new rubber linings is carried out according EN 14879-4 by using a high voltage tester. For carrying out the spark test, only the high voltage testers of Elmed model Isotest II RT or P as well as the test pistols of Wegener model WEG 20 or 22 or 100 are allowed.

CHEMOLINE 5 B	Test Voltage [kV/mm]	Max. Test Voltage [kV]
unvulcanised	2.5	12.5
vulcanised	2.5	12.5

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# CHEMOLINE 5 B

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
ADHESIVE TC 5000	9 kg	525 2286
ADHESIVE TC 5000	25 kg	525 2224
PRIMER PR 500-1	0.75 kg	525 2303
PRIMER PR 500-1	4.5 kg	525 2470
PRIMER PR 500-1	9 kg	525 2327
PRIMER PR 500-1	25 kg	525 2334
PRIMER S 500-2	0.75 kg	525 2310
PRIMER S 500-2	9 kg	525 2341
PRIMER S 500-2	25 kg	525 2358
SOLVENT CF-CE	10 l	595 9163

## PACKAGING OF RUBBER SHEETS

The rubber sheets are wrapped with PE-separating sheets on cardboard cores, and packed freely suspend in stable, stackable card boxes, to avoid pressure points.

CHEMOLINE 5 B is manufactured by extrusion in the following standard sizes:

Size (Tolerances according EN 14879-4)	Product-No.
2 mm x 1100 mm x 10000 mm	528 3334
3 mm x 1100 mm x 10000 mm	528 3372
4 mm x 1100 mm x 10000 mm	528 3413
5 mm x 1100 mm x 10000 mm	528 3451
6 mm x 1100 mm x 10000 mm	528 3499

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. The rubber sheets must be stored free of pressure, best in the original packaging. The rubber sheets may not receive any pressure points. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
ADHESIVE TC 5000	5 - 20°C	12 Months
CHEMOLINE 5 B	≤ +5°C	6 Months
CHEMOLINE 5 B	≤ +25°C	1 Month
PRIMER PR 500-1	5 - 20°C	12 Months
PRIMER S 500-2	5 - 20°C	12 Months
SOLVENT CF-CE	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Polymer Base	ISO 1629	-	BIIR / CR
Abrasion	ISO 4649 (ASTM D5963)	mm <sup>3</sup>	≤ 225
Density	EN ISO 1183-1	g/cm <sup>3</sup>	1.32 ± 0.02
Hardness Shore A	ISO 7619-1 (ASTM D2240)	-	60 ± 5****
Surface Resistance	DIN IEC 60093	Ω	≥ 10 <sup>8</sup>
Elongation at Break	DIN 53504 (ASTM D412)	%	≥ 250***
Tensile Strength	DIN 53504 (ASTM D412)	N/mm <sup>2</sup>	≥ 4***
Peel Strength to Steel	ISO 813	N/mm	≥ 4
Thermal Conductivity	DIN 51046	W / m K	0.28
Water Vapour Permeability	DIN 53122	g/m <sup>2</sup> ·d	0.1***
Max. Continuous Operating Temperature	-	°C	+90
Temperature Range	-	°C	-30 up to +90

\* Press vulcanisation \*\*\* 4 mm rubber \*\*\*\* After complete vulcanisation under operating conditions

**Note:** The indicated temperatures are dependent on the present load and may vary

Information given in the fact sheet above corresponds to the current knowledge available to us regarding our products at the time of its drafting and is intended as a guideline for informational purposes. However, because of the multiple possibilities regarding possible applications, processing and on site conditions, any information given in the fact sheet above is not legally binding, in particular, without being limited to, such information shall not be interpreted as a warranty of merchantability or of fitness for a particular purpose. Customer therefore is advised to conduct its own testing or make an inquiry with our technical department before ordering. We reserve the right to change the product at any time, in particular, without being limited to, minor changes because of advancements in technology. If by way of exception, the information given in the fact sheet above is incorporated by reference into any contract concluded with us under German Law, such information, shall only be interpreted as determining the specific requirements of the contractual products as set out in § 434 BGB (German Civil Code) and shall not be interpreted as constituting a guarantee of condition.

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# PRODUCT INFORMATION

## CHEMOLINE 8

### PRODUCT DESCRIPTION

**CHEMOLINE 8** is a brown soft rubber lining based on Chlorosulfonated Poly Ethylene and Polyvinyl Chloride (CSM / PVC). **CHEMOLINE 8** is ideal for frequently changing chemicals.

### FIELDS OF APPLICATION

**CHEMOLINE 8** is used mainly for the workshop rubber lining of tank trucks, ISO containers (tank containers) and railroad tank wagons which are subject to the chemical load of varying chemicals in frequent cycles. Further applications are the lining of storage tanks, electroplating baths and chlorine electrolysis plants (cells).

### FEATURES

- Outstanding chemical resistance against mineral acids, bases, sodium hypochlorite and chromic acid
- Well suited for the use of alternate transportation goods (hydrochloric acid, caustic soda, chlorine bleach) as well as mixed and spent acids
- Application onto steel components
- Workshop rubber lining

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of non-ferrous metals, cast iron, ferrite or austenitic steel. Components to be rubber lined shall be designed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

Surfaces to be rubber lined must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 50 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate or the component must be air conditioned.

### ENVIRONMENTAL CONDITIONS

Throughout the rubber lining process, the temperatures of the substrate and rubber lining materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### ADHESIVE SYSTEM

**CHEMOLINE 8** is bonded onto steel components by using the two-coat primer system **PRIMER HG 1** & **PRIMER HG 2** in combination with **ADHESIVE TC 6000**. The seams are bonded with **ADHESIVE CHEMO 8 SOLUTION**. The seams of the **CHEMOLINE 8** sheets need to be chemically activated with Cyclohexanon prior to adhesive application.

### APPLICATION METHOD UND CONSUMPTION

During the application of the product, the application instruction must always be observed.

Coat	Product	Application Method	Coverage [g/m²]
1. Coat steel	<b>PRIMER HG 1</b>	Roll / Spray	ca. 150
2. Coat steel	<b>PRIMER HG 2</b>	Brush	ca. 150
3. Coat steel	<b>ADHESIVE TC 6000</b>	Brush	ca. 200
4. Coat steel	<b>ADHESIVE TC 6000</b>	Brush	ca. 200
1. Coat rubber	Cyclohexanon	Brush	ca. 100
2. Coat rubber	<b>ADHESIVE TC 6000</b>	Brush	ca. 200
Nahtbereich	<b>ADHESIVE CHEMO 8 SOLUTION</b>	Brush	ca. 15

### CLEANING

Clean all equipment with **SOLVENT CF-CE** immediately after use.

### VULCANISATION

The details given in the application instruction must be observed during vulcanisation.

Place	Vulcanisation Method
Workshop	Vulcanisation in an autoclave under pressure by means hot air or steam.

### SPARK TEST

The spark test (holiday test) of new rubber linings is carried out according to EN 14879-4 by using a high voltage tester. For carrying out the spark test, only the high voltage testers of Elmed model Isotest II RT or P as well as the test pistols of Wegener model WEG 20 or 22 or 100 are allowed.

CHEMOLINE 8	Test Voltage [kV/mm]	Max. Test Voltage [kV]
unvulcanised	5.0	20.0
vulcanised	5.0	20.0

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# CHEMOLINE 8

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
ADHESIVE CHEMO 8 SOLUTION	0.75 kg	525 4180
ADHESIVE CHEMO 8 SOLUTION	4.5 kg	525 4190
ADHESIVE CHEMO 8 SOLUTION	9 kg	525 4167
ADHESIVE TC 6000	9 kg	525 2200
PRIMER HG 1	0.75 kg	525 2949
PRIMER HG 1	4.5 kg	525 3050
PRIMER HG 1	9 kg	525 2956
PRIMER HG 2	0.75 kg	525 2970
PRIMER HG 2	4.5 kg	525 3060
PRIMER HG 2	9 kg	525 2987
SOLVENT CF-CE	10 l	595 9163

## PACKAGING OF RUBBER SHEETS

The rubber sheets are wrapped with PE-separating sheets on cardboard cores, and packed freely suspended in stable, stackable card boxes, to avoid pressure points.

**CHEMOLINE 8** is manufactured by extrusion in the following standard sizes:

Size (Tolerances according EN 14879-4)	Product-No.
2 mm x 1100 mm x 10000 mm	528 3736
3 mm x 1100 mm x 10000 mm	528 3774
4 mm x 1100 mm x 10000 mm	528 3815
5 mm x 1100 mm x 10000 mm	528 3853
6 mm x 1100 mm x 10000 mm	528 3891

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. The rubber sheets must be stored free of pressure, best in the original packaging. The rubber sheets may not receive any pressure points. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
ADHESIVE CHEMO 8 SOLUTION	≤ +20°C	12 Months
ADHESIVE TC 6000	5 - 25°C	3 Months
CHEMOLINE 8	≤ +25°C	6 Months
CHEMOLINE 8	≤ +5°C	12 Months
PRIMER HG 1	5 - 20°C	12 Months
PRIMER HG 2	5 - 20°C	12 Months
SOLVENT CF-CE	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Polymer Base	ISO 1629	-	CSM / PVC
Density	EN ISO 1183-1	g/cm <sup>3</sup>	1.20 ± 0.02
Contact Resistance	DIN IEC 60093	Ω · cm	1.5 x 10 <sup>11</sup>
Hardness Shore A	ISO 7619-1 (ASTM D2240)	-	65 ± 5**
Max. Surface Pressure	-	N/mm <sup>2</sup>	2
Surface Resistance	DIN IEC 60093	Ω	4.5 x 10 <sup>11</sup>
Elongation at Break	DIN 53504 (ASTM D412)	%	≥ 300***
Tensile Strength	DIN 53504 (ASTM D412)	N/mm <sup>2</sup>	≥ 8***
Impact Resilience	DIN 53512 (ASTM D1054)	%	≥ 20*
Peel Strength to Steel	ISO 813	N/mm	≥ 4
Max. Continuous Operating Temperature	-	°C	+80
Temperature Range	-	°C	-20 up to +80

\* Press vulcanisation \*\* Autoclave vulcanisation \*\*\* 4 mm rubber

**Note:** The indicated temperatures are dependent on the present load and may vary

Information given in the fact sheet above corresponds to the current knowledge available to us regarding our products at the time of its drafting and is intended as a guideline for informational purposes. However, because of the multiple possibilities regarding possible applications, processing and on site conditions, any information given in the fact sheet above is not legally binding, in particular, without being limited to, such information shall not be interpreted as a warranty of merchantability or of fitness for a particular purpose. Customer therefore is advised to conduct its own testing or make an inquiry with our technical department before ordering. We reserve the right to change the product at any time, in particular, without being limited to, minor changes because of advancements in technology. If by way of exception, the information given in the fact sheet above is incorporated by reference into any contract concluded with us under German Law, such information, shall only be interpreted as determining the specific requirements of the contractual products as set out in § 434 BGB (German Civil Code) and shall not be interpreted as constituting a guarantee of condition.

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# PRODUCT INFORMATION

## CHEMOLINE 8 CN

### PRODUCT DESCRIPTION

**CHEMOLINE 8 CN** is an already vulcanised brown soft rubber lining based on Chlorosulfonated Polyethylene and Polyvinyl Chloride (CSM / PVC), which is equipped with an easy to bond, reactive bonding layer. **CHEMOLINE 8 CN** can be loaded directly without further vulcanisation.

### FIELDS OF APPLICATION

**CHEMOLINE 8 CN** is used mainly for on-site rubber linings of steel and concrete components which are exposed to chemical loads. The field of applications are chemical plants, chlorine and steel industries and electroplating. Some typical examples of applications are the lining of storage tanks, electroplating baths and chlorine electrolysis plants (cells).

### FEATURES

- Outstanding chemical resistance against mineral acids, bases, sodium hypochlorite and chromic acid
- Application onto steel and concrete components
- Can be exposed to the operation conditions right after the application
- On site rubber lining

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of non-ferrous metals, cast iron, ferrite or austenitic steel, concrete, screed or plaster. Components to be rubber lined shall be designed and manufactured in accordance with EN 14879-1. For components made of concrete, screed or plaster DIN 1045 must also be observed.

### SURFACE PRE-TREATMENT

#### C-STEEL

Surfaces to be rubber lined must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 50 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate or the component must be air conditioned.

#### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup> and minimum compressive strength of 25 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%. Generally the concrete surface must be smoothed prior to rubber lining application by applying an Epoxy resin based mortar coat. This coat should be conductive to enable a subsequent spark test (**REMAFIX C**).

### ENVIRONMENTAL CONDITIONS

Throughout the rubber lining process, the temperatures of the substrate and rubber lining materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### ADHESIVE SYSTEM

**CHEMOLINE 8 CN** is bonded on steel or concrete components by using the primer system **PRIMER PR 304** in combination with the adhesive system Cement **BC 3004** with 4% **HARDENER E 40**.

### APPLICATION METHOD UND CONSUMPTION

During the application of the product, the application instruction must always be observed.

Coat	Product	Application Method	Coverage [g/m <sup>2</sup> ]
1. Coat steel	<b>PRIMER PR 304</b>	Roll / Spray	ca. 150
2. Coat steel	<b>CEMENT BC 3004</b>	Roll	ca. 200
3. Coat steel	<b>CEMENT BC 3004</b>	Brush	ca. 200
1. Coat rubber	<b>CEMENT BC 3004</b>	Brush	ca. 200

If **PRIMER PR 304** is applied by airless spray, **PRIMER PR 304** must be diluted with **SOLVENT CE** in a mixing ratio of 1:1

### CLEANING

Clean all equipment with **SOLVENT CF-CE** immediately after use.

### VULCANISATION

Due to the already completed vulcanisation at the workshop, no further thermal treatment is longer necessary.

### SPARK TEST

The spark test (holiday test) of new rubber linings is carried out according EN 14879-4 by using a high voltage tester. For carrying out the spark test, only the high voltage testers of Elmed model Isotest II RT or P as well as the test pistols of Wegener model WEG 20 or 22 or 100 are allowed.

CHEMOLINE 8 CN	Test Voltage [kV/mm]	Max. Test Voltage [kV]
vulcanised	5.0	20.0

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# CHEMOLINE 8 CN

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
CEMENT BC 3004	4.5 kg	525 4095
CEMENT BC 3004	9 kg	525 4143
CEMENT BC 3004	18 kg	525 4130
HARDENER E 40	30 g	525 1067
PRIMER PR 304	0.75 kg	525 4112
PRIMER PR 304	10 kg	525 4150
SOLVENT CF-CE	10 l	595 9163

## PACKAGING OF RUBBER SHEETS

The rubber sheets are wrapped with PE-separating sheets on cardboard cores, and packed freely suspend in stable, stackable card boxes, to avoid pressure points.

CHEMOLINE 8 CN is manufactured by extrusion in the following standard sizes:

Size (Tolerances according EN 14879-4)	Product-No.
3 mm x 1100 mm x 10000 mm	528 8047
4 mm x 1100 mm x 10000 mm	528 8054
5 mm x 1100 mm x 10000 mm	528 8061
6 mm x 1100 mm x 10000 mm	528 8078

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. The rubber sheets must be stored free of pressure, best in the original packaging. The rubber sheets may not receive any pressure points. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
CEMENT BC 3004	5 - 25°C	24 Months
CHEMOLINE 8 CN	≤ +30°C	24 Months
PRIMER PR 304	5 - 25°C	12 Months
SOLVENT CF-CE	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Polymer Base	ISO 1629	-	CSM / PVC
Density	EN ISO 1183-1	g/cm <sup>3</sup>	1.20 ± 0.02
Hardness Shore A	ISO 7619-1 (ASTM D2240)	-	65 ± 5**
Max. Surface Pressure	-	N/mm <sup>2</sup>	2
Elongation at Break	DIN 53504 (ASTM D412)	%	≥ 300***
Tensile Strength	DIN 53504 (ASTM D412)	N/mm <sup>2</sup>	≥ 6***
Impact Resilience	DIN 53512 (ASTM D1054)	%	≥ 20
Peel Strength to Steel	ISO 813	N/mm	≥ 4
Max. Continuous Operating Temperature	-	°C	+80
Temperature Range	-	°C	-20 up to +80

\*\* Autoclave vulcanisation \*\*\* 4 mm rubber

**Note:** The indicated temperatures are dependent on the present load and may vary

Information given in the fact sheet above corresponds to the current knowledge available to us regarding our products at the time of its drafting and is intended as a guideline for informational purposes. However, because of the multiple possibilities regarding possible applications, processing and on site conditions, any information given in the fact sheet above is not legally binding, in particular, without being limited to, such information shall not be interpreted as a warranty of merchantability or of fitness for a particular purpose. Customer therefore is advised to conduct its own testing or make an inquiry with our technical department before ordering. We reserve the right to change the product at any time, in particular, without being limited to, minor changes because of advancements in technology. If by way of exception, the information given in the fact sheet above is incorporated by reference into any contract concluded with us under German Law, such information, shall only be interpreted as determining the specific requirements of the contractual products as set out in § 434 BGB (German Civil Code) and shall not be interpreted as constituting a guarantee of condition.

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# PRODUCT INFORMATION

## CHEMOLINE 8 FL

### PRODUCT DESCRIPTION

**CHEMOLINE 8 FL** is a brown soft rubber lining for flange sealing surfaces based on Chlorosulfonated Polyethylene and Polyvinyl Chloride (CSM / PVC).

### FIELDS OF APPLICATION

**CHEMOLINE 8 FL** is used mainly for rubber lining of flange surfaces and seals.

### FEATURES

- Outstanding chemical resistance against mineral acids, bases, sodium hypochlorite and chromic acid
- Well suited for the use of alternate transportation goods (hydrochloric acid, caustic soda, chlorine bleach) as well as mixed and spent acids
- Application onto steel components
- Workshop rubber lining

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of non-ferrous metals, cast iron, ferrite or austenitic steel. Components to be rubber lined shall be designed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

Surfaces to be rubber lined must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 50 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate or the component must be air conditioned.

### ENVIRONMENTAL CONDITIONS

Throughout the rubber lining process, the temperatures of the substrate and rubber lining materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### ADHESIVE SYSTEM

**CHEMOLINE 8 FL** is bonded onto steel components by using the two-coat primer system **PRIMER HG 1 & PRIMER HG 2** in combination with **ADHESIVE TC 6000**. The seams are bonded with **ADHESIVE CHEMO 8 SOLUTION**. The seams of the **CHEMOLINE 8** sheets need to be chemically activated with Cyclohexanon prior to adhesive application.

### APPLICATION METHOD UND CONSUMPTION

During the application of the product, the application instruction must always be observed.

Coat	Product	Application Method	Coverage [g/m²]
1. Coat steel	<b>PRIMER HG 1</b>	Roll / Spray	ca. 150
2. Coat steel	<b>PRIMER HG 2</b>	Brush	ca. 150
3. Coat steel	<b>ADHESIVE TC 6000</b>	Brush	ca. 200
4. Coat steel	<b>ADHESIVE TC 6000</b>	Brush	ca. 200
1. Coat rubber	Cyclohexanon	Brush	ca. 100
2. Coat rubber	<b>ADHESIVE TC 6000</b>	Brush	ca. 200
Nahtbereich	<b>ADHESIVE CHEMO 8 SOLUTION</b>	Brush	ca. 15

### CLEANING

Clean all equipment with **SOLVENT CF-CE** immediately after use.

### VULCANISATION

The details given in the application instruction must be observed during vulcanisation.

Place	Vulcanisation Method
Workshop	Vulcanisation in an autoclave under pressure by means hot air or steam.

### SPARK TEST

The spark test (holiday test) of new rubber linings is carried out according to EN 14879-4 by using a high voltage tester. For carrying out the spark test, only the high voltage testers of Elmed model Isotest II RT or P as well as the test pistols of Wegener model WEG 20 or 22 or 100 are allowed.

CHEMOLINE 8 FL	Test Voltage [kV/mm]	Max. Test Voltage [kV]
unvulcanised	5.0	20.0
vulcanised	5.0	20.0

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# CHEMOLINE 8 FL

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
ADHESIVE CHEMO 8 SOLUTION	0.75 kg	525 4180
ADHESIVE CHEMO 8 SOLUTION	4.5 kg	525 4190
ADHESIVE CHEMO 8 SOLUTION	9 kg	525 4167
ADHESIVE TC 6000	9 kg	525 2200
PRIMER HG 1	0.75 kg	525 2949
PRIMER HG 1	4.5 kg	525 3050
PRIMER HG 1	9 kg	525 2956
PRIMER HG 2	0.75 kg	525 2970
PRIMER HG 2	4.5 kg	525 3060
PRIMER HG 2	9 kg	525 2987
SOLVENT CF-CE	10 l	595 9163

## PACKAGING OF RUBBER SHEETS

The rubber sheets are wrapped with PE-separating sheets on cardboard cores, and packed freely suspended in stable, stackable card boxes, to avoid pressure points.

**CHEMOLINE 8 FL** is manufactured by extrusion in the following standard sizes:

Size (Tolerances according EN 14879-4)	Product-No.
4 mm x 1100 mm x 10000 mm	528 3700
5 mm x 1100 mm x 10000 mm	528 3710
6 mm x 1100 mm x 10000 mm	528 3720

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. The rubber sheets must be stored free of pressure, best in the original packaging. The rubber sheets may not receive any pressure points. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
ADHESIVE CHEMO 8 SOLUTION	≤ +20°C	12 Months
ADHESIVE TC 6000	5 - 25°C	3 Months
CHEMOLINE 8 FL	≤ +25°C	6 Months
CHEMOLINE 8 FL	≤ +5°C	12 Months
PRIMER HG 1	5 - 20°C	12 Months
PRIMER HG 2	5 - 20°C	12 Months
SOLVENT CF-CE	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Polymer Base	ISO 1629	-	CSM / PVC
Density	EN ISO 1183-1	g/cm <sup>3</sup>	1.22 ± 0.02
Contact Resistance	DIN IEC 60093	Ω · cm	1.5 x 10 <sup>11</sup>
Hardness Shore A	ISO 7619-1 (ASTM D2240)	-	85 ± 5**
Max. Surface Pressure	-	N/mm <sup>2</sup>	3
Surface Resistance	DIN IEC 60093	Ω	4.5 x 10 <sup>11</sup>
Elongation at Break	DIN 53504 (ASTM D412)	%	≥ 200***
Tensile Strength	DIN 53504 (ASTM D412)	N/mm <sup>2</sup>	≥ 6***
Impact Resilience	DIN 53512 (ASTM D1054)	%	≥ 20*
Peel Strength to Steel	ISO 813	N/mm	≥ 4
Max. Continuous Operating Temperature	-	°C	+80
Temperature Range	-	°C	-20 up to +80

\* Press vulcanisation \*\* Autoclave vulcanisation \*\*\* 4 mm rubber

**Note:** The indicated temperatures are dependent on the present load and may vary

Information given in the fact sheet above corresponds to the current knowledge available to us regarding our products at the time of its drafting and is intended as a guideline for informational purposes. However, because of the multiple possibilities regarding possible applications, processing and on site conditions, any information given in the fact sheet above is not legally binding, in particular, without being limited to, such information shall not be interpreted as a warranty of merchantability or of fitness for a particular purpose. Customer therefore is advised to conduct its own testing or make an inquiry with our technical department before ordering. We reserve the right to change the product at any time, in particular, without being limited to, minor changes because of advancements in technology. If by way of exception, the information given in the fact sheet above is incorporated by reference into any contract concluded with us under German Law, such information, shall only be interpreted as determining the specific requirements of the contractual products as set out in § 434 BGB (German Civil Code) and shall not be interpreted as constituting a guarantee of condition.

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# PRODUCT INFORMATION

## CHEMOLINE 10

### PRODUCT DESCRIPTION

**CHEMOLINE 10** is a pre-vulcanised black soft rubber lining based on Chlorobutyl and Chloroprene rubber (CIIR / CR). **CHEMOLINE 10** can be loaded directly without further vulcanisation.

### FIELDS OF APPLICATION

**CHEMOLINE 10** is used mainly for on-site rubber linings of steel and concrete components which are exposed to chemical loads. The field of applications are chemical plants, chlorine and steel industries and mineral processing plants. Some typical examples of applications are the lining of storage tanks and agitated tanks. The main application field of **CHEMOLINE 10** is the corrosion protection in phosphoric acid plants.

### FEATURES

- Strong chemical resistance against mineral acids and bases
- Application onto steel and concrete components
- Can be exposed to the operation conditions right after the application
- On site rubber lining

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of non-ferrous metals, cast iron, ferrite or austenitic steel, concrete, screed or plaster. Components to be rubber lined shall be designed and manufactured in accordance with EN 14879-1. For components made of concrete, screed or plaster DIN 1045 must also be observed.

### SURFACE PRE-TREATMENT

#### C-STEEL

Surfaces to be rubber lined must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 50 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate or the component must be air conditioned.

#### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup> and minimum compressive strength of 25 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%. Generally the concrete surface must be smoothed prior to rubber lining application by applying an Epoxy resin based mortar coat. This coat should be conductive to enable a subsequent spark test (**REMAFIX C**).

### ENVIRONMENTAL CONDITIONS

Throughout the rubber lining process, the temperatures of the substrate and rubber lining materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### ADHESIVE SYSTEM

**CHEMOLINE 10** is bonded on steel or concrete components by using the primer system **PRIMER PR 304** in combination with the adhesive system **CEMENT BC 3004** with 4% **HARDENER E 40**.

### APPLICATION METHOD UND CONSUMPTION

During the application of the product, the application instruction must always be observed.

Coat	Product	Application Method	Coverage [g/m <sup>2</sup> ]
1. Coat steel	<b>PRIMER PR 304</b>	Roll / Spray	ca. 150
2. Coat steel	<b>CEMENT BC 3004</b>	Roll	ca. 200
3. Coat steel	<b>CEMENT BC 3004</b>	Brush	ca. 200
1. Coat rubber	<b>CEMENT BC 3004</b>	Brush	ca. 200
2. Coat rubber	<b>CEMENT BC 3004</b>	Brush	ca. 200

If **PRIMER PR 304** is applied by airless spray, **PRIMER PR 304** must be diluted with **SOLVENT CE** in a mixing ratio of 1:1

### CLEANING

Clean all equipment with **SOLVENT CF-CE** immediately after use.

### VULCANISATION

Due to the already completed vulcanisation at the workshop, no further thermal treatment is longer necessary.

### SPARK TEST

The spark test (holiday test) of new rubber linings is carried out according EN 14879-4 by using a high voltage tester. For carrying out the spark test, only the high voltage testers of Elmed model Isotest II RT or P as well as the test pistols of Wegener model WEG 20 or 22 or 100 are allowed.

CHEMOLINE 10	Test Voltage [kV/mm]	Max. Test Voltage [kV]
vulcanised	2.5	12.5

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# CHEMOLINE 10

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
CEMENT BC 3004	4.5 kg	525 4095
CEMENT BC 3004	9 kg	525 4143
CEMENT BC 3004	18 kg	525 4130
HARDENER E 40	30 g	525 1067
PRIMER PR 304	0.75 kg	525 4112
PRIMER PR 304	10 kg	525 4150
SOLVENT CF-CE	10 l	595 9163

## PACKAGING OF RUBBER SHEETS

The rubber sheets are wrapped with PE-separating sheets on cardboard cores, and packed freely suspend in stable, stackable card boxes, to avoid pressure points.

**CHEMOLINE 10** is manufactured by extrusion in the following standard sizes:

Size (Tolerances according EN 14879-4)	Product-No.
3 mm x 1100 mm x 10000 mm	528 3970
4 mm x 1100 mm x 10000 mm	528 4230
5 mm x 1100 mm x 10000 mm	528 4247
6 mm x 1100 mm x 10000 mm	528 4254

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. The rubber sheets must be stored free of pressure, best in the original packaging. The rubber sheets may not receive any pressure points. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
CEMENT BC 3004	5 - 25°C	24 Months
CHEMOLINE 10	≤ +25°C	18 Months
PRIMER PR 304	5 - 25°C	12 Months
SOLVENT CF-CE	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Polymer Base	ISO 1629	-	CIIR / CR
Density	EN ISO 1183-1	g/cm <sup>3</sup>	1.30 ± 0.02
Contact Resistance	DIN IEC 60093	Ω · cm	5.0 x 10 <sup>7</sup>
Hardness Shore A	ISO 7619-1 (ASTM D2240)	-	50 ± 5**
Max. Surface Pressure	-	N/mm <sup>2</sup>	1
Surface Resistance	DIN IEC 60093	Ω	1.5 x 10 <sup>8</sup>
Elongation at Break	DIN 53504 (ASTM D412)	%	≥ 400***
Tensile Strength	DIN 53504 (ASTM D412)	N/mm <sup>2</sup>	≥ 2***
Impact Resilience	DIN 53512 (ASTM D1054)	%	≥ 18
Peel Strength to Steel	ISO 813	N/mm	≥ 3
Max. Continuous Operating Temperature	-	°C	+85
Temperature Range	-	°C	-40 up to +85

\*\* Autoclave vulcanisation \*\*\* 4 mm rubber

**Note:** The indicated temperatures are dependent on the present load and may vary

Information given in the fact sheet above corresponds to the current knowledge available to us regarding our products at the time of its drafting and is intended as a guideline for informational purposes. However, because of the multiple possibilities regarding possible applications, processing and on site conditions, any information given in the fact sheet above is not legally binding, in particular, without being limited to, such information shall not be interpreted as a warranty of merchantability or of fitness for a particular purpose. Customer therefore is advised to conduct its own testing or make an inquiry with our technical department before ordering. We reserve the right to change the product at any time, in particular, without being limited to, minor changes because of advancements in technology. If by way of exception, the information given in the fact sheet above is incorporated by reference into any contract concluded with us under German Law, such information, shall only be interpreted as determining the specific requirements of the contractual products as set out in § 434 BGB (German Civil Code) and shall not be interpreted as constituting a guarantee of condition.

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# PRODUCT INFORMATION

## CHEMOLINE 10 M

### PRODUCT DESCRIPTION

**CHEMOLINE 10 M** is an unvulcanised soft rubber lining based on Chlorobutyl and Chloroprene rubber (CIIR / CR)

### FIELDS OF APPLICATION

**CHEMOLINE 10 M** is used mainly as a membrane (sealing layer) on concrete structures under ceramic brick / tile linings.

### FEATURES

- Application onto concrete components
- On site rubber lining

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of non-ferrous metals, cast iron, ferrite or austenitic steel, concrete, screed or plaster. Components to be rubber lined shall be designed and manufactured in accordance with EN 14879-1. For components made of concrete, screed or plaster DIN 1045 must also be observed.

### SURFACE PRE-TREATMENT

#### C-STEEL

Surfaces to be rubber lined must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 50 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate or the component must be air conditioned.

#### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup> and minimum compressive strength of 25 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%. Generally the concrete surface must be smoothed prior to rubber lining application by applying an Epoxy resin based mortar coat. This coat should be conductive to enable a subsequent spark test (**REMAFIX C**).

### ENVIRONMENTAL CONDITIONS

Throughout the rubber lining process, the temperatures of the substrate and rubber lining materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### ADHESIVE SYSTEM

**CHEMOLINE 10 M** is bonded on steel or concrete components by using the primer system **PRIMER PR 304** in combination with the adhesive system **CEMENT BC 3004** with 4% **HARDENER E 40**.

### APPLICATION METHOD UND CONSUMPTION

During the application of the product, the application instruction must always be observed.

Coat	Product	Application Method	Coverage [g/m <sup>2</sup> ]
1. Coat steel	<b>PRIMER PR 304</b>	Roll / Spray	ca. 150
2. Coat steel	<b>CEMENT BC 3004</b>	Roll	ca. 200
3. Coat steel	<b>CEMENT BC 3004</b>	Brush	ca. 200
1. Coat rubber	<b>CEMENT BC 3004</b>	Brush	ca. 200
2. Coat rubber	<b>CEMENT BC 3004</b>	Brush	ca. 200

If **PRIMER PR 304** is applied by airless spray, **PRIMER PR 304** must be diluted with **SOLVENT CE** in a mixing ratio of 1:1

### CLEANING

Clean all equipment with **SOLVENT CF-CE** immediately after use.

### VULCANISATION

The details given in the application instruction must be observed during vulcanisation.

Place	Vulcanisation Method
On Site	Self-vulcanisation

### SPARK TEST

The spark test (holiday test) of new rubber linings is carried out according EN 14879-4 by using a high voltage tester. For carrying out the spark test, only the high voltage testers of Elmed model Isotest II RT or P as well as the test pistols of Wegener model WEG 20 or 22 or 100 are allowed.

CHEMOLINE 10 M	Test Voltage [kV/mm]	Max. Test Voltage [kV]
unvulcanised	2.5	-
vulcanised	2.5	-

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# CHEMOLINE 10 M

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
CEMENT BC 3004	4.5 kg	525 4095
CEMENT BC 3004	9 kg	525 4143
CEMENT BC 3004	18 kg	525 4130
HARDENER E 40	30 g	525 1067
PRIMER PR 304	0.75 kg	525 4112
PRIMER PR 304	10 kg	525 4150
SOLVENT CF-CE	10 l	595 9163

## PACKAGING OF RUBBER SHEETS

The rubber sheets are wrapped with PE-separating sheets on cardboard cores, and packed freely suspend in stable, stackable card boxes, to avoid pressure points.

**CHEMOLINE 10 M** is manufactured by extrusion in the following standard sizes:

Size (Tolerances according EN 14879-4)	Product-No.
2 mm x 1100 mm x 20.000 mm	529 4100

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. The rubber sheets must be stored free of pressure, best in the original packaging. The rubber sheets may not receive any pressure points. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
CEMENT BC 3004	5 - 25°C	24 Months
<b>CHEMOLINE 10 M</b>	≤ +25°C	18 Months
PRIMER PR 304	5 - 25°C	12 Months
SOLVENT CF-CE	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Polymer Base	ISO 1629	-	CIIR / CR
Density	EN ISO 1183-1	g/cm <sup>3</sup>	1.30 ± 0.02
Contact Resistance	DIN IEC 60093	Ω · cm	5.0 x 10 <sup>7</sup>
Hardness Shore A	ISO 7619-1 (ASTM D2240)	-	60 ± 5*****
Max. Surface Pressure	-	N/mm <sup>2</sup>	2
Surface Resistance	DIN IEC 60093	Ω	1.5 x 10 <sup>8</sup>
Elongation at Break	DIN 53504 (ASTM D412)	%	≥ 300***
Tensile Strength	DIN 53504 (ASTM D412)	N/mm <sup>2</sup>	≥ 4***
Peel Strength to Steel	ISO 813	N/mm	≥ 3
Max. Continuous Operating Temperature	-	°C	+85
Temperature Range	-	°C	-40 up to +85

\*\*\* 4 mm rubber \*\*\*\*\* After complete curing

**Note:** The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## CHEMOLINE 12

### PRODUCT DESCRIPTION

**CHEMOLINE 12** is a black soft rubber lining based on Chlorobutyl rubber (CIIR).

### FIELDS OF APPLICATION

**CHEMOLINE 12** is developed specifically for the workshop rubber lining of chemically loaded steel components in the drinking water and food industry. The field of applications are drinking water plants, swimming and bathing pools, water treatment facilities and chemical industry. Some typical examples of applications are the rubber linings of water preparation vessels for swimming pools, storage tanks and agitated tanks, basins, pipe spools as well as various vessels in the phosphoric acid industry.

### APPROVALS & CERTIFICATES

- KSW-Certificate
- KTW-Certificate for cold water in the categories B, C, D1 and D2
- Certificate according DVGW - worksheet W 270
- BS 6920 (British Standard) => WRAS-listing
- Certificate of suitability for aqueous food in accordance with the guidelines CFR 21§ 177.2600 of the Food and Drug Administration (FDA)

### FEATURES

- Strong resistance against mineral acids, bases and polar solvents
- Excellent diffusion resistance against gases like sulphur dioxide, nitrogen oxides, and saturated water vapour
- High insulation resistance
- Application onto steel components
- Workshop rubber lining

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of non-ferrous metals, cast iron, ferrite or austenitic steel. Components to be rubber lined shall be designed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

Surfaces to be rubber lined must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 50 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate or the component must be air conditioned.

### ENVIRONMENTAL CONDITIONS

Throughout the rubber lining process, the temperatures of the substrate and rubber lining materials shall be maintained

within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### ADHESIVE SYSTEM

The **CHEMOLINE 12** is bonded onto steel components by using the two-coat primer system **PRIMER PR 500-1** & **PRIMER S 500-2** in combination with **ADHESIVE TC 5000**.

### APPLICATION METHOD UND CONSUMPTION

During the application of the product, the application instruction must always be observed.

Coat	Product	Application Method	Coverage [g/m²]
1. Coat steel	<b>PRIMER PR 500-1</b>	Roll / Spray	ca. 150
2. Coat steel	<b>PRIMER S 500-2</b>	Brush	ca. 125
3. Coat steel	<b>ADHESIVE TC 5000</b>	Roll	ca. 200
4. Coat steel	<b>ADHESIVE TC 5000</b>	Brush	ca. 200
1. Coat rubber	<b>ADHESIVE TC 5000</b>	Brush	ca. 200

### CLEANING

Clean all equipment with **SOLVENT CF-CE** immediately after use.

### VULCANISATION

The details given in the application instruction must be observed during vulcanisation.

Place	Vulcanisation Method
Workshop	Vulcanisation in an autoclave under pressure by means hot air or steam.

### SPARK TEST

The spark test (holiday test) of new rubber linings is carried out according EN 14879-4 by using a high voltage tester. For carrying out the spark test, only the high voltage testers of Elmed model Isotest II RT or P as well as the test pistols of Wegener model WEG 20 or 22 or 100 are allowed.

CHEMOLINE 12	Test Voltage [kV/mm]	Max. Test Voltage [kV]
unvulcanised	3.0	15.0
vulcanised	3.0	15.0

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# CHEMOLINE 12

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
ADHESIVE TC 5000	9 kg	525 2286
ADHESIVE TC 5000	25 kg	525 2224
PRIMER PR 500-1	0.75 kg	525 2303
PRIMER PR 500-1	4.5 kg	525 2470
PRIMER PR 500-1	9 kg	525 2327
PRIMER PR 500-1	25 kg	525 2334
PRIMER S 500-2	0.75 kg	525 2310
PRIMER S 500-2	9 kg	525 2341
PRIMER S 500-2	25 kg	525 2358
SOLVENT CF-CE	10 l	595 9163

## PACKAGING OF RUBBER SHEETS

The rubber sheets are wrapped with PE-separating sheets on cardboard cores, and packed freely suspend in stable, stackable card boxes, to avoid pressure points.

CHEMOLINE 12 is manufactured by extrusion in the following standard sizes:

Size (Tolerances according EN 14879-4)	Product-No.
2 mm x 1100 mm x 10000 mm	528 2250
3 mm x 1100 mm x 10000 mm	528 2260
4 mm x 1100 mm x 10000 mm	528 2270
5 mm x 1100 mm x 10000 mm	528 2280
6 mm x 1100 mm x 10000 mm	528 2290

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. The rubber sheets must be stored free of pressure, best in the original packaging. The rubber sheets may not receive any pressure points. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
ADHESIVE TC 5000	5 - 20°C	12 Months
CHEMOLINE 12	≤ +25°C	6 Months
CHEMOLINE 12	≤ +5°C	12 Months
PRIMER PR 500-1	5 - 20°C	12 Months
PRIMER S 500-2	5 - 20°C	12 Months
SOLVENT CF-CE	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Polymer Base	ISO 1629	-	CIIR
Abrasion	ISO 4649 (ASTM D5963)	mm <sup>3</sup>	≤ 300*
Density	EN ISO 1183-1	g/cm <sup>3</sup>	1.08 ± 0.02
Hardness Shore A	ISO 7619-1 (ASTM D2240)	-	50 ± 5**
Max. Surface Pressure	-	N/mm <sup>2</sup>	2
Surface Resistance	DIN IEC 60093	Ω	≥ 10 <sup>11</sup>
Elongation at Break	DIN 53504 (ASTM D412)	%	≥ 300***
Tensile Strength	DIN 53504 (ASTM D412)	N/mm <sup>2</sup>	≥ 8***
Impact Resilience	DIN 53512 (ASTM D1054)	%	≥ 8*
Peel Strength to Steel	ISO 813	N/mm	≥ 4
Max. Continuous Operating Temperature	-	°C	+85
Temperature Range	-	°C	-40 up to +85

\* Press vulcanisation \*\* Autoclave vulcanisation \*\*\* 4 mm rubber

**Note:** The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## CHEMOLINE 12 CN

### PRODUCT DESCRIPTION

**CHEMOLINE 12 CN** is an already vulcanised black soft rubber lining based on Chlorobutyl rubber (CIIR), which is equipped with an easy to bond, reactive bonding layer. **CHEMOLINE 12 CN** can be loaded directly without further vulcanisation.

### FIELDS OF APPLICATION

**CHEMOLINE 12 CN** is developed specifically for the on-site rubber lining of chemically loaded steel or concrete components in drinking water and food industry. The field of applications are mainly drinking water manufacture, water treatment facilities, and chemical industry. Some typical examples of applications are the linings of storage tanks and agitated tanks, basins, pipe spools as well as various vessels in the phosphoric acid industry.

### APPROVALS & CERTIFICATES

- KSW-Certificate
- KTW-Certificate for cold water in the categories B, C, D1 and D2
- Certificate according DVGW - worksheet W 270
- BS 6920 (British Standard) => WRAS-listing
- Certificate of suitability for aqueous food in accordance with the guidelines CFR 21§ 177.2600 of the Food and Drug Administration (FDA)

### FEATURES

- Strong resistance against mineral acids, bases and polar solvents
- Excellent diffusion resistance against gases like sulphur dioxide, nitrogen oxides, and saturated water vapour
- High insulation resistance
- Application onto steel and concrete components
- Can be exposed to the operation conditions right after the application
- On site rubber lining

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of non-ferrous metals, cast iron, ferrite or austenitic steel, concrete, screed or plaster. Components to be rubber lined shall be designed and manufactured in accordance with EN 14879-1. For components made of concrete, screed or plaster DIN 1045 must also be observed.

### SURFACE PRE-TREATMENT C-STEEL

Surfaces to be rubber lined must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502. Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 50 microns is required. To prevent flash rust,

the primer must be applied immediately after the blasting and cleaning of the substrate or the component must be air conditioned.

### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup> and minimum compressive strength of 25 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%. Generally the concrete surface must be smoothed prior to rubber lining application by applying an Epoxy resin based mortar coat. This coat should be conductive to enable a subsequent spark test (**REMAFIX C**).

### ENVIRONMENTAL CONDITIONS

Throughout the rubber lining process, the temperatures of the substrate and rubber lining materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### ADHESIVE SYSTEM

**CHEMOLINE 12 CN** is bonded on steel or concrete components by using the primer system **PRIMER PR 304** in combination with the adhesive system **CEMENT BC 3004** with 4% **HARDENER E 40**.

### APPLICATION METHOD UND CONSUMPTION

During the application of the product, the application instruction must always be observed.

Coat	Product	Application Method	Coverage [g/m <sup>2</sup> ]
1. Coat steel	<b>PRIMER PR 304</b>	Roll / Spray	ca. 150
2. Coat steel	<b>CEMENT BC 3004</b>	Roll	ca. 200
3. Coat steel	<b>CEMENT BC 3004</b>	Brush	ca. 200
1. Coat rubber	<b>CEMENT BC 3004</b>	Brush	ca. 200

If **PRIMER PR 304** is applied by airless spray, **PRIMER PR 304** must be diluted with **SOLVENT CE** in a mixing ratio of 1:1

### CLEANING

Clean all equipment with **SOLVENT CF-CE** immediately after use.

### VULCANISATION

Due to the already completed vulcanisation at the workshop, no further thermal treatment is longer necessary.

### SPARK TEST

The spark test (holiday test) of new rubber linings is carried out according EN 14879-4 by using a high voltage tester. For carrying out the spark test, only the high voltage testers of Elmed model Isotest II RT or P as well as the test pistols of Wegener model WEG 20 or 22 or 100 are allowed.

CHEMOLINE 12 CN	Test Voltage [kV/mm]	Max. Test Voltage [kV]
vulcanised	3.0	15.0

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# CHEMOLINE 12 CN

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
CEMENT BC 3004	4.5 kg	525 4095
CEMENT BC 3004	9 kg	525 4143
CEMENT BC 3004	18 kg	525 4130
HARDENER E 40	30 g	525 1067
PRIMER PR 304	0.75 kg	525 4112
PRIMER PR 304	10 kg	525 4150
SOLVENT CF-CE	10 l	595 9163

## PACKAGING OF RUBBER SHEETS

The rubber sheets are wrapped with PE-separating sheets on cardboard cores, and packed freely suspended in stable, stackable card boxes, to avoid pressure points.

CHEMOLINE 12 CN is manufactured by extrusion in the following standard sizes:

Size (Tolerances according EN 14879-4)	Product-No.
2 mm x 1100 mm x 10000 mm	528 2370
3 mm x 1100 mm x 10000 mm	528 2300
4 mm x 1100 mm x 10000 mm	528 2310
5 mm x 1100 mm x 10000 mm	528 2320
6 mm x 1100 mm x 10000 mm	528 2330

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. The rubber sheets must be stored free of pressure, best in the original packaging. The rubber sheets may not receive any pressure points. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
CEMENT BC 3004	5 - 25°C	24 Months
CHEMOLINE 12 CN	≤ +30°C	24 Months
PRIMER PR 304	5 - 25°C	12 Months
SOLVENT CF-CE	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Polymer Base	ISO 1629	-	CIIR
Abrasion	ISO 4649 (ASTM D5963)	mm <sup>3</sup>	≤ 300*
Density	EN ISO 1183-1	g/cm <sup>3</sup>	1.08 ± 0.02
Hardness Shore A	ISO 7619-1 (ASTM D2240)	-	50 ± 5**
Max. Surface Pressure	-	N/mm <sup>2</sup>	2
Surface Resistance	DIN IEC 60093	Ω	≥ 10 <sup>11</sup>
Elongation at Break	DIN 53504 (ASTM D412)	%	≥ 150***
Tensile Strength	DIN 53504 (ASTM D412)	N/mm <sup>2</sup>	≥ 6***
Impact Resilience	DIN 53512 (ASTM D1054)	%	≥ 6
Peel Strength to Steel	ISO 813	N/mm	≥ 4
Max. Continuous Operating Temperature	-	°C	+70
Temperature Range	-	°C	-40 up to +70

\* Press vulcanisation \*\* Autoclave vulcanisation \*\*\* 4 mm rubber

**Note:** The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## CHEMOLINE 13

### PRODUCT DESCRIPTION

**CHEMOLINE 13** is a black soft rubber lining based on Bromobutyl rubber (BIIR). **CHEMOLINE 13** shows excellent chemical resistance against concentrated hydrochloric acid and hypochlorite.

### FIELDS OF APPLICATION

**CHEMOLINE 13** is used mainly for workshop and on-site rubber linings of steel components which are exposed to chemical loads. The field of applications are mainly chemical plants, chlorine and steel industries, mineral processing plants and environmental protection plants. Some typical examples of applications are the lining of storage tanks, agitated tanks, crystallization and condensation reactors and flue gas desulphurisation plants (FGD). Furthermore **CHEMOLINE 13** is used in phosphoric acid plants and autoclaves and it is especially suitable for use under vacuum services.

### FEATURES

- Very good resistance against mineral acids, bases, polar solvents and especially against concentrated hydrochloric acid  $\leq 37\%$  up to  $+60^\circ\text{C}$  and sodium hypochlorite
- Excellent diffusion resistance against gases like sulphur dioxide, nitrogen oxides, and saturated water vapour
- Suitable for vacuum services
- High thermal stability (max.  $+115^\circ\text{C}$ )
- Application onto steel components
- On site & Workshop rubber lining

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of non-ferrous metals, cast iron, ferrite or austenitic steel. Components to be rubber lined shall be designed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

Surfaces to be rubber lined must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of  $R_z \geq 50$  microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate or the component must be air conditioned.

### ENVIRONMENTAL CONDITIONS

Throughout the rubber lining process, the temperatures of the substrate and rubber lining materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### ADHESIVE SYSTEM

**CHEMOLINE 13** is bonded onto steel components by using the two-coat primer system **PRIMER PR 500-1** & **PRIMER S 500-2** in combination with **ADHESIVE TC 5000**. This bonding system requires a subsequent thermal treatment with a temperature of  $\geq +45^\circ\text{C}$ . In particular cases, and only with the verification of TIP TOP Application Technologies, the cold bonding system **PRIMER PR 304** / **CEMENT BC 3004** with 4% **HARDENER E 40** can be used alternatively. When using the cold bonding system, the service temperature is limited to max.  $+90^\circ\text{C}$ .

### APPLICATION METHOD UND CONSUMPTION

During the application of the product, the application instruction must always be observed.

Coat	Product	Application Method	Coverage [g/m <sup>2</sup> ]
1. Coat steel	<b>PRIMER PR 500-1</b>	Roll / Spray	ca. 150
2. Coat steel	<b>PRIMER S 500-2</b>	Brush	ca. 125
3. Coat steel	<b>ADHESIVE TC 5000</b>	Roll	ca. 200
4. Coat steel	<b>ADHESIVE TC 5000</b>	Brush	ca. 200
1. Coat rubber	<b>ADHESIVE TC 5000</b>	Brush	ca. 200

### CLEANING

Clean all equipment with **SOLVENT CF-CE** immediately after use.

### VULCANISATION

The details given in the application instruction must be observed during vulcanisation.

Place	Vulcanisation Method
Workshop	Vulcanisation in an autoclave under pressure by means hot air or steam.
On Site	Vulcanisation with medium under operating conditions. This vulcanisation method is only allowed after consultation with the Application Technology Department of TIP TOP.
On Site	At higher operating temperatures and vacuum loads vulcanisation is carried out by means of steam (pressure) or hot water.

### SPARK TEST

The spark test (holiday test) of new rubber linings is carried out according EN 14879-4 by using a high voltage tester. For carrying out the spark test, only the high voltage testers of Elmed model Isotest II RT or P as well as the test pistols of Wegener model WEG 20 or 22 or 100 are allowed.

CHEMOLINE 13	Test Voltage [kV/mm]	Max. Test Voltage [kV]
unvulcanised	3.0	15.0
vulcanised	3.0	15.0

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# CHEMOLINE 13

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
ADHESIVE TC 5000	9 kg	525 2286
ADHESIVE TC 5000	25 kg	525 2224
PRIMER PR 500-1	0.75 kg	525 2303
PRIMER PR 500-1	4.5 kg	525 2470
PRIMER PR 500-1	9 kg	525 2327
PRIMER PR 500-1	25 kg	525 2334
PRIMER S 500-2	0.75 kg	525 2310
PRIMER S 500-2	9 kg	525 2341
PRIMER S 500-2	25 kg	525 2358
SOLVENT CF-CE	10 l	595 9163

## PACKAGING OF RUBBER SHEETS

The rubber sheets are wrapped with PE-separating sheets on cardboard cores, and packed freely suspend in stable, stackable card boxes, to avoid pressure points.

**CHEMOLINE 13** is manufactured by extrusion in the following standard sizes:

Size (Tolerances according EN 14879-4)	Product-No.
2 mm x 1100 mm x 10000 mm	528 1700
3 mm x 1100 mm x 10000 mm	528 1710
4 mm x 1100 mm x 10000 mm	528 1720
5 mm x 1100 mm x 10000 mm	528 1730
6 mm x 1100 mm x 10000 mm	528 1740

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. The rubber sheets must be stored free of pressure, best in the original packaging. The rubber sheets may not receive any pressure points. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
ADHESIVE TC 5000	5 - 20°C	12 Months
CHEMOLINE 13	≤ +5°C	8 Months
CHEMOLINE 13	≤ +25°C	2 Months
PRIMER PR 500-1	5 - 20°C	12 Months
PRIMER S 500-2	5 - 20°C	12 Months
SOLVENT CF-CE	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Polymer Base	ISO 1629	-	BIIR
Abrasion	ISO 4649 (ASTM D5963)	mm <sup>3</sup>	≤ 250*
Density	EN ISO 1183-1	g/cm <sup>3</sup>	1.24 ± 0.02
Hardness Shore A	ISO 7619-1 (ASTM D2240)	-	60 ± 5**
Max. Surface Pressure	-	N/mm <sup>2</sup>	2
Surface Resistance	DIN IEC 60093	Ω	≥ 10 <sup>5</sup>
Elongation at Break	DIN 53504 (ASTM D412)	%	≥ 450***
Tensile Strength	DIN 53504 (ASTM D412)	N/mm <sup>2</sup>	≥ 8***
Impact Resilience	DIN 53512 (ASTM D1054)	%	≥ 8
Peel Strength to Steel	ISO 813	N/mm	≥ 4
Thermal Conductivity	DIN 51046	W / m K	0.35
Water Vapour Permeability	DIN 53122	g/m <sup>2</sup> ·d	0.08***
Max. Continuous Operating Temperature	-	°C	+115
Temperature Range	-	°C	-40 up to +115

\* Press vulcanisation \*\* Autoclave vulcanisation \*\*\* 4 mm rubber

**Note:** The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## CHEMOLINE 18 CN

### PRODUCT DESCRIPTION

**CHEMOLINE 18 CN** is an already vulcanised black soft rubber lining based on Bromobutyl rubber (BIIR), which is equipped with an easy to bond, reactive bonding layer. **CHEMOLINE 18 CN** can be loaded directly without further vulcanisation.

### FIELDS OF APPLICATION

Due to its resistance to numerous chemicals, **CHEMOLINE 18 CN** is worldwide used as industrial corrosion protection in the chemical industry and in the ore processing.

Structural steel parts subjected to high chemical, mechanical and thermal stress, such as storage-, agitator- and settling vessels can be protected from corrosion by using the **CHEMOLINE 18 CN**.

### FEATURES

- Good chemical resistance to mineral acids, bases and salt solutions
- Application onto steel and concrete components
- Can be exposed to the operation conditions right after the application
- On site rubber lining

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of non-ferrous metals, cast iron, ferrite or austenitic steel, concrete, screed or plaster. Components to be rubber lined shall be designed and manufactured in accordance with EN 14879-1. For components made of concrete, screed or plaster DIN 1045 must also be observed.

### SURFACE PRE-TREATMENT

#### C-STEEL

Surfaces to be rubber lined must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 50 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate or the component must be air conditioned.

#### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup> and minimum compressive strength of 25 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%. Generally the concrete surface must be smoothed prior to rubber lining application by applying an Epoxy resin based mortar coat. This coat should be conductive to enable a subsequent spark test (**REMAFIX C**).

### ENVIRONMENTAL CONDITIONS

Throughout the rubber lining process, the temperatures of the substrate and rubber lining materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### ADHESIVE SYSTEM

**CHEMOLINE 18 CN** is bonded on steel or concrete components by using the primer system **PRIMER PR 304** in combination with the adhesive system **CEMENT BC 3004** with 4% **HARDENER E 40**.

### APPLICATION METHOD UND CONSUMPTION

During the application of the product, the application instruction must always be observed.

Coat	Product	Application Method	Coverage [g/m <sup>2</sup> ]
1. Coat steel	<b>PRIMER PR 304</b>	Roll / Spray	ca. 150
2. Coat steel	<b>CEMENT BC 3004</b>	Roll	ca. 200
3. Coat steel	<b>CEMENT BC 3004</b>	Brush	ca. 200
1. Coat rubber	<b>CEMENT BC 3004</b>	Brush	ca. 200

If **PRIMER PR 304** is applied by airless spray, **PRIMER PR 304** must be diluted with **SOLVENT CE** in a mixing ratio of 1:1

### CLEANING

Clean all equipment with **SOLVENT CF-CE** immediately after use.

### VULCANISATION

Due to the already completed vulcanisation at the workshop, no further thermal treatment is longer necessary.

### SPARK TEST

The spark test (holiday test) of new rubber linings is carried out according EN 14879-4 by using a high voltage tester. For carrying out the spark test, only the high voltage testers of Elmed model Isotest II RT or P as well as the test pistols of Wegener model WEG 20 or 22 or 100 are allowed.

<b>CHEMOLINE 18 CN</b>	Test Voltage [kV/mm]	Max. Test Voltage [kV]
vulcanised	4.0	20.0

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# CHEMOLINE 18 CN

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
CEMENT BC 3004	4.5 kg	525 4095
CEMENT BC 3004	9 kg	525 4143
CEMENT BC 3004	18 kg	525 4130
HARDENER E 40	30 g	525 1067
PRIMER PR 304	0.75 kg	525 4112
PRIMER PR 304	10 kg	525 4150
SOLVENT CF-CE	10 l	595 9163

## PACKAGING OF RUBBER SHEETS

The rubber sheets are wrapped with PE-separating sheets on cardboard cores, and packed freely suspend in stable, stackable card boxes, to avoid pressure points.

CHEMOLINE 18 CN is manufactured by extrusion in the following standard sizes:

Size (Tolerances according EN 14879-4)	Product-No.
3 mm x 1100 mm x 10000 mm	528 3140
4 mm x 1100 mm x 10000 mm	528 3150
5 mm x 1100 mm x 10000 mm	528 3160
6 mm x 1100 mm x 10000 mm	528 3170

Technical Data	Standard	Unit	Value
Polymer Base	ISO 1629	-	BIIR
Abrasion	ISO 4649 (ASTM D5963)	mm <sup>3</sup>	≤ 300
Density	EN ISO 1183-1	g/cm <sup>3</sup>	1.38 ± 0.02
Hardness Shore A	ISO 7619-1 (ASTM D2240)	-	46 ± 5
Max. Surface Pressure	-	N/mm <sup>2</sup>	2
Elongation at Break	DIN 53504 (ASTM D412)	%	≥ 350***
Tensile Strength	DIN 53504 (ASTM D412)	N/mm <sup>2</sup>	≥ 7***
Max. Continuous Operating Temperature	-	°C	+75
Temperature Range	-	°C	-40 up to +75

\*\*\* 4 mm rubber

**Note:** The indicated temperatures are dependent on the present load and may vary

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. The rubber sheets must be stored free of pressure, best in the original packaging. The rubber sheets may not receive any pressure points. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
CEMENT BC 3004	5 - 25°C	24 Months
CHEMOLINE 18 CN	≤ +30°C	24 Months
PRIMER PR 304	5 - 25°C	12 Months
SOLVENT CF-CE	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

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# PRODUCT INFORMATION

## CHEMOLINE 55

### PRODUCT DESCRIPTION

**CHEMOLINE 55** is a black soft rubber lining based on Natural rubber (NR) which shows excellent properties against wear.

### FIELDS OF APPLICATION

Due to its excellent wear properties **CHEMOLINE 55** is used mainly for the workshop rubber lining of steel components which are exposed to abrasive conditions and chemical loads. The field of applications are mainly mineral processing plants and fertilizer industry. Some typical examples of applications are rubber lining of the storage tanks, filter vessels, agitated tanks as well as pipelines.

### FEATURES

- Excellent resistance against wear
- Good chemical resistance
- Application onto steel components
- Workshop rubber lining

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of non-ferrous metals, cast iron, ferrite or austenitic steel. Components to be rubber lined shall be designed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

Surfaces to be rubber lined must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 50 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate or the component must be air conditioned.

### ENVIRONMENTAL CONDITIONS

Throughout the rubber lining process, the temperatures of the substrate and rubber lining materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### ADHESIVE SYSTEM

**CHEMOLINE 55** is bonded onto steel components by using the two-coat primer system **PRIMER PR 500-1 & PRIMER S 500-2** in combination with **ADHESIVE REMACLAVE SOLUTION**.

### APPLICATION METHOD UND CONSUMPTION

During the application of the product, the application instruction must always be observed.

Coat	Product	Application Method	Coverage [g/m <sup>2</sup> ]
1. Coat steel	<b>PRIMER PR 500-1</b>	Roll / Spray	ca. 150
2. Coat steel	<b>PRIMER S 500-2</b>	Brush	ca. 125
3. Coat steel	<b>ADHESIVE REMACLAVE SOLUTION</b>	Roll	ca. 100
4. Coat steel	<b>ADHESIVE REMACLAVE SOLUTION</b>	Brush	ca. 100
1. Coat rubber	<b>ADHESIVE REMACLAVE SOLUTION</b>	Brush	ca. 100

### CLEANING

Clean all equipment with **SOLVENT CF-CE** immediately after use.

### VULCANISATION

The details given in the application instruction must be observed during vulcanisation.

Place	Vulcanisation Method
Workshop	Vulcanisation in an autoclave under pressure by means hot air or steam.

### SPARK TEST

The spark test (holiday test) of new rubber linings is carried out according EN 14879-4 by using a high voltage tester. For carrying out the spark test, only the high voltage testers of Elmed model Isotest II RT or P as well as the test pistols of Wegener model WEG 20 or 22 or 100 are allowed.

CHEMOLINE 55	Test Voltage [kV/mm]	Max. Test Voltage [kV]
unvulcanised	5.0	20.0
vulcanised	5.0	20.0

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# CHEMOLINE 55

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
ADHESIVE REMACLAVE SOLUTION	3.5 kg	538 1610
ADHESIVE REMACLAVE SOLUTION	7 kg	538 1620
ADHESIVE REMACLAVE SOLUTION	21 kg	538 1630
PRIMER PR 500-1	0.75 kg	525 2303
PRIMER PR 500-1	4.5 kg	525 2470
PRIMER PR 500-1	9 kg	525 2327
PRIMER PR 500-1	25 kg	525 2334
PRIMER S 500-2	0.75 kg	525 2310
PRIMER S 500-2	9 kg	525 2341
PRIMER S 500-2	25 kg	525 2358
SOLVENT CF-CE	10 l	595 9163

## PACKAGING OF RUBBER SHEETS

The rubber sheets are wrapped with PE-separating sheets on cardboard cores, and packed freely suspend in stable, stackable card boxes, to avoid pressure points.

**CHEMOLINE 55** is manufactured by extrusion in the following standard sizes:

Size (Tolerances according EN 14879-4)	Product-No.
3 mm x 1100 mm x 10000 mm	528 3925
4 mm x 1100 mm x 10000 mm	528 3932

Size (Tolerances according EN 14879-4)	Product-No.
5 mm x 1100 mm x 10000 mm	528 3949
6 mm x 1100 mm x 10000 mm	528 3956

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. The rubber sheets must be stored free of pressure, best in the original packaging. The rubber sheets may not receive any pressure points. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
ADHESIVE REMACLAVE SOLUTION	5 - 20°C	12 Months
CHEMOLINE 55	≤ +25°C	6 Months
CHEMOLINE 55	≤ +5°C	12 Months
PRIMER PR 500-1	5 - 20°C	12 Months
PRIMER S 500-2	5 - 20°C	12 Months
SOLVENT CF-CE	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Polymer Base	ISO 1629	-	NR
Abrasion	ISO 4649 (ASTM D5963)	mm <sup>3</sup>	≤ 100
Density	EN ISO 1183-1	g/cm <sup>3</sup>	1.11 ± 0.02
Contact Resistance	DIN IEC 60093	Ω · cm	3.0 x 10 <sup>11</sup>
Hardness Shore A	ISO 7619-1 (ASTM D2240)	-	55 ± 5**
Max. Surface Pressure	-	N/mm <sup>2</sup>	2
Surface Resistance	DIN IEC 60093	Ω	1.0 x 10 <sup>12</sup>
Elongation at Break	DIN 53504 (ASTM D412)	%	≥ 520***
Tensile Strength	DIN 53504 (ASTM D412)	N/mm <sup>2</sup>	≥ 22***
Impact Resilience	DIN 53512 (ASTM D1054)	%	≥ 63
Peel Strength to Steel	ISO 813	N/mm	≥ 4
Thermal Conductivity	DIN 51046	W / m K	0.26
Max. Continuous Operating Temperature	-	°C	+60
Temperature Range	-	°C	-40 up to +60

\*\* Autoclave vulcanisation \*\*\* 4 mm rubber

**Note:** The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## CHEMOLINE 55 CN

### PRODUCT DESCRIPTION

**CHEMOLINE 55 CN** is an already vulcanised black soft rubber lining based on Natural rubber (NR) with excellent properties against wear and which is equipped with an easy to bond, reactive bonding layer. **CHEMOLINE 55 CN** can be loaded directly without further vulcanisation.

### FIELDS OF APPLICATION

Due to its excellent wear properties **CHEMOLINE 55 CN** is used mainly for on-site rubber linings of steel and concrete components which are exposed to abrasive conditions and chemical loads. The field of applications are mainly mineral processing plants and fertilizer industry. Some typical examples of applications are rubber lining of the storage tanks, filter vessels and agitated tanks.

### FEATURES

- Excellent resistance against wear
- Good chemical resistance
- Application onto steel and concrete components
- Can be exposed to the operation conditions right after the application
- On site rubber lining

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of non-ferrous metals, cast iron, ferrite or austenitic steel, concrete, screed or plaster. Components to be rubber lined shall be designed and manufactured in accordance with EN 14879-1. For components made of concrete, screed or plaster DIN 1045 must also be observed.

### SURFACE PRE-TREATMENT

#### C-STEEL

Surfaces to be rubber lined must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 50 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate or the component must be air conditioned.

#### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup> and minimum compressive strength of 25 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%. Generally the concrete surface must be smoothed prior to rubber lining application by applying an Epoxy resin based mortar coat. This coat should be conductive to enable a subsequent spark test (**REMAFIX C**).

### ENVIRONMENTAL CONDITIONS

Throughout the rubber lining process, the temperatures of the substrate and rubber lining materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### ADHESIVE SYSTEM

**CHEMOLINE 55 CN** is bonded on steel or concrete components by using the primer system **PRIMER PR 304** in combination with the adhesive system **CEMENT BC 3004** with 4% **HARDENER E 40**.

### APPLICATION METHOD UND CONSUMPTION

During the application of the product, the application instruction must always be observed.

Coat	Product	Application Method	Coverage [g/m <sup>2</sup> ]
1. Coat steel	<b>PRIMER PR 304</b>	Roll / Spray	ca. 150
2. Coat steel	<b>CEMENT BC 3004</b>	Roll	ca. 200
3. Coat steel	<b>CEMENT BC 3004</b>	Brush	ca. 200
1. Coat rubber	<b>CEMENT BC 3004</b>	Brush	ca. 200

If **PRIMER PR 304** is applied by airless spray, **PRIMER PR 304** must be diluted with **SOLVENT CE** in a mixing ratio of 1:1

### CLEANING

Clean all equipment with **SOLVENT CF-CE** immediately after use.

### VULCANISATION

Due to the already completed vulcanisation at the workshop, no further thermal treatment is longer necessary.

### SPARK TEST

The spark test (holiday test) of new rubber linings is carried out according EN 14879-4 by using a high voltage tester. For carrying out the spark test, only the high voltage testers of Elmed model Isotest II RT or P as well as the test pistols of Wegener model WEG 20 or 22 or 100 are allowed.

CHEMOLINE 55 CN	Test Voltage [kV/mm]	Max. Test Voltage [kV]
vulcanised	5.0	20.0

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# CHEMOLINE 55 CN

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
CEMENT BC 3004	4.5 kg	525 4095
CEMENT BC 3004	9 kg	525 4143
CEMENT BC 3004	18 kg	525 4130
HARDENER E 40	30 g	525 1067
PRIMER PR 304	0.75 kg	525 4112
PRIMER PR 304	10 kg	525 4150
SOLVENT CF-CE	10 l	595 9163

## PACKAGING OF RUBBER SHEETS

The rubber sheets are wrapped with PE-separating sheets on cardboard cores, and packed freely suspend in stable, stackable card boxes, to avoid pressure points.

CHEMOLINE 55 CN is manufactured by extrusion in the following standard sizes:

Size (Tolerances according EN 14879-4)	Product-No.
3 mm x 1100 mm x 10000 mm	528 9895
4 mm x 1100 mm x 10000 mm	528 9905
5 mm x 1100 mm x 10000 mm	528 9912
6 mm x 1100 mm x 10000 mm	528 9929

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. The rubber sheets must be stored free of pressure, best in the original packaging. The rubber sheets may not receive any pressure points. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
CEMENT BC 3004	5 - 25°C	24 Months
CHEMOLINE 55 CN	≤ +30°C	24 Months
PRIMER PR 304	5 - 25°C	12 Months
SOLVENT CF-CE	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Polymer Base	ISO 1629	-	NR
Abrasion	ISO 4649 (ASTM D5963)	mm <sup>3</sup>	≤ 100
Density	EN ISO 1183-1	g/cm <sup>3</sup>	1.11 ± 0.02
Hardness Shore A	ISO 7619-1 (ASTM D2240)	-	55 ± 5**
Max. Surface Pressure	-	N/mm <sup>2</sup>	2
Elongation at Break	DIN 53504 (ASTM D412)	%	≥ 520***
Tensile Strength	DIN 53504 (ASTM D412)	N/mm <sup>2</sup>	≥ 22***
Impact Resilience	DIN 53512 (ASTM D1054)	%	≥ 63
Peel Strength to Steel	ISO 813	N/mm	≥ 4
Max. Continuous Operating Temperature	-	°C	+60
Temperature Range	-	°C	-40 up to +60

\*\* Autoclave vulcanisation \*\*\* 4 mm rubber

**Note:** The indicated temperatures are dependent on the present load and may vary

Information given in the fact sheet above corresponds to the current knowledge available to us regarding our products at the time of its drafting and is intended as a guideline for informational purposes. However, because of the multiple possibilities regarding possible applications, processing and on site conditions, any information given in the fact sheet above is not legally binding, in particular, without being limited to, such information shall not be interpreted as a warranty of merchantability or of fitness for a particular purpose. Customer therefore is advised to conduct its own testing or make an inquiry with our technical department before ordering. We reserve the right to change the product at any time, in particular, without being limited to, minor changes because of advancements in technology. If by way of exception, the information given in the fact sheet above is incorporated by reference into any contract concluded with us under German Law, such information, shall only be interpreted as determining the specific requirements of the contractual products as set out in § 434 BGB (German Civil Code) and shall not be interpreted as constituting a guarantee of condition.

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# PRODUCT INFORMATION

## CHEMOLINE 70 CN

### PRODUCT DESCRIPTION

**CHEMOLINE 70 CN** is an already vulcanised black soft rubber lining based on Chlorobutyl rubber and Polyvinyl Chloride (ClIR / PVC), which is equipped with an easy to bond, reactive bonding layer. **CHEMOLINE 70 CN** shows excellent resistance against concentrated hydrochloric acid at temperatures up to +60°C. **CHEMOLINE 70 CN** can be loaded directly without further vulcanisation.

### FIELDS OF APPLICATION

**CHEMOLINE 70 CN** is used mainly for on-site rubber linings of steel or concrete storage containers for concentrated hydrochloric acid up to +60 °C. Further examples to the applications include the lining of acid pickling lines (pickling baths) and electroplating baths.

### FEATURES

- Very good resistance against mineral acids, bases and especially against concentrated hydrochloric acid up to +60°C
- Application onto steel and concrete components
- Can be exposed to the operation conditions right after the application
- On site rubber lining

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of non-ferrous metals, cast iron, ferrite or austenitic steel, concrete, screed or plaster. Components to be rubber lined shall be designed and manufactured in accordance with EN 14879-1. For components made of concrete, screed or plaster DIN 1045 must also be observed.

### SURFACE PRE-TREATMENT

#### C-STEEL

Surfaces to be rubber lined must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 50 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate or the component must be air conditioned.

#### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup> and minimum compressive strength of 25 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%. Generally the concrete surface must be smoothed prior to rubber lining application by applying an Epoxy resin based mortar coat. This coat should be conductive to enable a subsequent spark test (**REMAFIX C**).

### ENVIRONMENTAL CONDITIONS

Throughout the rubber lining process, the temperatures of the substrate and rubber lining materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### ADHESIVE SYSTEM

**CHEMOLINE 70 CN** is bonded on steel or concrete components by using the primer system **PRIMER PR 304** in combination with the adhesive system **CEMENT BC 3004** with 4% **HARDENER E 40**.

### APPLICATION METHOD UND CONSUMPTION

During the application of the product, the application instruction must always be observed.

Coat	Product	Application Method	Coverage [g/m <sup>2</sup> ]
1. Coat steel	<b>PRIMER PR 304</b>	Roll / Spray	ca. 150
2. Coat steel	<b>CEMENT BC 3004</b>	Roll	ca. 200
3. Coat steel	<b>CEMENT BC 3004</b>	Brush	ca. 200
1. Coat rubber	<b>CEMENT BC 3004</b>	Brush	ca. 200

If **PRIMER PR 304** is applied by airless spray, **PRIMER PR 304** must be diluted with **SOLVENT CE** in a mixing ratio of 1:1

### CLEANING

Clean all equipment with **SOLVENT CF-CE** immediately after use.

### VULCANISATION

Due to the already completed vulcanisation at the workshop, no further thermal treatment is longer necessary.

### SPARK TEST

The spark test (holiday test) of new rubber linings is carried out according EN 14879-4 by using a high voltage tester. For carrying out the spark test, only the high voltage testers of Elmed model Isotest II RT or P as well as the test pistols of Wegener model WEG 20 or 22 or 100 are allowed.

CHEMOLINE 70 CN	Test Voltage [kV/mm]	Max. Test Voltage [kV]
vulcanised	4.0	20.0

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# CHEMOLINE 70 CN

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
CEMENT BC 3004	4.5 kg	525 4095
CEMENT BC 3004	9 kg	525 4143
CEMENT BC 3004	18 kg	525 4130
HARDENER E 40	30 g	525 1067
PRIMER PR 304	0.75 kg	525 4112
PRIMER PR 304	10 kg	525 4150
SOLVENT CF-CE	10 l	595 9163
SOLVENT CF-CE	10 l	595 9163

## PACKAGING OF RUBBER SHEETS

The rubber sheets are wrapped with PE-separating sheets on cardboard cores, and packed freely suspend in stable, stackable card boxes, to avoid pressure points.

CHEMOLINE 70 CN is manufactured by extrusion in the following standard sizes:

Size (Tolerances according EN 14879-4)	Product-No.
3 mm x 1100 mm x 10000 mm	528 8140
4 mm x 1100 mm x 10000 mm	528 8157
5 mm x 1100 mm x 10000 mm	528 8164
6 mm x 1100 mm x 10000 mm	528 8171

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. The rubber sheets must be stored free of pressure, best in the original packaging. The rubber sheets may not receive any pressure points. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
CEMENT BC 3004	5 - 25°C	24 Months
CHEMOLINE 70 CN	≤ +30°C	24 Months
PRIMER PR 304	5 - 25°C	12 Months
SOLVENT CF-CE	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Polymer Base	ISO 1629	-	CIIR / PVC
Density	EN ISO 1183-1	g/cm <sup>3</sup>	1.18 ± 0.02
Contact Resistance	DIN IEC 60093	Ω · cm	1.5 x 10 <sup>11</sup>
Hardness Shore A	ISO 7619-1 (ASTM D2240)	-	57 ± 5**
Max. Surface Pressure	-	N/mm <sup>2</sup>	2
Surface Resistance	DIN IEC 60093	Ω	3.5 x 10 <sup>11</sup>
Elongation at Break	DIN 53504 (ASTM D412)	%	≥ 400***
Tensile Strength	DIN 53504 (ASTM D412)	N/mm <sup>2</sup>	≥ 3***
Peel Strength to Steel	ISO 813	N/mm	≥ 4
Max. Continuous Operating Temperature	-	°C	+80
Temperature Range	-	°C	-30 up to +80

\*\* Autoclave vulcanisation \*\*\* 4 mm rubber

**Note:** The indicated temperatures are dependent on the present load and may vary

Information given in the fact sheet above corresponds to the current knowledge available to us regarding our products at the time of its drafting and is intended as a guideline for informational purposes. However, because of the multiple possibilities regarding possible applications, processing and on site conditions, any information given in the fact sheet above is not legally binding, in particular, without being limited to, such information shall not be interpreted as a warranty of merchantability or of fitness for a particular purpose. Customer therefore is advised to conduct its own testing or make an inquiry with our technical department before ordering. We reserve the right to change the product at any time, in particular, without being limited to, minor changes because of advancements in technology. If by way of exception, the information given in the fact sheet above is incorporated by reference into any contract concluded with us under German Law, such information, shall only be interpreted as determining the specific requirements of the contractual products as set out in § 434 BGB (German Civil Code) and shall not be interpreted as constituting a guarantee of condition.

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# PRODUCT INFORMATION

## CHEMOLINE RT

### PRODUCT DESCRIPTION

**CHEMOLINE RT** is a black soft rubber lining based on a copolymerised Bromobutyl rubber (BIIR) with high chemical and thermal resistance.

### FIELDS OF APPLICATION

**CHEMOLINE RT** is used mainly for on-site rubber linings of steel components which are exposed to chemical loads. The field of applications are chemical plants, chlorine and steel industries, mineral processing plants and environmental protection plants. Some typical examples of its applications are the rubber linings of storage tanks, agitated tanks, electroplating baths and chlorine electrolysis plants (cells). Furthermore **CHEMOLINE RT** is used as the corrosion protection rubber lining for storage and transport containers which contain chlorine bleach or hydrofluoric acid, as well as for road tankers and tank wagons.

### FEATURES

- Strong resistance against mineral acids (Including hydrofluoric acid), bases and especially outstanding resistance against oxidizing media such as sodium hypochlorite with increased chlorine content (max. 190 g/l) as well as chromic acid
- Strong resistance against temperature excursions
- Good resistance against UV and ozone
- High thermal stability (max. +120°C)
- Application onto steel components
- Workshop rubber lining

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of non-ferrous metals, cast iron, ferrite or austenitic steel. Components to be rubber lined shall be designed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

Surfaces to be rubber lined must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 50 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate or the component must be air conditioned.

### ENVIRONMENTAL CONDITIONS

Throughout the rubber lining process, the temperatures of the substrate and rubber lining materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### ADHESIVE SYSTEM

**CHEMOLINE RT** is bonded onto steel components by using the two-coat primer system **PRIMER HG 1 & PRIMER HG 2** in combination with **ADHESIVE TC 5002**. **ADHESIVE TC 5002** is thixotropic and must be stirred well prior to use.

### APPLICATION METHOD UND CONSUMPTION

During the application of the product, the application instruction must always be observed.

Coat	Product	Application Method	Coverage [g/m <sup>2</sup> ]
1. Coat steel	<b>PRIMER HG 1</b>	Roll / Spray	ca. 150
2. Coat steel	<b>PRIMER HG 2</b>	Brush	ca. 150
3. Coat steel	<b>ADHESIVE TC 5002</b>	Roll	ca. 200
4. Coat steel	<b>ADHESIVE TC 5002</b>	Brush	ca. 200
1. Coat rubber	<b>ADHESIVE TC 5002</b>	Brush	ca. 200

### CLEANING

Clean all equipment with **SOLVENT CF-CE** immediately after use.

### VULCANISATION

The details given in the application instruction must be observed during vulcanisation.

Place	Vulcanisation Method
Workshop	Vulcanisation in an autoclave under pressure by means hot air or steam.

### SPARK TEST

The spark test (holiday test) of new rubber linings is carried out according EN 14879-4 by using a high voltage tester. For carrying out the spark test, only the high voltage testers of Elmed model Isotest II RT or P as well as the test pistols of Wegener model WEG 20 or 22 or 100 are allowed.

CHEMOLINE RT	Test Voltage [kV/mm]	Max. Test Voltage [kV]
unvulcanised	3.0	15.0
vulcanised	3.0	15.0

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# CHEMOLINE RT

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
ADHESIVE TC 5002	9 kg	525 2810
ADHESIVE TC 5002	23 kg	525 2790
PRIMER HG 1	0.75 kg	525 2949
PRIMER HG 1	4.5 kg	525 3050
PRIMER HG 1	9 kg	525 2956
PRIMER HG 2	0.75 kg	525 2970
PRIMER HG 2	4.5 kg	525 3060
PRIMER HG 2	9 kg	525 2987
SOLVENT CF-CE	10 l	595 9163

## PACKAGING OF RUBBER SHEETS

The rubber sheets are wrapped with PE-separating sheets on cardboard cores, and packed freely suspend in stable, stackable card boxes, to avoid pressure points.

CHEMOLINE RT is manufactured by extrusion in the following standard sizes:

Size (Tolerances according EN 14879-4)	Product-No.
2 mm x 1100 mm x 10000 mm	528 4000
3 mm x 1100 mm x 10000 mm	528 4010
4 mm x 1100 mm x 10000 mm	528 4020
5 mm x 1100 mm x 10000 mm	528 4030
6 mm x 1100 mm x 10000 mm	528 4040

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. The rubber sheets must be stored free of pressure, best in the original packaging. The rubber sheets may not receive any pressure points. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
ADHESIVE TC 5002	5 - 25°C	6 Months
CHEMOLINE RT	≤ +5°C	6 Months
CHEMOLINE RT	≤ +25°C	3 Months
PRIMER HG 1	5 - 20°C	12 Months
PRIMER HG 2	5 - 20°C	12 Months
SOLVENT CF-CE	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Polymer Base	ISO 1629	-	BIIR
Abrasion	ISO 4649 (ASTM D5963)	mm <sup>3</sup>	≤ 250*
Density	EN ISO 1183-1	g/cm <sup>3</sup>	1.23 ± 0.02
Contact Resistance	DIN IEC 60093	Ω · cm	7.0 x 10 <sup>10</sup>
Hardness Shore A	ISO 7619-1 (ASTM D2240)	-	65 ± 5**
Max. Surface Pressure	-	N/mm <sup>2</sup>	2
Surface Resistance	DIN IEC 60093	Ω	9.0 x 10 <sup>10</sup>
Elongation at Break	DIN 53504 (ASTM D412)	%	≥ 150***
Tensile Strength	DIN 53504 (ASTM D412)	N/mm <sup>2</sup>	≥ 8***
Impact Resilience	DIN 53512 (ASTM D1054)	%	≥ 8*
Peel Strength to Steel	ISO 813	N/mm	≥ 4
Max. Continuous Operating Temperature	-	°C	+120
Temperature Range	-	°C	-40 up to +120

\* Press vulcanisation \*\* Autoclave vulcanisation \*\*\* 4 mm rubber

**Note:** The indicated temperatures are dependent on the present load and may vary

Information given in the fact sheet above corresponds to the current knowledge available to us regarding our products at the time of its drafting and is intended as a guideline for informational purposes. However, because of the multiple possibilities regarding possible applications, processing and on site conditions, any information given in the fact sheet above is not legally binding, in particular, without being limited to, such information shall not be interpreted as a warranty of merchantability or of fitness for a particular purpose. Customer therefore is advised to conduct its own testing or make an inquiry with our technical department before ordering. We reserve the right to change the product at any time, in particular, without being limited to, minor changes because of advancements in technology. If by way of exception, the information given in the fact sheet above is incorporated by reference into any contract concluded with us under German Law, such information, shall only be interpreted as determining the specific requirements of the contractual products as set out in § 434 BGB (German Civil Code) and shall not be interpreted as constituting a guarantee of condition.

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# PRODUCT INFORMATION

## CHEMOLINE RT CN

### PRODUCT DESCRIPTION

**CHEMOLINE RT CN** is an already vulcanised black soft rubber lining based on a co-polymerised Bromobutyl rubber (BIIR), which is equipped with an easy to bond, reactive bonding layer. **CHEMOLINE RT CN** can be loaded directly without further vulcanisation.

### FIELDS OF APPLICATION

**CHEMOLINE RT CN** is used mainly for the on-site rubber lining of the steel components which are exposed to chemical loads. The field of applications are mainly chemical plants, chlorine and steel industries, mineral processing plants and environmental protection plants. Some typical examples of applications are the rubber linings of storage tanks, agitated tanks, crystallization and condensation reactors and road tankers.

### FEATURES

- Strong resistance against mineral acids (Including hydrofluoric acid), bases and especially outstanding resistance against oxidizing media such as sodium hypochlorite with increased chlorine content (max. 190 g/l) as well as chromic acid
- Strong resistance against temperature excursions
- Good resistance against UV and ozone
- Application onto steel and concrete components
- Can be exposed to the operation conditions right after the application
- On site rubber lining

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of non-ferrous metals, cast iron, ferrite or austenitic steel, concrete, screed or plaster. Components to be rubber lined shall be designed and manufactured in accordance with EN 14879-1. For components made of concrete, screed or plaster DIN 1045 must also be observed.

### SURFACE PRE-TREATMENT

#### C-STEEL

Surfaces to be rubber lined must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 50 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate or the component must be air conditioned.

#### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup> and minimum compressive strength

of 25 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%. Generally the concrete surface must be smoothed prior to rubber lining application by applying an Epoxy resin based mortar coat. This coat should be conductive to enable a subsequent spark test (**REMAFIX C**).

### ENVIRONMENTAL CONDITIONS

Throughout the rubber lining process, the temperatures of the substrate and rubber lining materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### ADHESIVE SYSTEM

**CHEMOLINE RT CN** is bonded on steel or concrete components by using the primer system **PRIMER PR 304** in combination with the adhesive system **CEMENT BC 3004** with 4% **HARDENER E 40**.

### APPLICATION METHOD UND CONSUMPTION

During the application of the product, the application instruction must always be observed.

Coat	Product	Application Method	Coverage [g/m <sup>2</sup> ]
1. Coat steel	<b>PRIMER PR 304</b>	Roll / Spray	ca. 150
2. Coat steel	<b>CEMENT BC 3004</b>	Roll	ca. 200
3. Coat steel	<b>CEMENT BC 3004</b>	Brush	ca. 200
1. Coat rubber	<b>CEMENT BC 3004</b>	Brush	ca. 200

If **PRIMER PR 304** is applied by airless spray, **PRIMER PR 304** must be diluted with **SOLVENT CE** in a mixing ratio of 1:1

### CLEANING

Clean all equipment with **SOLVENT CF-CE** immediately after use.

### VULCANISATION

Due to the already completed vulcanisation at the workshop, no further thermal treatment is longer necessary.

### SPARK TEST

The spark test (holiday test) of new rubber linings is carried out according EN 14879-4 by using a high voltage tester. For carrying out the spark test, only the high voltage testers of Elmed model Isotest II RT or P as well as the test pistols of Wegener model WEG 20 or 22 or 100 are allowed.

CHEMOLINE RT CN	Test Voltage [kV/mm]	Max. Test Voltage [kV]
vulcanised	3.0	15.0

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# CHEMOLINE RT CN

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
CEMENT BC 3004	4.5 kg	525 4095
CEMENT BC 3004	9 kg	525 4143
CEMENT BC 3004	18 kg	525 4130
HARDENER E 40	30 g	525 1067
PRIMER PR 304	0.75 kg	525 4112
PRIMER PR 304	10 kg	525 4150
SOLVENT CF-CE	10 l	595 9163

## PACKAGING OF RUBBER SHEETS

The rubber sheets are wrapped with PE-separating sheets on cardboard cores, and packed freely suspend in stable, stackable card boxes, to avoid pressure points.

CHEMOLINE RT CN is manufactured by extrusion in the following standard sizes:

Size (Tolerances according EN 14879-4)	Product-No.
2 mm x 1100 mm x 10000 mm	528 4680
3 mm x 1100 mm x 10000 mm	528 4690
4 mm x 1100 mm x 10000 mm	528 4700
5 mm x 1100 mm x 10000 mm	528 4710
6 mm x 1100 mm x 10000 mm	528 4720

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. The rubber sheets must be stored free of pressure, best in the original packaging. The rubber sheets may not receive any pressure points. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
CEMENT BC 3004	5 - 25°C	24 Months
CHEMOLINE RT CN	≤ +30°C	24 Months
PRIMER PR 304	5 - 25°C	12 Months
SOLVENT CF-CE	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Polymer Base	ISO 1629	-	BIIR
Abrasion	ISO 4649 (ASTM D5963)	mm <sup>3</sup>	≤ 270
Density	EN ISO 1183-1	g/cm <sup>3</sup>	1.23 ± 0.02
Hardness Shore A	ISO 7619-1 (ASTM D2240)	-	60 ± 5**
Max. Surface Pressure	-	N/mm <sup>2</sup>	2
Surface Resistance	DIN IEC 60093	Ω	≥ 10 <sup>9</sup>
Elongation at Break	DIN 53504 (ASTM D412)	%	≥ 150***
Tensile Strength	DIN 53504 (ASTM D412)	N/mm <sup>2</sup>	≥ 6***
Impact Resilience	DIN 53512 (ASTM D1054)	%	≥ 8
Peel Strength to Steel	ISO 813	N/mm	≥ 4
Max. Continuous Operating Temperature	-	°C	+85
Temperature Range	-	°C	-40 up to +85

\*\* Autoclave vulcanisation \*\*\* 4 mm rubber

**Note:** The indicated temperatures are dependent on the present load and may vary

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## DESCRIPTION

### CHEMONIT

Product	Product Description
<b>CHEMONIT 3 B</b>	<b>CHEMONIT 3 B</b> is a brown hard rubber lining based on Natural rubber (NR).
<b>CHEMONIT 18HT</b>	<b>CHEMONIT 18HT</b> is a high graphite-filled and electrostatic dissipating hard rubber lining based on Natural rubber (NR).
<b>CHEMONIT 20 KTW</b>	<b>CHEMONIT 20 KTW</b> is a light brown hard rubber lining based on Natural rubber (NR).
<b>CHEMONIT 31</b>	<b>CHEMONIT 31</b> is a black hard rubber lining based on Natural rubber (NR).
<b>CHEMONIT 33</b>	<b>CHEMONIT 33</b> is an anthracite-coloured, graphite-filled hard rubber lining based on Natural rubber (NR).
<b>CHEMONIT 35</b>	<b>CHEMONIT 35</b> is an anthracite-coloured, graphite-filled hard rubber lining based on Polyisoprene rubber (IR) and Styrene Butadiene rubber (SBR).
<b>CHEMONIT 181</b>	<b>CHEMONIT 181</b> is a black hard rubber lining based on Polyisoprene rubber (IR) and Styrene Butadiene rubber (SBR).

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# OVERVIEW CHEMONIT

Product	Polymer	Primer	Adhesive	Application	
				On Site	Workshop
CHEMONIT 3 B	NR	PRIMER HG 1 & PRIMER HG 2*	ADHESIVE SH-3A SOLUTION (steel) / ADHESIVE PARA SOLUTION (rubber)	-	X
CHEMONIT 18HT	NR	PRIMER HG 1 & PRIMER HG 2*	ADHESIVE SH-3A SOLUTION (steel) / ADHESIVE PARA SOLUTION (rubber)	-	X
CHEMONIT 20 KTW	NR	PRIMER HG 1 & PRIMER HG 2	ADHESIVE SH-3A SOLUTION (steel) / ADHESIVE PARA SOLUTION (rubber)	-	X
CHEMONIT 31	NR	PRIMER HG 1 & PRIMER HG 2*	ADHESIVE SH-3A SOLUTION (steel) / ADHESIVE PARA SOLUTION (rubber)	-	X
CHEMONIT 33	NR	PRIMER HG 1 & PRIMER HG 2*	ADHESIVE SH-3A SOLUTION (steel) / ADHESIVE PARA SOLUTION (rubber)	-	X
CHEMONIT 35	IR / SBR	PRIMER HG 1 & PRIMER HG 2	ADHESIVE SH-3A SOLUTION (steel) / ADHESIVE PARA SOLUTION (rubber)	X	-
CHEMONIT 181	IR / SBR	PRIMER HG 2 / PRIMER HG 1 & PRIMER HG 2*	ADHESIVE SH-3A SOLUTION (steel) / ADHESIVE PARA SOLUTION (rubber)	-	X

\* The two-component primer system **PRIMER HG 1 & PRIMER HG 2** is only used for steam vulcanization or for special applications (e.g. rubber lining on stainless steel). The information in the application instruction must always be observed.

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# PHYSICAL DATA CHEMONIT

Product	DIN ISO 1629	EN ISO 178	EN ISO 1183-1	ELATEST	DIN IEC 60093	EN ISO 527 ASTM D638	Max. Surface Pressure	Adhesion Strength to Steel	Hardness Shore D	Max. Continuous Operating Temperature	Temperature Range	Elongation at Break	Tensile Strength	Water Vapour Permeability
	-	[N/mm <sup>2</sup> ]	[g/cm <sup>3</sup> ]	[g/cm <sup>3</sup> ]	[Ω · cm]	[N/mm <sup>2</sup> ]	[N/mm <sup>2</sup> ]	[N/mm <sup>2</sup> ]	ISO 7619-1 ASTM D2240	[°C]	[°C]	[%]	[N/mm <sup>2</sup> ]	[g/m <sup>2</sup> ·d]
CHEMONIT 3 B	NR	≥ 70*	1.14 ± 0.02	1.09 ± 0.02	10 <sup>15</sup>	≥ 2000*	10	≥ 6	75 ± 5**	+100	-10 up to +100	≥ 3***	≥ 40***	100 x 10 <sup>-6</sup>
CHEMONIT 18HT	NR	---	1.42 ± 0.02	1.38 ± 0.02	≤ 10 <sup>5</sup>	≥ 900*	10	> 6	75 ± 5**	+120	-20 up to +120	≥ 2***	≥ 25***	16 x 10 <sup>-6</sup>
CHEMONIT 20 KTW	NR	---	1.61 ± 0.02	1.55 ± 0.02	---	---	10	≥ 6	78 ± 5**	+85	-20 up to +85	≥ 5***	≥ 20***	---
CHEMONIT 31	NR	≥ 80*	1.16 ± 0.02	1.12 ± 0.02	---	≥ 2000*	10	≥ 6	75 ± 5**	+100	-15 up to +100	≥ 3***	≥ 40***	90 x 10 <sup>-6</sup>
CHEMONIT 33	NR	≥ 70*	1.29 ± 0.02	1.25 ± 0.02	---	---	10	≥ 6	78 ± 5**	+105	-20 up to +105	≥ 1***	≥ 45***	---
CHEMONIT 35	IR / SBR	≥ 40*	1.29 ± 0.02	1.24 ± 0.02	10 <sup>14</sup>	≥ 2000*	10	≥ 6	78 ± 5** / 65 ± 5**** / 70 ± 5*****	+100	-15 up to +100	≥ 2***	≥ 30***	50 x 10 <sup>-6</sup>
CHEMONIT 181	IR / SBR	≥ 40*	1.32 ± 0.02	1.29 ± 0.02	10 <sup>11</sup>	≥ 1500*	10	≥ 6	75 ± 5**	+100	-25 up to +100	≥ 1.5***	≥ 20***	70 x 10 <sup>-6</sup>

\* Press vulcanisation \*\* Autoclave vulcanisation \*\*\* 4 mm rubber \*\*\*\* Hot water vulcanisation \*\*\*\*\* Vulcanisation with steam and pressure (On Site)

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# TEST VOLTAGE CHEMONIT

## VULCANISED

Product	Test Voltage [kV / mm]	Max. Voltage [kV]
CHEMONIT 3 B	5.0	20.0
CHEMONIT 18HT	-	-
CHEMONIT 20 KTW	6.0	20.0
CHEMONIT 31	5.0	20.0
CHEMONIT 33	3.0	15.0
CHEMONIT 35	3.0	20.0
CHEMONIT 181	5.0	20.0

## UNVULCANISED

Product	Test Voltage [kV / mm]	Max. Voltage [kV]
CHEMONIT 3 B	5.0	20.0
CHEMONIT 18HT	-	-
CHEMONIT 20 KTW	6.0	20.0
CHEMONIT 31	5.0	20.0
CHEMONIT 33	3.0	15.0
CHEMONIT 35	3.0	20.0
CHEMONIT 181	5.0	20.0

**Note:** The spark test (holiday test) of new rubber linings is carried out according EN 14879-4 by using a high voltage tester. For carrying out the spark test, only the high voltage testers of Elmed model Isotest II RT or P as well as the test pistols of Wegener model WEG 20 or 22 or 100 are allowed.

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# PRODUCT INFORMATION

## CHEMONIT 3 B

### PRODUCT DESCRIPTION

**CHEMONIT 3 B** is a brown hard rubber lining based on Natural rubber (NR).

### FIELDS OF APPLICATION

**CHEMONIT 3 B** is used mainly for the workshop rubber lining of steel components servicing under chemical loads. The field of applications are mainly chemical plants, chlorine and steel industry, mineral processing plants, electroplating industry and environmental protection plants. Some typical examples of applications are the rubber linings of storage and process tanks, electroplating baths, centrifuges, pipe spools as well as the cell covers, and inlet-outlet boxes in the chlor-alkali process (electrolysis).

### FEATURES

- Strong chemical resistance against mineral acids, bases and especially excellent resistance against wet chlorine and organic chemicals
- High diffusion resistance
- High thermal stability (max. +100°C)
- Application onto steel components
- Workshop rubber lining

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of non-ferrous metals, cast iron or ferrite steel. Components to be rubber lined shall be designed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

Surfaces to be rubber lined must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 60 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate or the component must be air conditioned.

### ENVIRONMENTAL CONDITIONS

Throughout the rubber lining process, the temperatures of the substrate and rubber lining materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### ADHESIVE SYSTEM

**CHEMONIT 3 B** is bonded onto steel components by using **ADHESIVE SH-3A SOLUTION & ADHESIVE PARA SOLUTION**. Alternatively, **CHEMONIT 3 B** can be adhered to the steel using only **ADHESIVE SH-3A SOLUTION**.

### APPLICATION METHOD UND CONSUMPTION

During the application of the product, the application instruction must always be observed.

Coat	Product	Application Method	Coverage [g/m <sup>2</sup> ]
1. Coat steel*	<b>PRIMER HG 1</b>	Roll / Spray	ca. 150
2. Coat steel*	<b>PRIMER HG 2</b>	Brush	ca. 150
3. Coat steel	<b>ADHESIVE SH-3A SOLUTION</b>	Brush	ca. 250
4. Coat steel	<b>ADHESIVE SH-3A SOLUTION</b>	Brush	ca. 250
1. Coat rubber	<b>ADHESIVE PARA SOLUTION</b> or <b>ADHESIVE SH-3A SOLUTION</b>	Brush	ca. 250

\* The two-component primer system **PRIMER HG 1 & PRIMER HG 2** is only used for steam vulcanization or for special applications (e.g. rubber lining on stainless steel).

### CLEANING

Clean all equipment with **SOLVENT CF-CE** immediately after use.

### VULCANISATION

The details given in the application instruction must be observed during vulcanisation.

Place	Vulcanisation Method
Workshop	Vulcanisation in an autoclave under pressure by means hot air or steam.

### SPARK TEST

The spark test (holiday test) of new rubber linings is carried out according EN 14879-4 by using a high voltage tester. For carrying out the spark test, only the high voltage testers of Elmed model Isotest II RT or P as well as the test pistols of Wegener model WEG 20 or 22 or 100 are allowed.

CHEMONIT 3 B	Test Voltage [kV/mm]	Max. Test Voltage [kV]
unvulcanised	5.0	20.0
vulcanised	5.0	20.0

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# CHEMONIT 3 B

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
ADHESIVE PARA SOLUTION	6 kg	538 1504
ADHESIVE PARA SOLUTION	21 kg	538 1460
ADHESIVE SH-3A SOLUTION	4 kg	538 1410
ADHESIVE SH-3A SOLUTION	8 kg	538 1511
ADHESIVE SH-3A SOLUTION	21 kg	538 1430
PRIMER HG 1	0.75 kg	525 2949
PRIMER HG 1	9 kg	525 2956
PRIMER HG 1	4.5 kg	525 3050
PRIMER HG 2	0.75 kg	525 2970
PRIMER HG 2	4.5 kg	525 3060
PRIMER HG 2	9 kg	525 2987
SOLVENT CF-CE	10 l	595 9163

## PACKAGING OF RUBBER SHEETS

The rubber sheets are wrapped with PE-separating sheets on cardboard cores, and packed freely suspend in stable, stackable card boxes, to avoid pressure points.

CHEMONIT 3 B is manufactured by extrusion in the following standard sizes:

Size (Tolerances according EN 14879-4)	Product-No.
2 mm x 1100 mm x 10000 mm	529 3520
3 mm x 1100 mm x 10000 mm	529 3568
4 mm x 1100 mm x 10000 mm	529 3609
5 mm x 1100 mm x 10000 mm	529 3647
6 mm x 1100 mm x 10000 mm	529 3685

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. The rubber sheets must be stored free of pressure, best in the original packaging. The rubber sheets may not receive any pressure points. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
ADHESIVE PARA SOLUTION	≤ +20°C	12 Months
ADHESIVE SH-3A SOLUTION	5 - 20°C	12 Months
CHEMONIT 3 B	≤ +25°C	3 Months
CHEMONIT 3 B	≤ +5°C	12 Months
PRIMER HG 1	5 - 20°C	12 Months
PRIMER HG 2	5 - 20°C	12 Months
SOLVENT CF-CE	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Polymer	ISO 1629	-	NR
Bending Strength	EN ISO 178	N/mm <sup>2</sup>	≥ 70*
Density	EN ISO 1183-1	g/cm <sup>3</sup>	1.14 ± 0.02
Contact Resistance	DIN IEC 60093	Ω · cm	10 <sup>15</sup>
Modulus of Elasticity	EN ISO 527 (ASTM D638)	N/mm <sup>2</sup>	≥ 2000*
Hardness Shore D	ISO 7619-1 (ASTM D2240)	-	75 ± 5**
Max. Surface Pressure	-	N/mm <sup>2</sup>	10
Adhesion Strength Steel	EN ISO 4624 (ASTM D429; Method E)	N/mm <sup>2</sup>	≥ 6
Elongation at Break	DIN 53504 (ASTM D412)	%	≥ 3***
Tensile Strength	DIN 53504 (ASTM D412)	N/mm <sup>2</sup>	≥ 40***
Coefficient of Thermal Expansion	DIN 53752	1/K	100 x 10 <sup>-6</sup>
Max. Continuous Operating Temperature	-	°C	+100
Temperature Range	-	°C	-10 up to +100

\* Press vulcanisation \*\* Autoclave vulcanisation \*\*\* 4 mm rubber

**Note:** The indicated temperatures are dependent on the present load and may vary

Information given in the fact sheet above corresponds to the current knowledge available to us regarding our products at the time of its drafting and is intended as a guideline for informational purposes. However, because of the multiple possibilities regarding possible applications, processing and on site conditions, any information given in the fact sheet above is not legally binding, in particular, without being limited to, such information shall not be interpreted as a warranty of merchantability or of fitness for a particular purpose. Customer therefore is advised to conduct its own testing or make an inquiry with our technical department before ordering. We reserve the right to change the product at any time, in particular, without being limited to, minor changes because of advancements in technology. If by way of exception, the information given in the fact sheet above is incorporated by reference into any contract concluded with us under German Law, such information, shall only be interpreted as determining the specific requirements of the contractual products as set out in § 434 BGB (German Civil Code) and shall not be interpreted as constituting a guarantee of condition.

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# PRODUCT INFORMATION

## CHEMONIT 18HT

### PRODUCT DESCRIPTION

**CHEMONIT 18HT** is a high graphite-filled and electrostatic dissipating hard rubber lining based on Natural rubber (NR).

### FIELDS OF APPLICATION

**CHEMONIT 18HT** is used mainly for the workshop rubber lining of steel components servicing under chemical loads. The field of applications are mainly chemical plants, chlorine and steel industry, mineral processing plants and environmental protection plants. Some typical examples of applications are the rubber linings of storage tanks and reaction vessels, columns, centrifuges, crystallization reactors and tube bundle heat exchangers (shell & tube heat exchangers) operating at higher temperatures. Due to its good electrical conductivity, **CHEMONIT 18HT** can be used in processes where the static electricity must be avoided.

### FEATURES

- Very good chemical resistance against mineral acids, bases and aqueous phases with organic ingredients
- Excellent diffusion resistance
- Strong resistance against temperature excursions
- High thermal stability (max. +120°C)
- Application onto steel components
- Workshop rubber lining

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of non-ferrous metals, cast iron or ferrite steel. Components to be rubber lined shall be designed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

Surfaces to be rubber lined must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 60 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate or the component must be air conditioned.

### ENVIRONMENTAL CONDITIONS

Throughout the rubber lining process, the temperatures of the substrate and rubber lining materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### ADHESIVE SYSTEM

**CHEMONIT 18HT** is bonded onto steel components by using **ADHESIVE SH-3A SOLUTION & ADHESIVE PARA SOLUTION**.

Alternatively, **CHEMONIT 18HT** can be adhered to the steel using only **ADHESIVE SH-3A SOLUTION**.

### APPLICATION METHOD UND CONSUMPTION

During the application of the product, the application instruction must always be observed.

Coat	Product	Application Method	Coverage [g/m²]
1. Coat steel*	<b>PRIMER HG 1</b>	Roll / Spray	ca. 150
2. Coat steel*	<b>PRIMER HG 2</b>	Brush	ca. 150
3. Coat steel	<b>ADHESIVE SH-3A SOLUTION</b>	Brush	ca. 250
4. Coat steel	<b>ADHESIVE SH-3A SOLUTION</b>	Brush	ca. 250
1. Coat rubber	<b>ADHESIVE PARA SOLUTION or ADHESIVE SH-3A SOLUTION</b>	Brush	ca. 250

\* The two-component primer system **PRIMER HG 1 & PRIMER HG 2** is only used for steam vulcanization or for special applications (e.g. rubber lining on stainless steel).

### CLEANING

Clean all equipment with **SOLVENT CF-CE** immediately after use.

### VULCANISATION

The details given in the application instruction must be observed during vulcanisation.

Place	Vulcanisation Method
Workshop	Vulcanisation in an autoclave under pressure by means hot air or steam.

### SPARK TEST

Due to its electrostatic properties (electrical conductive), the rubber lining can not be tested on pores or cracks by means of high voltage test. The rubber lining is tested on pores and cracks by 100% visual inspection with optimal illumination.

CHEMONIT 18HT	Test Voltage [kV/mm]	Max. Test Voltage [kV]
unvulcanised	-	-
vulcanised	-	-

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# CHEMONIT 18HT

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
ADHESIVE PARA SOLUTION	6 kg	538 1504
ADHESIVE PARA SOLUTION	21 kg	538 1460
ADHESIVE SH-3A SOLUTION	4 kg	538 1410
ADHESIVE SH-3A SOLUTION	8 kg	538 1511
ADHESIVE SH-3A SOLUTION	21 kg	538 1430
PRIMER HG 1	0.75 kg	525 2949
PRIMER HG 1	4.5 kg	525 3050
PRIMER HG 1	9 kg	525 2956
PRIMER HG 2	0.75 kg	525 2970
PRIMER HG 2	4.5 kg	525 3060
PRIMER HG 2	9 kg	525 2987
SOLVENT CF-CE	10 l	595 9163

## PACKAGING OF RUBBER SHEETS

The rubber sheets are wrapped with PE-separating sheets on cardboard cores, and packed freely suspend in stable, stackable card boxes, to avoid pressure points.

CHEMONIT 18HT is manufactured by extrusion in the following standard sizes:

Size (Tolerances according EN 14879-4)	Product-No.
2 mm x 1100 mm x 10000 mm	529 4300
3 mm x 1100 mm x 10000 mm	529 4310
4 mm x 1100 mm x 10000 mm	529 4320
5 mm x 1100 mm x 10000 mm	529 4330
6 mm x 1100 mm x 10000 mm	529 4340

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. The rubber sheets must be stored free of pressure, best in the original packaging. The rubber sheets may not receive any pressure points. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
ADHESIVE PARA SOLUTION	≤ +20°C	12 Months
ADHESIVE SH-3A SOLUTION	5 - 20°C	12 Months
CHEMONIT 18HT	≤ +25°C	3 Months
CHEMONIT 18HT	≤ +5°C	12 Months
PRIMER HG 1	5 - 20°C	12 Months
PRIMER HG 2	5 - 20°C	12 Months
SOLVENT CF-CE	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Polymer	ISO 1629	-	NR
Density	EN ISO 1183-1	g/cm <sup>3</sup>	1.42 ± 0.02
Contact Resistance	DIN IEC 60093	Ω · cm	≤ 10 <sup>5</sup>
Modulus of Elasticity	EN ISO 527 (ASTM D638)	N/mm <sup>2</sup>	≥ 900*
Hardness Shore D	ISO 7619-1 (ASTM D2240)	-	75 ± 5**
Max. Surface Pressure	-	N/mm <sup>2</sup>	10
Adhesion Strength Steel	EN ISO 4624 (ASTM D429; Method E)	N/mm <sup>2</sup>	> 6
Elongation at Break	DIN 53504 (ASTM D412)	%	≥ 2***
Tensile Strength	DIN 53504 (ASTM D412)	N/mm <sup>2</sup>	≥ 25***
Coefficient of Thermal Expansion	DIN 53752	1/K	16 x 10 <sup>-6</sup>
Max. Continuous Operating Temperature	-	°C	+120
Temperature Range	-	°C	-20 up to +120

\* Press vulcanisation \*\* Autoclave vulcanisation \*\*\* 4 mm rubber

**Note:** The indicated temperatures are dependent on the present load and may vary

Information given in the fact sheet above corresponds to the current knowledge available to us regarding our products at the time of its drafting and is intended as a guideline for informational purposes. However, because of the multiple possibilities regarding possible applications, processing and on site conditions, any information given in the fact sheet above is not legally binding, in particular, without being limited to, such information shall not be interpreted as a warranty of merchantability or of fitness for a particular purpose. Customer therefore is advised to conduct its own testing or make an inquiry with our technical department before ordering. We reserve the right to change the product at any time, in particular, without being limited to, minor changes because of advancements in technology. If by way of exception, the information given in the fact sheet above is incorporated by reference into any contract concluded with us under German Law, such information, shall only be interpreted as determining the specific requirements of the contractual products as set out in § 434 BGB (German Civil Code) and shall not be interpreted as constituting a guarantee of condition.

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# PRODUCT INFORMATION

## CHEMONIT 20 KTW

### PRODUCT DESCRIPTION

**CHEMONIT 20 KTW** is a light brown hard rubber lining based on Natural rubber (NR).

### FIELDS OF APPLICATION

**CHEMONIT 20 KTW** is developed specifically for the workshop rubber lining of steel components in the drinking water and food industry which are subject to chemical loads. Some typical examples of applications are the rubber linings of storage and filter tanks, accessories, instruments and of other miscellaneous equipment components.

### APPROVALS & CERTIFICATES

- KTW-Certificate for cold and hot water according the new elastomer guidelines from 22.12.2011
- Certificate according DVGW - worksheet W 270
- Certificate of suitability for aqueous food in accordance with the guidelines CFR 21§ 177.2600 of the Food and Drug Administration (FDA)
- BS 6920

### FEATURES

- Strong chemical resistance against mineral acids and bases
- High diffusion resistance
- High thermal stability (max. +85°C)
- Application onto steel components
- Workshop rubber lining

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of non-ferrous metals, cast iron or ferrite steel. Components to be rubber lined shall be designed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

Surfaces to be rubber lined must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 60 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate or the component must be air conditioned.

### ENVIRONMENTAL CONDITIONS

Throughout the rubber lining process, the temperatures of the substrate and rubber lining materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### ADHESIVE SYSTEM

**CHEMONIT 20 KTW** is bonded onto steel components by using **ADHESIVE SH-3A SOLUTION** & **ADHESIVE PARA SOLUTION**.

Alternatively, **CHEMONIT 20 KTW** can be adhered to the steel using only **ADHESIVE SH-3A SOLUTION**.

### APPLICATION METHOD UND CONSUMPTION

During the application of the product, the application instruction must always be observed.

Coat	Product	Application Method	Coverage [g/m²]
1. Coat steel	<b>PRIMER HG 1</b>	Roll / Spray	ca. 150
2. Coat steel	<b>PRIMER HG 2</b>	Brush	ca. 150
3. Coat steel	<b>ADHESIVE SH-3A SOLUTION</b>	Brush	ca. 250
4. Coat steel	<b>ADHESIVE SH-3A SOLUTION</b>	Brush	ca. 250
1. Coat rubber	<b>ADHESIVE PARA SOLUTION</b> or <b>ADHESIVE SH-3A SOLUTION</b>	Brush	ca. 250

### CLEANING

Clean all equipment with **SOLVENT CF-CE** immediately after use.

### VULCANISATION

The details given in the application instruction must be observed during vulcanisation.

Place	Vulcanisation Method
Workshop	Vulcanisation in an autoclave under pressure by means hot air or steam.

### SPARK TEST

The spark test (holiday test) of new rubber linings is carried out according EN 14879-4 by using a high voltage tester. For carrying out the spark test, only the high voltage testers of Elmed model Isotest II RT or P as well as the test pistols of Wegener model WEG 20 or 22 or 100 are allowed.

CHEMONIT 20 KTW	Test Voltage [kV/mm]	Max. Test Voltage [kV]
unvulcanised	6.0	20.0
vulcanised	6.0	20.0

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# CHEMONIT 20 KTW

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
ADHESIVE PARA SOLUTION	6 kg	538 1504
ADHESIVE PARA SOLUTION	21 kg	538 1460
ADHESIVE SH-3A SOLUTION	4 kg	538 1410
ADHESIVE SH-3A SOLUTION	8 kg	538 1511
ADHESIVE SH-3A SOLUTION	21 kg	538 1430
PRIMER HG 1	0.75 kg	525 2949
PRIMER HG 1	4.5 kg	525 3050
PRIMER HG 1	9 kg	525 2956
PRIMER HG 2	0.75 kg	525 2970
PRIMER HG 2	4.5 kg	525 3060
PRIMER HG 2	9 kg	525 2987
SOLVENT CF-CE	10 l	595 9163

## PACKAGING OF RUBBER SHEETS

The rubber sheets are wrapped with PE-separating sheets on cardboard cores, and packed freely suspend in stable, stackable card boxes, to avoid pressure points.

CHEMONIT 20 KTW is manufactured by extrusion in the following standard sizes:

Size (Tolerances according EN 14879-4)	Product-No.
2 mm x 1100 mm x 10000 mm	529 4350
3 mm x 1100 mm x 10000 mm	529 4360
4 mm x 1100 mm x 10000 mm	529 4370
5 mm x 1100 mm x 10000 mm	529 4380
6 mm x 1100 mm x 10000 mm	529 4390

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. The rubber sheets must be stored free of pressure, best in the original packaging. The rubber sheets may not receive any pressure points. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
ADHESIVE PARA SOLUTION	≤ +20°C	12 Months
ADHESIVE SH-3A SOLUTION	5 - 20°C	12 Months
CHEMONIT 20 KTW	≤ +5°C	6 Months
CHEMONIT 20 KTW	≤ +20°C	2 Months
PRIMER HG 1	5 - 20°C	12 Months
PRIMER HG 2	5 - 20°C	12 Months
SOLVENT CF-CE	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Polymer	ISO 1629	-	NR
Density	EN ISO 1183-1	g/cm <sup>3</sup>	1.61 ± 0.02
Hardness Shore D	ISO 7619-1 (ASTM D2240)	-	78 ± 5**
Max. Surface Pressure	-	N/mm <sup>2</sup>	10
Adhesion Strength Steel	EN ISO 4624 (ASTM D429; Method E)	N/mm <sup>2</sup>	≥ 6
Elongation at Break	DIN 53504 (ASTM D412)	%	≥ 5***
Tensile Strength	DIN 53504 (ASTM D412)	N/mm <sup>2</sup>	≥ 20***
Max. Continuous Operating Temperature	-	°C	+85
Temperature Range	-	°C	-20 up to +85

\*\* Autoclave vulcanisation \*\*\* 4 mm rubber

**Note:** The indicated temperatures are dependent on the present load and may vary

Information given in the fact sheet above corresponds to the current knowledge available to us regarding our products at the time of its drafting and is intended as a guideline for informational purposes. However, because of the multiple possibilities regarding possible applications, processing and on site conditions, any information given in the fact sheet above is not legally binding, in particular, without being limited to, such information shall not be interpreted as a warranty of merchantability or of fitness for a particular purpose. Customer therefore is advised to conduct its own testing or make an inquiry with our technical department before ordering. We reserve the right to change the product at any time, in particular, without being limited to, minor changes because of advancements in technology. If by way of exception, the information given in the fact sheet above is incorporated by reference into any contract concluded with us under German Law, such information, shall only be interpreted as determining the specific requirements of the contractual products as set out in § 434 BGB (German Civil Code) and shall not be interpreted as constituting a guarantee of condition.

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# PRODUCT INFORMATION

## CHEMONIT 31

### PRODUCT DESCRIPTION

**CHEMONIT 31** is a black hard rubber lining based on Natural rubber (NR).

### FIELDS OF APPLICATION

**CHEMONIT 31** is used mainly for the workshop rubber lining of steel components which are exposed to chemical loads. The field of applications are mainly chemical plants, chlorine and steel industry, mineral processing plants, electroplating facilities and environmental protection plants. Some typical examples of applications are the rubber linings of storage tanks, filter tanks, agitated tanks, ion exchangers, electroplating baths, centrifuge drums, pipe spools, as well as the cell covers and inlet-outlet boxes in the chlor-alkali process (electrolysis) or the filter vessels in water treatment field.

### APPROVALS

**CHEMONIT 31** is approved (**Z-59.22-140**) by the German Institute of Construction Technology (DIBt) for steel storage vessels.

### FEATURES

- Strong chemical resistance against mineral acids, bases and organic chemicals
- High diffusion resistance
- Strong resistance against temperature excursions
- Application onto steel components
- Workshop rubber lining

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of non-ferrous metals, cast iron or ferrite steel. Components to be rubber lined shall be designed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

Surfaces to be rubber lined must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 60 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate or the component must be air conditioned.

### ENVIRONMENTAL CONDITIONS

Throughout the rubber lining process, the temperatures of the substrate and rubber lining materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### ADHESIVE SYSTEM

**CHEMONIT 31** is bonded onto steel components by using **ADHESIVE SH-3A SOLUTION & ADHESIVE PARA SOLUTION**. Alternatively, **CHEMONIT 31** can be adhered to the steel using only **ADHESIVE SH-3A SOLUTION**.

### APPLICATION METHOD UND CONSUMPTION

During the application of the product, the application instruction must always be observed.

Coat	Product	Application Method	Coverage [g/m²]
1. Coat steel*	<b>PRIMER HG 1</b>	Roll / Spray	ca. 150
2. Coat steel*	<b>PRIMER HG 2</b>	Brush	ca. 150
3. Coat steel	<b>ADHESIVE SH-3A SOLUTION</b>	Brush	ca. 250
4. Coat steel	<b>ADHESIVE SH-3A SOLUTION</b>	Brush	ca. 250
1. Coat rubber	<b>ADHESIVE PARA SOLUTION</b> or <b>ADHESIVE SH-3A SOLUTION</b>	Brush	ca. 250

\* The two-component primer system **PRIMER HG 1 & PRIMER HG 2** is only used for steam vulcanization or for special applications (e.g. rubber lining on stainless steel).

### CLEANING

Clean all equipment with **SOLVENT CF-CE** immediately after use.

### VULCANISATION

The details given in the application instruction must be observed during vulcanisation.

Place	Vulcanisation Method
Workshop	Vulcanisation in an autoclave under pressure by means hot air or steam.

### SPARK TEST

The spark test (holiday test) of new rubber linings is carried out according EN 14879-4 by using a high voltage tester. For carrying out the spark test, only the high voltage testers of Elmed model Isotest II RT or P as well as the test pistols of Wegener model WEG 20 or 22 or 100 are allowed.

CHEMONIT 31	Test Voltage [kV/mm]	Max. Test Voltage [kV]
unvulcanised	5.0	20.0
vulcanised	5.0	20.0

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# CHEMONIT 31

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
ADHESIVE PARA SOLUTION	6 kg	538 1504
ADHESIVE PARA SOLUTION	21 kg	538 1460
ADHESIVE SH-3A SOLUTION	4 kg	538 1410
ADHESIVE SH-3A SOLUTION	8 kg	538 1511
ADHESIVE SH-3A SOLUTION	21 kg	538 1430
PRIMER HG 1	0.75 kg	525 2949
PRIMER HG 1	4.5 kg	525 3050
PRIMER HG 1	9 kg	525 2956
PRIMER HG 2	0.75 kg	525 2970
PRIMER HG 2	4.5 kg	525 3060
PRIMER HG 2	9 kg	525 2987
SOLVENT CF-CE	10 l	595 9163

## PACKAGING OF RUBBER SHEETS

The rubber sheets are wrapped with PE-separating sheets on cardboard cores, and packed freely suspend in stable, stackable card boxes, to avoid pressure points.

CHEMONIT 31 is manufactured by extrusion in the following standard sizes:

Size (Tolerances according EN 14879-4)	Product-No.
2 mm x 1100 mm x 10000 mm	529 3922
3 mm x 1100 mm x 10000 mm	529 3960
4 mm x 1100 mm x 10000 mm	529 4000
5 mm x 1100 mm x 10000 mm	529 4048
6 mm x 1100 mm x 10000 mm	529 4086

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. The rubber sheets must be stored free of pressure, best in the original packaging. The rubber sheets may not receive any pressure points. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
ADHESIVE PARA SOLUTION	≤ +20°C	12 Months
ADHESIVE SH-3A SOLUTION	5 - 20°C	12 Months
CHEMONIT 31	≤ +25°C	3 Months
CHEMONIT 31	≤ +5°C	12 Months
PRIMER HG 1	5 - 20°C	12 Months
PRIMER HG 2	5 - 20°C	12 Months
SOLVENT CF-CE	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Polymer	ISO 1629	-	NR
Bending Strength	EN ISO 178	N/mm <sup>2</sup>	≥ 80*
Density	EN ISO 1183-1	g/cm <sup>3</sup>	1.16 ± 0.02
Modulus of Elasticity	EN ISO 527 (ASTM D638)	N/mm <sup>2</sup>	≥ 2000*
Hardness Shore D	ISO 7619-1 (ASTM D2240)	-	75 ± 5**
Max. Surface Pressure	-	N/mm <sup>2</sup>	10
Adhesion Strength Steel	EN ISO 4624 (ASTM D429; Method E)	N/mm <sup>2</sup>	≥ 6
Elongation at Break	DIN 53504 (ASTM D412)	%	≥ 3***
Tensile Strength	DIN 53504 (ASTM D412)	N/mm <sup>2</sup>	≥ 40***
Coefficient of Thermal Expansion	DIN 53752	1/K	90 x 10 <sup>-6</sup>
Max. Continuous Operating Temperature	-	°C	+100
Temperature Range	-	°C	-15 up to +100

\* Press vulcanisation \*\* Autoclave vulcanisation \*\*\* 4 mm rubber

**Note:** The indicated temperatures are dependent on the present load and may vary

Information given in the fact sheet above corresponds to the current knowledge available to us regarding our products at the time of its drafting and is intended as a guideline for informational purposes. However, because of the multiple possibilities regarding possible applications, processing and on site conditions, any information given in the fact sheet above is not legally binding, in particular, without being limited to, such information shall not be interpreted as a warranty of merchantability or of fitness for a particular purpose. Customer therefore is advised to conduct its own testing or make an inquiry with our technical department before ordering. We reserve the right to change the product at any time, in particular, without being limited to, minor changes because of advancements in technology. If by way of exception, the information given in the fact sheet above is incorporated by reference into any contract concluded with us under German Law, such information, shall only be interpreted as determining the specific requirements of the contractual products as set out in § 434 BGB (German Civil Code) and shall not be interpreted as constituting a guarantee of condition.

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# PRODUCT INFORMATION

## CHEMONIT 33

### PRODUCT DESCRIPTION

**CHEMONIT 33** is an anthracite-coloured, graphite-filled hard rubber lining based on Natural rubber (NR).

### FIELDS OF APPLICATION

**CHEMONIT 33** is used mainly for the workshop rubber lining of steel components which are exposed to chemical loads. The field of applications are mainly chemical plants, chlorine and steel industry, mineral processing plants, electroplating facilities and environmental protection plants. Some typical examples of applications are the rubber linings of storage tanks, filter tanks, agitated tanks, ion exchangers, electroplating baths, centrifuge drums, flue gas scrubbers in waste incinerators, pipe spools, as well as the cell covers and inlet-outlet boxes in the chlor-alkali process (electrolysis) or the filter vessels in water treatment field.

### APPROVALS

**CHEMONIT 33** is approved (**Z-59.22-312**) by the German Institute of Construction Technology (DIBt) for steel storage vessels.

### FEATURES

- Strong chemical resistance against mineral acids, bases and especially excellent resistance against wet chlorine and concentrated hydrochloric acid
- High diffusion resistance
- High thermal stability (max. +115°C)
- Application onto steel components
- Workshop rubber lining

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of non-ferrous metals, cast iron or ferrite steel. Components to be rubber lined shall be designed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

Surfaces to be rubber lined must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 60 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate or the component must be air conditioned.

### ENVIRONMENTAL CONDITIONS

Throughout the rubber lining process, the temperatures of the substrate and rubber lining materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### ADHESIVE SYSTEM

**CHEMONIT 33** is bonded onto steel components by using **ADHESIVE SH-3A SOLUTION & ADHESIVE PARA SOLUTION**. Alternatively, **CHEMONIT 33** can be adhered to the steel using only **ADHESIVE SH-3A SOLUTION**.

### APPLICATION METHOD UND CONSUMPTION

During the application of the product, the application instruction must always be observed.

Coat	Product	Application Method	Coverage [g/m²]
1. Coat steel*	<b>PRIMER HG 1</b>	Roll / Spray	ca. 150
2. Coat steel*	<b>PRIMER HG 2</b>	Brush	ca. 150
3. Coat steel	<b>ADHESIVE SH-3A SOLUTION</b>	Brush	ca. 250
4. Coat steel	<b>ADHESIVE SH-3A SOLUTION</b>	Brush	ca. 250
1. Coat rubber	<b>ADHESIVE PARA SOLUTION</b> or <b>ADHESIVE SH-3A SOLUTION</b>	Brush	ca. 250

\* The two-component primer system **PRIMER HG 1 & PRIMER HG 2** is only used for steam vulcanization or for special applications (e.g. rubber lining on stainless steel).

### CLEANING

Clean all equipment with **SOLVENT CF-CE** immediately after use.

### VULCANISATION

The details given in the application instruction must be observed during vulcanisation.

Place	Vulcanisation Method
Workshop	Vulcanisation in an autoclave under pressure by means hot air or steam.

### SPARK TEST

The spark test (holiday test) of new rubber linings is carried out according EN 14879-4 by using a high voltage tester. For carrying out the spark test, only the high voltage testers of Elmed model Isotest II RT or P as well as the test pistols of Wegener model WEG 20 or 22 or 100 are allowed.

CHEMONIT 33	Test Voltage [kV/mm]	Max. Test Voltage [kV]
unvulcanised	3.0	15.0
vulcanised	3.0	15.0

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# CHEMONIT 33

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
ADHESIVE PARA SOLUTION	6 kg	538 1504
ADHESIVE PARA SOLUTION	21 kg	538 1460
ADHESIVE SH-3A SOLUTION	4 kg	538 1410
ADHESIVE SH-3A SOLUTION	8 kg	538 1511
ADHESIVE SH-3A SOLUTION	21 kg	538 1430
PRIMER HG 1	0.75 kg	525 2949
PRIMER HG 1	4.5 kg	525 3050
PRIMER HG 1	9 kg	525 2956
PRIMER HG 2	0.75 kg	525 2970
PRIMER HG 2	4.5 kg	525 3060
PRIMER HG 2	9 kg	525 2987
SOLVENT CF-CE	10 l	595 9163

## PACKAGING OF RUBBER SHEETS

The rubber sheets are wrapped with PE-separating sheets on cardboard cores, and packed freely suspend in stable, stackable card boxes, to avoid pressure points.

CHEMONIT 33 is manufactured by extrusion in the following standard sizes:

Size (Tolerances according EN 14879-4)	Product-No.
2 mm x 1100 mm x 10000 mm	529 5102
3 mm x 1100 mm x 10000 mm	529 5119
4 mm x 1100 mm x 10000 mm	529 5126
5 mm x 1100 mm x 10000 mm	529 5130
6 mm x 1100 mm x 10000 mm	529 5140

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. The rubber sheets must be stored free of pressure, best in the original packaging. The rubber sheets may not receive any pressure points. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
ADHESIVE PARA SOLUTION	≤ +20°C	12 Months
ADHESIVE SH-3A SOLUTION	5 - 20°C	12 Months
CHEMONIT 33	≤ +25°C	3 Months
CHEMONIT 33	≤ +5°C	12 Months
PRIMER HG 1	5 - 20°C	12 Months
PRIMER HG 2	5 - 20°C	12 Months
SOLVENT CF-CE	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Polymer	ISO 1629	-	NR
Bending Strength	EN ISO 178	N/mm <sup>2</sup>	≥ 70*
Density	EN ISO 1183-1	g/cm <sup>3</sup>	1.29 ± 0.02
Hardness Shore D	ISO 7619-1 (ASTM D2240)	-	78 ± 5**
Max. Surface Pressure	-	N/mm <sup>2</sup>	10
Adhesion Strength Steel	EN ISO 4624 (ASTM D429; Method E)	N/mm <sup>2</sup>	≥ 6
Elongation at Break	DIN 53504 (ASTM D412)	%	≥ 1***
Tensile Strength	DIN 53504 (ASTM D412)	N/mm <sup>2</sup>	≥ 45***
Max. Continuous Operating Temperature	-	°C	+105
Temperature Range	-	°C	-20 up to +105

\* Press vulcanisation \*\* Autoclave vulcanisation \*\*\* 4 mm rubber

**Note:** The indicated temperatures are dependent on the present load and may vary

Information given in the fact sheet above corresponds to the current knowledge available to us regarding our products at the time of its drafting and is intended as a guideline for informational purposes. However, because of the multiple possibilities regarding possible applications, processing and on site conditions, any information given in the fact sheet above is not legally binding, in particular, without being limited to, such information shall not be interpreted as a warranty of merchantability or of fitness for a particular purpose. Customer therefore is advised to conduct its own testing or make an inquiry with our technical department before ordering. We reserve the right to change the product at any time, in particular, without being limited to, minor changes because of advancements in technology. If by way of exception, the information given in the fact sheet above is incorporated by reference into any contract concluded with us under German Law, such information, shall only be interpreted as determining the specific requirements of the contractual products as set out in § 434 BGB (German Civil Code) and shall not be interpreted as constituting a guarantee of condition.

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# PRODUCT INFORMATION

## CHEMONIT 35

### PRODUCT DESCRIPTION

**CHEMONIT 35** is an anthracite-coloured, graphite-filled hard rubber lining based on Polyisoprene rubber (IR) and Styrene Butadiene rubber (SBR).

### FIELDS OF APPLICATION

**CHEMONIT 35** is used mainly for the workshop rubber lining of steel components which are exposed to chemical loads. The field of applications are mainly chemical plants, chlorine and steel industry, mineral processing plants, electroplating facilities and environmental protection plants. Some typical examples of applications are the rubber linings of storage tanks, filter tanks, agitated tanks, electroplating baths, crystallization reactors, centrifuge drums, and pipe spools. **CHEMONIT 35** is used especially as corrosion protection lining for storage or transportation tanks (rubber lining of railway tank wagons) against concentrated hydrochloric acid.

### APPROVALS

**CHEMONIT 35** is approved (**Z-59.22-322**) by the German Institute of Construction Technology (DIBt) for steel storage vessels.

### FEATURES

- Strong chemical resistance against mineral acids and bases with the exception of oxidizing media
- High diffusion resistance
- High thermal stability (max. +100°C)
- Application onto steel components
- On site rubber lining

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of non-ferrous metals, cast iron or ferrite steel. Components to be rubber lined shall be designed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

Surfaces to be rubber lined must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 60 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate or the component must be air conditioned.

### ENVIRONMENTAL CONDITIONS

Throughout the rubber lining process, the temperatures of the substrate and rubber lining materials shall be maintained within the range specified by TIP TOP. All surfaces shall be

maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### ADHESIVE SYSTEM

When vulcanised with hot water, hot air or steam atmosphere **CHEMONIT 35** has to be bonded onto steel components with the two-coat primer system **PRIMER HG 1** and **PRIMER HG 2** in combination with the adhesives **ADHESIVE SH-3A SOLUTION** and **ADHESIVE PARA SOLUTION**. Alternatively, **CHEMONIT 35** can be adhered to the steel using only **ADHESIVE SH-3A SOLUTION** or **ADHESIVE SH-3E SOLUTION** (overseas) in combination with **PRIMER HG 1** and **PRIMER HG 2**.

### APPLICATION METHOD UND CONSUMPTION

During the application of the product, the application instruction must always be observed.

Coat	Product	Application Method	Coverage [g/m²]
1. Coat steel	<b>PRIMER HG 1</b>	Roll / Spray	ca. 150
2. Coat steel	<b>PRIMER HG 2</b>	Brush	ca. 150
3. Coat steel	<b>ADHESIVE SH-3A SOLUTION</b>	Brush	ca. 250
4. Coat steel	<b>ADHESIVE SH-3A SOLUTION</b>	Brush	ca. 250
1. Coat rubber	<b>ADHESIVE PARA SOLUTION</b> or <b>ADHESIVE SH-3A SOLUTION</b>	Brush	ca. 250

### CLEANING

Clean all equipment with **SOLVENT CF-CE** immediately after use.

### VULCANISATION

The details given in the application instruction must be observed during vulcanisation.

Place	Vulcanisation Method
On Site	Vulcanisation at higher temperatures by means of hot air, steam (pressure) or hot water.
Workshop	Vulcanisation in an autoclave under pressure by means hot air or steam.

### SPARK TEST

The spark test (holiday test) of new rubber linings is carried out according EN 14879-4 by using a high voltage tester. For carrying out the spark test, only the high voltage testers of Elmed model Isotest II RT or P as well as the test pistols of Wegener model WEG 20 or 22 or 100 are allowed.

CHEMONIT 35	Test Voltage [kV/mm]	Max. Test Voltage [kV]
unvulcanised	3.0	20.0
vulcanised	3.0	20.0

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# CHEMONIT 35

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
ADHESIVE PARA SOLUTION	6 kg	538 1504
ADHESIVE PARA SOLUTION	21 kg	538 1460
ADHESIVE SH-3A SOLUTION	4 kg	538 1410
ADHESIVE SH-3A SOLUTION	8 kg	538 1511
ADHESIVE SH-3A SOLUTION	21 kg	538 1430
ADHESIVE SH-3E SOLUTION	8 kg	538 1513
PRIMER HG 1	0.75 kg	525 2949
PRIMER HG 1	4.5 kg	525 3050
PRIMER HG 1	9 kg	525 2956
PRIMER HG 2	0.75 kg	525 2970
PRIMER HG 2	4.5 kg	525 3060
PRIMER HG 2	9 kg	525 2987
SOLVENT CF-CE	10 l	595 9163

## PACKAGING OF RUBBER SHEETS

The rubber sheets are wrapped with PE-separating sheets on cardboard cores, and packed freely suspend in stable, stackable card boxes, to avoid pressure points.

**CHEMONIT 35** is manufactured by extrusion in the following standard sizes:

Size (Tolerances according EN 14879-4)	Product-No.
2 mm x 1100 mm x 10000 mm	529 6785
3 mm x 1100 mm x 10000 mm	529 6826
4 mm x 1100 mm x 10000 mm	529 6864
5 mm x 1100 mm x 10000 mm	529 6905
6 mm x 1100 mm x 10000 mm	529 6943

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. The rubber sheets must be stored free of pressure, best in the original packaging. The rubber sheets may not receive any pressure points. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
ADHESIVE PARA SOLUTION	≤ +20°C	12 Months
ADHESIVE SH-3A SOLUTION	5 - 20°C	12 Months
ADHESIVE SH-3E SOLUTION	5 - 20°C	12 Months
CHEMONIT 35	≤ +5°C	6 Months
CHEMONIT 35	≤ +25°C	2 Months
PRIMER HG 1	5 - 20°C	12 Months
PRIMER HG 2	5 - 20°C	12 Months
SOLVENT CF-CE	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Polymer	ISO 1629	-	IR / SBR
Density	EN ISO 1183-1	g/cm <sup>3</sup>	1.29 ± 0.02
Contact Resistance	DIN IEC 60093	Ω · cm	10 <sup>14</sup>
Modulus of Elasticity	EN ISO 527 (ASTM D638)	N/mm <sup>2</sup>	≥ 2000*
Hardness Shore D	ISO 7619-1 (ASTM D2240)	-	78 ± 5** / 65 ± 5**** / 70 ± 5*****
Max. Surface Pressure	-	N/mm <sup>2</sup>	10
Adhesion Strength Steel	EN ISO 4624 (ASTM D429; Method E)	N/mm <sup>2</sup>	≥ 6
Elongation at Break	DIN 53504 (ASTM D412)	%	≥ 2***
Tensile Strength	DIN 53504 (ASTM D412)	N/mm <sup>2</sup>	≥ 30***
Coefficient of Thermal Expansion	DIN 53752	1/K	50 x 10 <sup>-6</sup>
Max. Continuous Operating Temperature	-	°C	+100
Temperature Range	-	°C	-15 up to +100

\* Press vulcanisation \*\* Autoclave vulcanisation \*\*\* 4 mm rubber \*\*\*\* Hot water vulcanisation \*\*\*\*\* Vulcanisation with steam and pressure (On Site)

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# PRODUCT INFORMATION

## CHEMONIT 181

### PRODUCT DESCRIPTION

**CHEMONIT 181** is a black hard rubber lining based on Polyisoprene rubber (IR) and Styrene Butadiene rubber (SBR).

### FIELDS OF APPLICATION

**CHEMONIT 181** is used mainly for the workshop rubber lining of steel components which are exposed to chemical loads. The field of applications are mainly chemical plants, chlorine and steel industry, electricity generating plants, mineral processing plants and environmental protection plants. Some typical examples of applications are the rubber linings of storage tanks, filter tanks, agitated tanks, water treatment tanks, crystallization reactors, centrifuge drums as well as various tanks and pipelines in nuclear power plants.

### APPROVALS & CERTIFICATES

- **CHEMONIT 181** is approved (**Z-59.22-142**) by the German Institute of Construction Technology (DIBt) for steel storage vessels.
- Approval for nuclear power plants according AVS D 6.1/50 Rev. A
- Certificate of suitability for aqueous food in accordance with the guidelines CFR 21§ 177.2600 of the Food and Drug Administration (FDA)
- NSF 61 Approval
- BS 6920 (British Standard) => WRAS-listing

### FEATURES

- Strong chemical resistance against mineral acids and bases
- High diffusion resistance
- Application onto steel components
- Workshop rubber lining

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of non-ferrous metals, cast iron or ferrite steel. Components to be rubber lined shall be designed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

Surfaces to be rubber lined must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 60 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate or the component must be air conditioned.

### ENVIRONMENTAL CONDITIONS

Throughout the rubber lining process, the temperatures of the substrate and rubber lining materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### ADHESIVE SYSTEM

**CHEMONIT 181** is bonded onto steel components by using **PRIMER HG 2** and **ADHESIVE SH-3A SOLUTION & ADHESIVE PARA SOLUTION**. Alternatively, **CHEMONIT 181** can be adhered to the steel using only **ADHESIVE SH-3A SOLUTION** in combination with **PRIMER HG 2**.

### APPLICATION METHOD UND CONSUMPTION

During the application of the product, the application instruction must always be observed.

Coat	Product	Application Method	Coverage [g/m²]
1. Coat steel*	<b>PRIMER HG 1</b>	Roll / Spray	ca. 150
2. Coat steel*	<b>PRIMER HG 2</b>	Brush	ca. 150
3. Coat steel	<b>ADHESIVE SH-3A SOLUTION</b>	Brush	ca. 250
4. Coat steel	<b>ADHESIVE SH-3A SOLUTION</b>	Brush	ca. 250
1. Coat rubber	<b>ADHESIVE PARA SOLUTION</b> or <b>ADHESIVE SH-3A SOLUTION</b>	Brush	ca. 250

\* The two-component primer system **PRIMER HG 1 & PRIMER HG 2** is only used for steam vulcanization or for special applications (e.g. rubber lining on stainless steel).

### CLEANING

Clean all equipment with **SOLVENT CF-CE** immediately after use.

### VULCANISATION

The details given in the application instruction must be observed during vulcanisation.

Place	Vulcanisation Method
Workshop	Vulcanisation in an autoclave under pressure by means hot air or steam.

### SPARK TEST

The spark test (holiday test) of new rubber linings is carried out according EN 14879-4 by using a high voltage tester. For carrying out the spark test, only the high voltage testers of Elmed model Isotest II RT or P as well as the test pistols of Wegener model WEG 20 or 22 or 100 are allowed.

CHEMONIT 181	Test Voltage [kV/mm]	Max. Test Voltage [kV]
unvulcanised	5.0	20.0
vulcanised	5.0	20.0

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# CHEMONIT 181

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
ADHESIVE PARA SOLUTION	6 kg	538 1504
ADHESIVE PARA SOLUTION	21 kg	538 1460
ADHESIVE SH-3A SOLUTION	4 kg	538 1410
ADHESIVE SH-3A SOLUTION	8 kg	538 1511
ADHESIVE SH-3A SOLUTION	21 kg	538 1430
PRIMER HG 1	0.75 kg	525 2949
PRIMER HG 1	4.5 kg	525 3050
PRIMER HG 1	9 kg	525 2956
PRIMER HG 2	0.75 kg	525 2970
PRIMER HG 2	4.5 kg	525 3060
PRIMER HG 2	9 kg	525 2987
SOLVENT CF-CE	10 l	595 9163

## PACKAGING OF RUBBER SHEETS

The rubber sheets are wrapped with PE-separating sheets on cardboard cores, and packed freely suspended in stable, stackable card boxes, to avoid pressure points.

**CHEMONIT 181** is manufactured by extrusion in the following standard sizes:

Size (Tolerances according EN 14879-4)	Product-No.
2 mm x 1100 mm x 10000 mm	529 4921
3 mm x 1100 mm x 10000 mm	529 4969
4 mm x 1100 mm x 10000 mm	529 5009
5 mm x 1100 mm x 10000 mm	529 5047
6 mm x 1100 mm x 10000 mm	529 5085

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. The rubber sheets must be stored free of pressure, best in the original packaging. The rubber sheets may not receive any pressure points. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
ADHESIVE PARA SOLUTION	≤ +20°C	12 Months
ADHESIVE SH-3A SOLUTION	5 - 20°C	12 Months
CHEMONIT 181	≤ +25°C	3 Months
CHEMONIT 181	≤ +5°C	12 Months
PRIMER HG 1	5 - 20°C	12 Months
PRIMER HG 2	5 - 20°C	12 Months
SOLVENT CF-CE	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Polymer	ISO 1629	-	IR / SBR
Bending Strength	EN ISO 178	N/mm <sup>2</sup>	≥ 40*
Density	EN ISO 1183-1	g/cm <sup>3</sup>	1.32 ± 0.02
Contact Resistance	DIN IEC 60093	Ω · cm	10 <sup>11</sup>
Modulus of Elasticity	EN ISO 527 (ASTM D638)	N/mm <sup>2</sup>	≥ 1500*
Hardness Shore D	ISO 7619-1 (ASTM D2240)	-	75 ± 5**
Max. Surface Pressure	-	N/mm <sup>2</sup>	10
Adhesion Strength Steel	EN ISO 4624 (ASTM D429; Method E)	N/mm <sup>2</sup>	≥ 6
Elongation at Break	DIN 53504 (ASTM D412)	%	≥ 1.5***
Tensile Strength	DIN 53504 (ASTM D412)	N/mm <sup>2</sup>	≥ 20***
Coefficient of Thermal Expansion	DIN 53752	1/K	70 x 10 <sup>-6</sup>
Max. Continuous Operating Temperature	-	°C	+100
Temperature Range	-	°C	-25 up to +100

\* Press vulcanisation \*\* Autoclave vulcanisation \*\*\* 4 mm rubber

**Note:** The indicated temperatures are dependent on the present load and may vary

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# DESCRIPTION

## REPAIR MATERIAL

Product	Product Description
REMAFIX H	REMAFIX H is an anthracite coloured, reaction-hardening, solvent free repair cement (putty/mastic/paste) based on epoxy resin.
REMAFIX S	REMAFIX S is a solvent free elastic repair cement (putty / mastic) based on a modified polybutadiene rubber (BR).

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# PRODUCT INFORMATION

## REMAFIX H

### PRODUCT DESCRIPTION

**REMAFIX H** is an anthracite coloured, reaction-hardening, solvent free repair cement (putty/mastic/paste) based on epoxy resin.

### FIELDS OF APPLICATION

**REMAFIX H** is applicable for repair areas up to a max. diameter of 100 mm. Larger areas must be repaired with vulcanised hard rubber plates and **REMAFIX H**. Another application of **REMAFIX H** is the hard rubber lining of flanges on construction site. In such cases, pre-cut vulcanized hard rubber rings or segments are applied to the flange surface area.

### APPROVALS & CERTIFICATES

**REMAFIX H** has an approval for nuclear power plants according AVS D 6.1/50 Rev. A

### FEATURES

- Strong adhesion
- Solvent free
- Easy application

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of non-ferrous metals, cast iron or ferrite steel. Components to be rubber lined shall be designed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

Surfaces to be repaired must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 60 microns is required.

### ENVIRONMENTAL CONDITIONS

Throughout the repair process, the temperatures of the substrate and repair materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### APPLICATION

During the application of the product, the application instruction must always be observed.

The application needs to be done in an ambient temperature between +15 °C and +45 °C. At lower temperatures the mastic hardens very slowly, and most likely inadequate. Short before use same amounts of **REMAFIX H COMP. A & B** need to be mixed thoroughly and carefully to avoid air traps until a uniform, spreadable mixture is achieved.

If **REMAFIX H** is stored at too low temperatures, **REMAFIX H COMP. A** must be warmed in a warm environment, such as a water bath or other heat sources at 40 - 60 °C. The prepared mixture is applied onto the pre-treated surfaces using a trowel. At +25 °C the trowelled mixture completely hardens within approx. 8 - 10 hours. The hardening time can be considerably reduced by means of a thermal treatment (hot air or radiant heater at approx. +60 °C). Once the hardening is complete, the repaired spot can be refinished / retouched e.g. by sanding.

### MIXING RATIO

**REMAFIX H** is supplied in pre-measured units so that weighing or measuring of the components is kept to a minimum. After the unit has been mixed it shall be used within the specified pot life.

Product	Parts by Weight
REMAFIX H COMP. A	100
REMAFIX H COMP. B	100

### CONSUMPTION

Product	Thickness [mm]	Coverage [g/m²]
REMAFIX H	1	ca. 2000

### POT LIFE / WORKING TIME [min]

Produkt	15 °C	20 °C	30 °C
REMAFIX H	-	ca. 30	-

### CLEANING

Clean all equipment with **SOLVENT CF-CE** immediately after use.

### SPARK TEST

The spark test (holiday test) is carried out according EN 14879-4 by using a high voltage tester. For carrying out the spark test, only the high voltage testers of Elmed model Isotest II RT or P as well as the test pistols of Wegener model WEG 20 or 22 or 100 are allowed. The test voltage is set analogue of the repaired hard rubber lining.

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# REMAFIX H

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
REMAFIX H COMP. A & B	1 kg (each 0.5 kg)	525 0563
SOLVENT CF-CE	10 l	595 9163

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
REMAFIX H COMP. A & B	5 - 25°C	12 Months
SOLVENT CF-CE	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Polymer Base	-	-	Epoxy resin
Colour	-	-	Anthracite
Density	-	g/cm <sup>3</sup>	1.85 ± 0.02
Hardness Shore D	DIN 53504	-	80 ± 5

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# PRODUCT INFORMATION

## REMAFIX S

### PRODUCT DESCRIPTION

**REMAFIX S** is a solvent free elastic repair cement (putty / mastic) based on a modified polybutadiene rubber (BR).

### FIELDS OF APPLICATION

**REMAFIX S** has been developed for the repair of rubber lined vessels, pipes, rollers and drums, chutes, and channels and further for the transition areas of hard and soft rubber lining on flange facings.

Application Examples

- Repairs of Rubber lined drums, rollers, support rollers, chutes, and channels
- Repairs to wear resistant rubber linings of polymers based on natural, Styrene butadiene and Nitrile rubber as well as on Polyurea systems
- Filling of groves and impact areas of rubber lining, such as in hoppers and coal bunkers.
- Repairs of special rubber linings based on Bromobutyl, Chloroprene and Chlorosulfonated Polyethylene polymers

### FEATURES

- Strong chemical resistance against non-oxidising mineral acids and bases
- Outstanding adhesion on various substrates such as steel, soft and hard rubber linings, graphite and acid resistant ceramics

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of non-ferrous metals, cast iron or ferrite steel. Components to be rubber lined shall be designed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

Surfaces to be repaired must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 50 microns is required.

### ENVIRONMENTAL CONDITIONS

Throughout the repair process, the temperatures of the substrate and repair materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### APPLICATION

During the application of the product, the application instruction must always be observed.

- Application of the primer

One thin coat of **REMAFIX PR 100** is applied thoroughly to cover the complete repair area. The applied primer should be allowed to dry for at least two hours at +23°C ± 2°C.

- Repair with **REMAFIX S**

Short before use, **REMAFIX S** and **REMAFIX S H3 HARDENER** need to be thoroughly mixed avoiding trapped air until a homogeneous paste is formed which can be applied with a trowel. The prepared paste (mastic) is trowelled onto the prepared repair area. Metal surfaces and joint areas shall be covered with a thin layer of mastic and then the mastic shall be trowelled to build the required thickness, at the same time preventing any air pockets and trapped air. When applying the mastic, great care needs to be taken to assure that no cavities remain. The applied product hardens in approximately 24 hours at +23°C ± 2°C. The hardening period can be shortened by warming up the area at approx. +60°C with either warm air or radiators. Following the complete hardening the repair area can be sanded if necessary.

### MIXING RATIO

**REMAFIX S** is supplied in pre-measured units so that weighing or measuring of the components is kept to a minimum. After the unit has been mixed it shall be used within the specified pot life.

Product	Parts by Weight	Parts by Volume
<b>REMAFIX S</b>	100	100
<b>REMAFIX S H3 HARDENER</b>	5	6

### CONSUMPTION

Product	Thickness [mm]	Coverage [g/m²]
<b>REMAFIX S</b>	1	ca. 1400

### POT LIFE / WORKING TIME [min]

Produkt	15°C	20°C	30°C
<b>REMAFIX PR 100</b>	ca. 240	ca. 180	ca. 80
<b>REMAFIX S</b>	ca. 40	ca. 30	ca. 10

### CLEANING

Clean all equipment with **SOLVENT CF-CE** immediately after use.

### SPARK TEST

The spark test (holiday test) is carried out according EN 14879-4 by using a high voltage tester. For carrying out the spark test, only the high voltage testers of Elmed model Isotest II RT or P as well as the test pistols of Wegener model WEG 20 or 22 or 100 are allowed. The test voltage is 5 kV/mm.

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# REMAFIX S

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
REMAFIX PR 100	0.25 kg	525 2901
REMAFIX S BROWN	0.5 kg	525 2877
REMAFIX S BLACK	0.5 kg	525 2853
REMAFIX S H3 HARDENER	0.025 kg	525 2891
SOLVENT CF-CE	10 l	595 9163

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
REMAFIX PR 100	5 - 25°C	12 Months
REMAFIX S BROWN	5 - 25°C	12 Months
REMAFIX S H3 HARDENER	5 - 25°C	12 Months
REMAFIX S BLACK	5 - 25°C	12 Months
SOLVENT CF-CE	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Polymer Base	-	-	BR
Abrasion	DIN 53516	mm <sup>3</sup>	≤ 250
Density	DIN 53479	g/cm <sup>3</sup>	1.17 ± 0.02
Hardness Shore A	-	-	75 ± 5
Max. Surface Pressure	-	N/mm <sup>2</sup>	2
Surface Resistance	DIN IEC 167	-	≥ 10 <sup>11</sup>
Elongation at Break	DIN 53504 (ASTM D412)	%	≥ 100
Tensile Strength	DIN 53504 (ASTM D412)	N/mm <sup>2</sup>	≥ 3
Max. Continuous Operating Temperature	-	°C	+90
Temperature Range	-	°C	-40 up to +90

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# DESCRIPTION

## COROFLAKE

Product	Product Description
COROFLAKE 10	<b>COROFLAKE 10</b> is a two-component, glass flake filled polymer coating based on a chemical and thermal resistant Bisphenol polyester resin. The C-glass flake fillers are oriented parallel to the substrate surface to form a high level of protection against permeation and ensure a long service life.
COROFLAKE 14	<b>COROFLAKE 14</b> is a two-component, vapour diffusion resistant, glass flake filled polymer coating based on a chemical and thermal resistant Bisphenol-A vinyl ester resin. <b>COROFLAKE 14</b> is the ideal corrosion protection if high chemical resistance is required at high medium temperatures. Furthermore, <b>COROFLAKE 14</b> is characterized by its good abrasion resistance. The parallel to the substrate oriented C-glass flakes provide an excellent diffusion barrier and thus ensure a long service life. The very high diffusion resistance is a particular feature of <b>COROFLAKE 14</b> .
COROFLAKE 18	<b>COROFLAKE 18</b> is a two-component, vapour diffusion resistant, C-glass flake filled polymer coating based on a chemical and thermal resistant Novolac vinyl ester resin. <b>COROFLAKE 18</b> is the ideal corrosion protection if high chemical resistance is required at high medium temperatures. Furthermore, <b>COROFLAKE 18</b> is characterized by its good abrasion resistance. The parallel to the substrate oriented C-glass flakes provide an excellent diffusion barrier and thus ensure a long service life.
COROFLAKE 23	<b>COROFLAKE 23</b> is a two-component; vapour diffusion resistant, inert flake filled polymer coating based on a chemical and thermal resistant Novolac vinyl ester resin, which has been designed especially for flue gas desulphurization systems. <b>COROFLAKE 23</b> is the ideal corrosion protection if high chemical resistance is required at high medium temperatures. The parallel to the substrate oriented inert flakes provide an excellent diffusion barrier and thus ensure a long service life.
COROFLAKE 23 LSE	<b>COROFLAKE 23 LSE</b> is a two-component, PTFE flake filled polymer coating based on a Novolac vinyl ester resin which has been designed especially for chemical plants and vessels where deposits must be avoided. By using PTFE flakes, <b>COROFLAKE 23 LSE</b> achieves excellent non-stick properties combined with good thermal and chemical resistance.
COROFLAKE 23 M	<b>COROFLAKE 23 M</b> is a combination of a fibreglass mat reinforced laminate lining, based on a Bisphenol-A vinyl ester resin and with an inert flake filled topcoat, based on a high chemical and thermal resistant Novolac vinyl ester resin. Due to the excellent mechanical properties, <b>COROFLAKE 23 M</b> can cover cracks up to 0.2 mm according to DIBt (German Institute for Construction Technology) guidelines.
COROFLAKE 23 T	<b>COROFLAKE 23 T</b> is a two-component, vapour diffusion resistant, inert flake filled polymer coating based on a chemical and thermal resistant Novolac vinyl ester resin. <b>COROFLAKE 23 T</b> can be applied in layer thicknesses up to 1000 µm per coat. <b>COROFLAKE 23 T</b> is the ideal corrosion protection if high chemical resistance is required at high medium temperatures. The parallel to the substrate oriented inert flakes provide an excellent diffusion barrier and thus ensure a long service life.
COROFLAKE 24	<b>COROFLAKE 24</b> is a two-component; vapour diffusion resistant, inert flake filled polymer coating based on a chemical and thermal resistant Bisphenol-A vinyl ester resin, which has been designed especially for flue gas desulphurization systems. <b>COROFLAKE 24</b> is the ideal corrosion protection if high chemical resistance is required. The parallel to the substrate oriented inert flakes provide an excellent diffusion barrier and thus ensure a long service life.
COROFLAKE 24 AR TC	<b>COROFLAKE 24 AR TC</b> is a two-component, high abrasion resistant polymer coating based on a Bisphenol-A vinyl ester resin which has been designed especially for chemical plants and vessels where abrasion must be avoided. By using special fillers, <b>COROFLAKE 24 AR TC</b> achieves excellent abrasion resistance combined with good thermal and chemical resistance.
COROFLAKE 24 LSE	<b>COROFLAKE 24 LSE</b> is a two-component, PTFE flake filled polymer coating based on a Novolac vinyl ester resin which has been designed especially for chemical plants and vessels where deposits must be avoided. By using PTFE flakes, <b>COROFLAKE 24 LSE</b> achieves excellent non-stick properties combined with good thermal and chemical resistance.
COROFLAKE 24 M	<b>COROFLAKE 24 M</b> is a combination of a fibreglass mat reinforced laminate lining with an inert flake filled topcoat, both based on a high chemical and thermal resistant Bisphenol-A vinyl ester resin. Due to the excellent mechanical properties, <b>COROFLAKE 24 M</b> can cover cracks up to 0.2 mm according to DIBt (German Institute for Construction Technology) guidelines.
COROFLAKE 25	<b>COROFLAKE 25</b> is a two-component; vapour diffusion resistant, inert flake filled polymer coating based on a chemical and thermal resistant modified polyester resin. The parallel to the substrate oriented inert flakes provide an excellent diffusion barrier and thus ensure a long service life.
COROFLAKE 27	<b>COROFLAKE 27</b> is a two-component; vapour diffusion resistant, inert flake filled polymer coating based on a chemical and thermal resistant, flexibilized vinyl ester resin, which has been designed especially for extreme loads with high rates of temperature change. The parallel to the substrate oriented inert flakes provide an excellent diffusion barrier and thus ensure a long service life.

# DESCRIPTION

## COROFLAKE

<b>COROFLAKE 28</b>	<b>COROFLAKE 28</b> is a two-component; vapour diffusion resistant, C-glass flake filled polymer coating based on a chemical and thermal resistant Novolac vinyl ester resin, which has been designed especially for flue gas desulphurization systems. The parallel to the substrate oriented C-glass flakes provide an excellent diffusion barrier and thus ensure a long service life.
<b>COROFLAKE 28 AR TC</b>	<b>COROFLAKE 28 AR TC</b> is a two-component, high abrasion resistant polymer coating based on a Novolac vinyl ester resin which has been designed especially for chemical plants and vessels where abrasion must be avoided. By using special fillers, <b>COROFLAKE 28 AR TC</b> achieves excellent abrasion resistance combined with good thermal and chemical resistance.
<b>COROFLAKE 29</b>	<b>COROFLAKE 29</b> is a two-component; vapour diffusion resistant, C-glass flake filled polymer coating based on a chemical and thermal resistant Novolac vinyl ester resin, which has been designed especially for flue gas desulphurization plants where very high temperatures may occur. <b>COROFLAKE 29</b> is the ideal corrosion protection, when a high chemical resistance combined with a very high temperature resistance is required. The parallel to the substrate oriented C-glass flakes provide an excellent diffusion barrier and thus ensure a long service life.
<b>COROFLAKE 34</b>	<b>COROFLAKE 34</b> is a two-component, C-glass flake filled polymer coating based on a chemical resistant Bisphenol-A vinyl ester resin. Due to its excellent chemical resistance, <b>COROFLAKE 34</b> can be used universally in almost all branches of industry. The parallel to the substrate oriented C-glass flakes provide an excellent diffusion barrier and thus ensure a long service life.
<b>COROFLAKE 60</b>	<b>COROFLAKE 60</b> is a two-component, inert flake filled polymer coating based on a polyamid-epoxy resin. The inert flake fillers are oriented parallel to the substrate surface to form a high level of protection against permeation and ensure a long service life. Due to the adduct curing of <b>COROFLAKE 60</b> a moisture compatibility and a curing at temperatures of min. +3°C can be achieved.
<b>COROFLAKE 200</b>	<b>COROFLAKE 200</b> is a two-component, C-glass flake filled polymer coating based on a chemical and thermal resistant Novolac vinyl ester resin. The parallel to the substrate oriented C-glass flakes provide an excellent diffusion barrier and thus ensure a long service life.
<b>COROFLAKE 200 M</b>	<b>COROFLAKE 200 M</b> is a combination of a fibreglass mat reinforced laminate lining with an inert flake filled topcoat, both based on a high chemical and thermal resistant Bisphenol-A vinyl ester resin. Due to the excellent mechanical properties, <b>COROFLAKE 200 M</b> can cover cracks up to 0.3 mm according to DIBt (German Institute for Construction Technology) guidelines.
<b>COROFLAKE 650 FDA</b>	<b>COROFLAKE 650 FDA</b> is a two-component polymer coating based on an epoxy resin. The coating system offers good chemical resistance to many media which are used in the food and beverage industry. <b>COROFLAKE 650 FDA</b> cures with a smooth surface.
<b>COROFLAKE 3000</b>	<b>COROFLAKE 3000</b> is a three-component, vapour diffusion resistant, with special C-glass flake filled polymer coating based on a chemical and thermal resistant modified vinyl ester resin, which has been designed especially for plants with high wet temperatures. The parallel to the substrate oriented C-glass flakes provide an excellent diffusion barrier and thus ensure a long service life.
<b>COROFLAKE C</b>	<b>COROFLAKE C</b> is a two-component, graphite filled polymer coating based on a chemical and thermal resistant Novolac vinyl ester resin. <b>COROFLAKE C</b> achieves good electrical conductivity combined with good chemical and thermal resistance by using graphite flakes. The parallel to the substrate oriented graphite flakes provide an excellent diffusion barrier and thus ensure a long service life.

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# OVERVIEW COROFLAKE

Product	Polymer	Filler	Solvent	DFT	Application						Primer
					Roll	Brush	Spray	Trowel	Concrete	Steel	
<b>COROFLAKE 68 PRIMER</b>	Novolac Epoxy Resin	No Filler	-	covering	X	X	X	-	X	X	-
<b>COROFLAKE N PRIMER</b>	Bisphenol-A Vinyl Ester Resin	No Filler	Styrene (reactive)	covering	X	X	X	-	X	X	-
<b>COROFLAKE N PRIMER AS</b>	Bisphenol-A Vinyl Ester Resin	Carbon	Styrene (reactive)	covering	X	X	X	-	X	-	-
<b>COROFLAKE S PRIMER</b>	Novolac Vinyl Ester Resin	No Filler	Styrene (reactive)	covering	X	X	X	-	-	X	-
<b>COROFLAKE T PRIMER</b>	Novolac Vinyl Ester Resin	No Filler	Styrene (reactive)	covering	X	X	X	-	-	X	-
<b>COROFLAKE 10</b>	Bisphenol-A Polyesterharz	C-Glass-Flakes	Styrene (reactive)	3.0	-	-	-	X	-	X	<b>COROFLAKE N PRIMER</b>
<b>COROFLAKE 14</b>	Bisphenol-A Vinyl Ester Resin	C-Glass-Flakes	Styrene (reactive)	3.0	-	-	-	X	-	X	<b>COROFLAKE N PRIMER</b>
<b>COROFLAKE 18</b>	Novolac Vinyl Ester Resin	C-Glass-Flakes	Styrene (reactive)	3.0	-	-	-	X	-	X	<b>COROFLAKE S PRIMER</b>
<b>COROFLAKE 23</b>	Novolac Vinyl Ester Resin	Inert-Flakes	Styrene (reactive)	2.5	X	X	X	-	-	X	<b>COROFLAKE S PRIMER</b>
<b>COROFLAKE 23 LSE</b>	Novolac Vinyl Ester Resin	PTFE-Flakes	Styrene (reactive)	0.5	-	-	X	-	-	-	-
<b>COROFLAKE 23 M</b>	Novolac Vinyl Ester Resin	Silica & Inert-Flakes	Styrene (reactive)	2.0 - 3.0	X	X	X	X	X	-	<b>COROFLAKE N PRIMER / COROFLAKE N PRIMER AS</b>
<b>COROFLAKE 23 T</b>	Novolac Vinyl Ester Resin	Inert-Flakes	Styrene (reactive)	2.5	X	X	X	-	-	X	<b>COROFLAKE S PRIMER</b>
<b>COROFLAKE 24</b>	Bisphenol-A Vinyl Ester Resin	Inert-Flakes	Styrene (reactive)	2.5	X	X	X	-	-	X	<b>COROFLAKE N PRIMER</b>
<b>COROFLAKE 24 AR TC</b>	Bisphenol-A Vinyl Ester Resin	Alumina	Styrene (reactive)	0.5	-	-	X	-	-	-	-
<b>COROFLAKE 24 LSE</b>	Bisphenol-A Vinyl Ester Resin	PTFE-Flakes	Styrene (reactive)	0.5	-	-	X	-	-	-	-
<b>COROFLAKE 24 M</b>	Bisphenol-A Vinyl Ester Resin	Silica & Inert-Flakes	Styrene (reactive)	2.0 - 3.0	X	X	X	X	X	-	<b>COROFLAKE N PRIMER / COROFLAKE N PRIMER AS</b>
<b>COROFLAKE 25</b>	Bisphenol-A Polyester Resin	Inert-Flakes	Styrene (reactive)	2.5	X	X	X	-	-	X	<b>COROFLAKE N PRIMER</b>
<b>COROFLAKE 27</b>	Modified Novolac Vinyl Ester Resin	Inert-Flakes	Styrene (reactive)	2.0	X	X	X	-	X	X	<b>COROFLAKE S PRIMER (steel) / COROFLAKE N PRIMER (concrete) / COROFLAKE N PRIMER AS (concrete)</b>
<b>COROFLAKE 28</b>	Novolac Vinyl Ester Resin	C-Glass-Flakes	Styrene (reactive)	2.5	X	X	X	-	-	X	<b>COROFLAKE S PRIMER</b>
<b>COROFLAKE 28 AR TC</b>	Novolac Vinyl Ester Resin	Alumina	Styrene (reactive)	0.5	-	-	X	-	-	-	-
<b>COROFLAKE 29</b>	Modified Novolac Vinyl Ester Resin	C-Glass-Flakes	Styrene (reactive)	2.0	X	X	X	-	-	X	<b>COROFLAKE T PRIMER</b>
<b>COROFLAKE 60</b>	Polyamide Epoxy Resin	Inert-Flakes	-	0.4	X	X	X	-	X	X	<b>COROFLAKE 68 PRIMER</b>

# OVERVIEW

## COROFLAKE

Product	Polymer	Filler	Solvent	DFT	Application						Primer
					Roll	Brush	Spray	Trowel	Concrete	Steel	
<b>COROFLAKE 200</b>	Novolac Epoxy Resin	C-Glass-Flakes	-	1.0	X	X	X	-	-	X	<b>COROFLAKE 68 PRIMER</b>
<b>COROFLAKE 200 M</b>	Novolac Epoxy Resin	Silica & C-Glass-Flakes	-	2.5 - 3.5	X	X	X	-	X	-	<b>COROFLAKE 68 PRIMER</b>
<b>COROFLAKE 650 FDA</b>	Epoxy Resin	Inert-Flakes	-	0.3	X	X	X	-	X	X	<b>COROFLAKE 68 PRIMER</b> (concrete)
<b>COROFLAKE 3000</b>	Modified Vinyl Ester Resin	C-Glass-Flakes	Styrene (reactive)	2.5	X	X	X	-	-	X	<b>COROFLAKE T PRIMER</b>
<b>COROFLAKE C</b>	Novolac Vinyl Ester Resin	Graphite	Styrene (reactive)	1.5	X	X	X	-	-	X	<b>COROFLAKE N PRIMER AS</b>

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# PHYSICAL DATA COROFLAKE

Product	Abrasion	Density	Min. Adhesion Strength Concrete	Min. Adhesion Strength Steel	Hardness Barcol	Hardness Shore D	Max. Temperature Dry	Max. Temperature Wet	Max. Temperature Short-Time	Elongation at Break	Viscosity	Water Vapour Permeability	Tensile Strength
	ASTM D4060 [mg]	EN ISO 2811 ASTM D1475 [g/cm <sup>3</sup> ]	EN ISO 4624 ASTM D4541 [N/mm <sup>2</sup> ]	EN ISO 4624 ASTM D4541 [N/mm <sup>2</sup> ]	EN 59 ASTM D2583	ISO 7619 ASTM D2240	°C	°C	°C	EN ISO 527 ASTM D638 [%]	EN ISO 2555 ASTM D2196 [mPa·s]	ASTM E-96, Method E [perm-inch]	EN ISO 527 ASTM D638 [N/mm <sup>2</sup> ]
COROFLAKE 10	68	---	---	4	≥ 30	---	+110	+80	---	---	7750 ± 750	0,002	28
COROFLAKE 14	68	---	---	4	≥ 30	---	+120	+90	---	---	4750 ± 250	0,0001	30
COROFLAKE 18	68	---	---	4	≥ 30	---	+160	+90	---	---	4750 ± 250	0,0001	30
COROFLAKE 23	90	1.19 ± 0.03	---	7	≥ 35	---	+180	+75	+220	0.50	3000 ± 250	0.0016	20
COROFLAKE 23 LSE	---	1.13 ± 0.05	---	7	---	≥ 70	+180	+65	---	0.25 - 0.50	2750 ± 250	---	20
COROFLAKE 23 M	90	---	1.5*	---	≥ 35	---	---	+75	---	---	3000 ± 250	---	---
COROFLAKE 23 T	95	1.19 ± 0.03	---	7	35	---	+180	+70	+200	0.50	3250 ± 250	---	19
COROFLAKE 24	92	1.15 ± 0.02	---	7	≥ 30	---	+120	+75	---	0.50	3250 ± 250	0.0014	20
COROFLAKE 24 AR TC	55	1.23 ± 0.03	---	7	≥ 35	---	+120	+70	---	---	2750 ± 250	---	20
COROFLAKE 24 LSE	---	1.09 ± 0.03	---	7	---	≥ 70	+120	+65	---	0.25 - 0.50	3250 ± 250	---	20
COROFLAKE 24 M	92	---	1.5*	---	≥ 30	---	---	+75	---	---	3250 ± 250	---	75
COROFLAKE 25	78	1.18 ± 0.04	---	7	≥ 35	---	+100	+70	---	---	3750 ± 250	0.0014	18
COROFLAKE 27	92	1.16 ± 0.02	1.5*	7	≥ 30	---	+180	+70	---	0.75	3000 ± 250	0.0014	48
COROFLAKE 28	90	1.20 ± 0.04	---	7	35	---	+180	+70	+200	0.50	2550 ± 250	0.001	40

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# PHYSICAL DATA COROFLAKE

Product	Abrasion	Density	Min. Adhesion Strength Concrete	Min. Adhesion Strength Steel	Hardness Barcol	Hardness Shore D	Max. Temperature Dry	Max. Temperature Wet	Max. Temperature Short-Time	Elongation at Break	Viscosity	Water Vapour Permeability	Tensile Strength
	ASTM D4060 [mg]	EN ISO 2811 ASTM D1475 [g/cm <sup>3</sup> ]	EN ISO 4624 ASTM D4541 [N/mm <sup>2</sup> ]	EN ISO 4624 ASTM D4541 [N/mm <sup>2</sup> ]	EN 59 ASTM D2583 -	ISO 7619 ASTM D2240 -	°C	°C	°C	EN ISO 527 ASTM D638 [%]	EN ISO 2555 ASTM D2196 [mPa·s]	ASTM E-96, Method E [perm-inch]	EN ISO 527 ASTM D638 [N/mm <sup>2</sup> ]
COROFLAKE 29	90	1.17 ± 0.02	---	7	≥ 30	---	+230	+70	---	0.50	3250 ± 250	0.001	25
COROFLAKE 34	90	1.17 ± 0.03	---	7	≥ 30	---	+120	+75	---	---	2750 ± 250	0.0012	---
COROFLAKE 60	100	COMP. A: 1.20 ± 0.04 / COMP. B: 1.19 ± 0.02	1.5*	≥ 10	35	---	+110	+50	---	0.30	COMP. A: 8000 ± 1000 / COMP. B: 7300 ± 1000	0.07	30
COROFLAKE 200	---	COMP. A: 1.20 ± 0.03 / COMP. B: 1.01 ± 0.03	---	7	---	---	+95	+60	---	---	COMP. A: 14000 ± 4000 / COMP. B: 800 ± 100	---	23
COROFLAKE 200 M	---	---	1.5*	---	20 - 30	---	+95	+60	---	---	COMP. A: 14000 ± 4000 / COMP. B: 800 ± 100	---	65
COROFLAKE 650 FDA	210	---	1.5*	7	---	≥ 70	+110	+50	---	---	COMP. A: 3150 ± 450 / COMP. B: 1000 ± 250	---	---
COROFLAKE 3000	---	1.30	---	≥ 7	≥ 35	---	+160	+90	---	---	2300 ± 250	0.1	---
COROFLAKE C	70	1.2	---	4	---	≥ 70	+180	+70	---	---	3100 ± 300	0.0024	---

\* Depending on the concrete strength

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**COROFLAKE**  
 PHYSICAL DATA

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# PRODUCT INFORMATION

## COROFLAKE 68 PRIMER

### PRODUCT DESCRIPTION

**COROFLAKE 68 PRIMER** is a moisture compatible, low viscosity, two-component primer based on a Novolac vinyl ester resin which provides exceptional resistance to rust and undercutting. It protects abrasive blasted steel surfaces from rust formation until subsequent protective coating or lining layers are applied. When applied to concrete the primer will effectively seal and strengthen prepared surfaces to improve the adhesion of subsequent coating and lining systems. **COROFLAKE 68 PRIMER** cures at ambient temperatures of +3°C.

### FIELDS OF APPLICATION

**COROFLAKE 68 PRIMER** is used as a primer on properly prepared steel or concrete surfaces for coatings based on epoxy resins. In addition **COROFLAKE 68 PRIMER** can also be used as sealing of concrete surfaces.

### FEATURES

- Outstanding adhesion to steel and concrete
- No fillers
- Easy processing
- Application by spraying, brushing or rolling

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of steel, concrete, screed or plaster. Components to be coated shall be designed and manufactured in accordance with EN 14879-1. For components made of concrete, screed or plaster DIN 1045 must also be observed.

### SURFACE PRE-TREATMENT

#### C-STEEL

Surfaces to be coated must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht # 28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 70 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate.

#### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup> and minimum compressive strength of 25 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%.

### ENVIRONMENTAL CONDITIONS

Throughout the coating process, the temperatures of the substrate and coating materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### APPLICATION

During the application of the product, the application instruction must always be observed.

**COROFLAKE 68 PRIMER** is applied to the substrate using an airless air spray system or by rolling or brushing. The primer must be applied to cover. Subsequent coatings can be applied after hardening of the primer according to the table "Recoat Time".

**Note:** During primer application, the lined surface should be shaded from direct or indirect sunlight whenever possible.

### MIXING RATIO

The primer and coating components are supplied in pre-measured units so that weighing or measuring of the components is kept to a minimum. After the unit has been mixed it shall be used within the specified pot life.

Primer	Parts by Weight	Parts by Volume
<b>COROFLAKE 68 PRIMER</b>	100	100
<b>HARDENER No. 4</b>	30	33.69

### CONSUMPTION

Product	Thickness [µm]	Coverage [g/m <sup>2</sup> ]
<b>COROFLAKE 68 PRIMER</b>	covering	ca. 300 (concrete)
<b>COROFLAKE 68 PRIMER</b>	covering	ca. 150 (steel)
<b>COROFLAKE 68 PRIMER</b> (as sealing)	covering	ca. 2 x 300

The information about coverage is an average for spray applications. Actual coverage depends on the object geometry and the method of application. It can vary.

### POT LIFE / WORKING TIME [min]

Product	15°C	20°C	30°C
<b>COROFLAKE 68 PRIMER</b>	ca. 120	ca. 60	ca. 30

### RECOAT TIME (20°C)

Product	Min. [h]	Max. [Days]
<b>COROFLAKE 68 PRIMER</b>	ca. 12	ca. 7

### CLEANING

Clean all equipment with **SOLVENT T-100** immediately after use. Frequency of cleaning will depend upon amount applied, temperature and elapsed time, including any delays.

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# COROFLAKE 68 PRIMER

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
<b>COROFLAKE 68 PRIMER</b>	12 kg	590 0851
<b>HARDENER No. 4</b>	3.6 kg	590 0875
<b>SOLVENT T-100</b>	4 kg	590 0617
<b>SOLVENT T-100</b>	8 kg	590 0600

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
<b>COROFLAKE 68 PRIMER</b>	5 - 25°C	12 Months
<b>HARDENER No. 4</b>	5 - 25°C	12 Months
<b>SOLVENT T-100</b>	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Density (Mixture)	EN ISO 2811 (ASTM D1475)	g/cm <sup>3</sup>	1.14 ± 0.01
Min. Adhesion Strength Concrete	EN ISO 4624 (ASTM D7234)	N/mm <sup>2</sup>	1.5*
Min. Adhesion Strength Steel	EN ISO 4624 (ASTM D4541)	N/mm <sup>2</sup>	≥ 10
Viscosity	EN ISO 2555 (ASTM D2196)	mPa·s	325 ± 50
Max. Operating Temperature	-	°C	Depends on the subsequent coating system

\* Depending on the concrete strength

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# PRODUCT INFORMATION

## COROFLAKE N PRIMER

### PRODUCT DESCRIPTION

**COROFLAKE N PRIMER** is a low viscosity, two-component primer based on a Bisphenol-A vinyl ester resin which provides exceptional resistance to rust and undercutting. It protects abrasive blasted steel surfaces from rust formation until subsequent protective coating or lining layers are applied. When applied to concrete the primer will effectively seal and strengthen prepared surfaces to improve the adhesion of subsequent coating and lining systems.

### FIELDS OF APPLICATION

**COROFLAKE N PRIMER** is used as a primer on properly prepared steel or concrete surfaces for coatings based on polyester or vinyl ester resins.

### FEATURES

- Outstanding adhesion to steel and concrete
- Easy to apply
- Application by spraying, brushing or rolling

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of steel, concrete, screed or plaster. Components to be coated shall be designed and manufactured in accordance with EN 14879-1. For components made of concrete, screed or plaster DIN 1045 must also be observed.

### SURFACE PRE-TREATMENT

#### C-STEEL

Surfaces to be coated must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht # 28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 70 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate.

#### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup> and minimum compressive strength of 25 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%.

### ENVIRONMENTAL CONDITIONS

Throughout the coating process, the temperatures of the substrate and coating materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### APPLICATION

During the application of the product, the application instruction must always be observed.

**COROFLAKE N PRIMER** is applied to the substrate using an airless air spray system or by rolling or brushing. The primer must be applied to cover. Subsequent coatings can be applied after hardening of the primer according to the table "Recoat Time".

**Note:** During primer application, the lined surface should be shaded from direct or indirect sunlight whenever possible.

### MIXING RATIO

The primer and coating components are supplied in pre-measured units so that weighing or measuring of the components is kept to a minimum. After the unit has been mixed it shall be used within the specified pot life.

Primer	Parts by Weight	Parts by Volume
<b>COROFLAKE N PRIMER</b>	100	100
<b>HARDENER No. 1 CLEAR</b>	2	2.01

### CONSUMPTION

Product	Thickness [µm]	Coverage [g/m <sup>2</sup> ]
<b>COROFLAKE N PRIMER</b>	covering	ca. 300 (concrete)
<b>COROFLAKE N PRIMER</b>	covering	ca. 150 (steel)

The information about coverage is an average for spray applications. Actual coverage depends on the object geometry and the method of application. It can vary.

### POT LIFE / WORKING TIME [min]

Product	15°C	20°C	30°C
<b>COROFLAKE N PRIMER</b>	ca. 60	ca. 40	ca. 20

### RECOAT TIME (20°C)

Product	Min. [h]	Max. [Days]
<b>COROFLAKE N PRIMER</b>	ca. 8	ca. 14

### CLEANING

Clean all equipment with **SOLVENT T-100** immediately after use. Frequency of cleaning will depend upon amount applied, temperature and elapsed time, including any delays.

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# COROFLAKE N PRIMER

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
COROFLAKE N PRIMER	5 kg	590 0480
COROFLAKE N PRIMER	20 kg	590 0040
HARDENER No. 1 CLEAR	0.1 kg	590 0181
HARDENER No. 1 CLEAR	0.4 kg	590 0019
SOLVENT T-100	4 kg	590 0617
SOLVENT T-100	8 kg	590 0600

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
COROFLAKE N PRIMER	5 - 20°C	6 Months
HARDENER No. 1 CLEAR	5 - 20°C	12 Months
SOLVENT T-100	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Density (Mixture)	EN ISO 2811 (ASTM D1475)	g/cm <sup>3</sup>	1.04 ± 0.04
Min. Adhesion Strength Concrete	EN ISO 4624 (ASTM D7234)	N/mm <sup>2</sup>	1.5*
Min. Adhesion Strength Steel	EN ISO 4624 (ASTM D4541)	N/mm <sup>2</sup>	7
Viscosity	EN ISO 2555 (ASTM D2196)	mPa·s	390 ± 50
Max. Operating Temperature	-	°C	Depends on the subsequent coating system

\* Depending on the concrete strength

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# PRODUCT INFORMATION

## COROFLAKE N PRIMER AS

### PRODUCT DESCRIPTION

**COROFLAKE N PRIMER AS** is a conductive, low viscosity, three-component primer based on a Bisphenol-A vinyl ester resin. Concrete surfaces can be set conductive by using **COROFLAKE N PRIMER AS**, so that subsequent coatings can be tested by high voltage test.

### FIELDS OF APPLICATION

**COROFLAKE N PRIMER AS** is used as a primer on properly prepared concrete surfaces where a static dissipation is required or where a high voltage test shall be performed for subsequent lining systems.

### FEATURES

- Outstanding adhesion to concrete
- Electrically conductive
- Easy to apply
- Application by spraying, brushing or rolling

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of concrete, screed or plaster. Components to be coated shall be designed and manufactured in accordance with EN 14879-1. In addition, DIN 1045 must also be observed.

### SURFACE PRE-TREATMENT

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup> and minimum compressive strength of 25 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%.

### ENVIRONMENTAL CONDITIONS

Throughout the coating process, the temperatures of the substrate and coating materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### APPLICATION

During the application of the product, the application instruction must always be observed.

**COROFLAKE N PRIMER AS** is applied to the substrate using an airless air spray system or by rolling or brushing. The primer must be applied to cover. Subsequent coatings can be applied after hardening of the primer according to the table "Recoat Time".

**Note:** During primer application, the lined surface should be shaded from direct or indirect sunlight whenever possible.

### MIXING RATIO

The primer and coating components are supplied in pre-measured units so that weighing or measuring of the components is kept to a minimum. After the unit has been mixed it shall be used within the specified pot life.

Primer	Parts by Weight	Parts by Volume
<b>COROFLAKE N PRIMER AS</b>	100	100
<b>COROFLAKE ACCELERATOR NO. 1</b>	1 - 2	1.07 - 2.14
<b>HARDENER No. 1 CLEAR</b>	2	2.01

### CONSUMPTION

Product	Thickness [µm]	Coverage [g/m <sup>2</sup> ]
<b>COROFLAKE N PRIMER AS</b>	covering	ca. 300

The information about coverage is an average for spray applications. Actual coverage depends on the object geometry and the method of application. It can vary.

### POT LIFE / WORKING TIME [min]

Product	15°C	20°C	30°C
<b>COROFLAKE N PRIMER AS</b>	ca. 60	ca. 30-40	ca. 10

### RECOAT TIME (20°C)

Product	Min. [h]	Max. [Days]
<b>COROFLAKE N PRIMER AS</b>	ca. 4	ca. 14

### CLEANING

Clean all equipment with **SOLVENT T-100** immediately after use. Frequency of cleaning will depend upon amount applied, temperature and elapsed time, including any delays.

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# COROFLAKE N PRIMER AS

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
COROFLAKE ACCELERATOR NO. 1	0.4 kg	590 2985
COROFLAKE N PRIMER AS	5 kg	590 2983
COROFLAKE N PRIMER AS	20 kg	590 2990
HARDENER No. 1 CLEAR	0.1 kg	590 0181
HARDENER No. 1 CLEAR	0.4 kg	590 0019
SOLVENT T-100	4 kg	590 0617
SOLVENT T-100	8 kg	590 0600

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
COROFLAKE ACCELERATOR NO. 1	5 - 20°C	6 Months
COROFLAKE N PRIMER AS	5 - 20°C	6 Months
HARDENER No. 1 CLEAR	5 - 20°C	12 Months
SOLVENT T-100	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Density (Mixture)	EN ISO 2811 (ASTM D1475)	g/cm <sup>3</sup>	1.04 ± 0.04
Min. Adhesion Strength Concrete	EN ISO 4624 (ASTM D7234)	N/mm <sup>2</sup>	1.5*
Viscosity	EN ISO 2555 (ASTM D2196)	mPa·s	2100 ± 200
Max. Operating Temperature	-	°C	Depends on the subsequent coating system

\* Depending on the concrete strength

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# PRODUCT INFORMATION

## COROFLAKE S PRIMER

### PRODUCT DESCRIPTION

**COROFLAKE S PRIMER** is a low viscosity, two-component primer based on a Novolac vinyl ester resin. It protects abrasive blasted steel surfaces from rust formation until subsequent protective coating or lining layers are applied.

### FIELDS OF APPLICATION

**COROFLAKE S PRIMER** is used as a primer on properly prepared steel surfaces for coatings based on vinyl ester resins.

### FEATURES

- Outstanding adhesion to steel
- High dry temperature stability
- Easy to apply
- Application by spraying, brushing or rolling

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are steel components. Components to be coated shall be designed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

Surfaces to be coated must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht # 28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 70 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate.

### ENVIRONMENTAL CONDITIONS

Throughout the coating process, the temperatures of the substrate and coating materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### APPLICATION

During the application of the product, the application instruction must always be observed.

**COROFLAKE S PRIMER** is applied to the substrate using an airless air spray system or by rolling or brushing. The primer must be applied to cover. Subsequent coatings can be applied after hardening of the primer according to the table "Recoat Time".

**Note:** During primer application, the lined surface should be shaded from direct or indirect sunlight whenever possible.

### MIXING RATIO

The primer and coating components are supplied in pre-measured units so that weighing or measuring of the components is kept to a minimum. After the unit has been mixed it shall be used within the specified pot life.

Primer	Parts by Weight	Parts by Volume
<b>COROFLAKE S PRIMER</b>	100	100
<b>HARDENER No. 1 CLEAR</b>	2	2.11

### CONSUMPTION

Product	Thickness [µm]	Coverage [g/m²]
<b>COROFLAKE S PRIMER</b>	covering	ca. 150

The information about coverage is an average for spray applications. Actual coverage depends on the object geometry and the method of application. It can vary.

### POT LIFE / WORKING TIME [min]

Product	15°C	20°C	30°C
<b>COROFLAKE S PRIMER</b>	ca. 60	ca. 40	ca. 20

### RECOAT TIME (20°C)

Product	Min. [h]	Max. [Days]
<b>COROFLAKE S PRIMER</b>	ca. 6	ca. 7

### CLEANING

Clean all equipment with **SOLVENT T-100** immediately after use. Frequency of cleaning will depend upon amount applied, temperature and elapsed time, including any delays.

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# COROFLAKE S PRIMER

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
COROFLAKE S PRIMER	5 kg	590 0167
COROFLAKE S PRIMER	20 kg	590 0033
HARDENER No. 1 CLEAR	0.1 kg	590 0181
HARDENER No. 1 CLEAR	0.4 kg	590 0019
SOLVENT T-100	4 kg	590 0617
SOLVENT T-100	8 kg	590 0600

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
COROFLAKE S PRIMER	5 - 20°C	6 Months
HARDENER No. 1 CLEAR	5 - 20°C	12 Months
SOLVENT T-100	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Density (Mixture)	EN ISO 2811 (ASTM D1475)	g/cm <sup>3</sup>	1.09 ± 0.03
Min. Adhesion Strength Steel	EN ISO 4624 (ASTM D4541)	N/mm <sup>2</sup>	7
Viscosity	EN ISO 2555 (ASTM D2196)	mPa·s	425 ± 125
Max. Operating Temperature	-	°C	Depends on the subsequent coating system

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# PRODUCT INFORMATION

## COROFLAKE T PRIMER

### PRODUCT DESCRIPTION

**COROFLAKE T PRIMER** is a low viscosity, two-component primer based on a high temperature resistant Novolac vinyl ester resin which provides exceptional resistance to rust and undercutting. **COROFLAKE T PRIMER** protects abrasive blasted steel surfaces from rust formation until subsequent protective coating or lining layers are applied.

### FIELDS OF APPLICATION

**COROFLAKE T PRIMER** is used as a primer on properly prepared steel surfaces for **COROFLAKE 29** and **COROFLAKE 3000** vinyl ester linings.

### FEATURES

- Outstanding adhesion to steel
- Excellent dry temperature stability
- Easy to apply
- Application by spraying, brushing or rolling

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are steel components. Components to be coated shall be designed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

Surfaces to be coated must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht # 28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 70 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate.

### ENVIRONMENTAL CONDITIONS

Throughout the coating process, the temperatures of the substrate and coating materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### APPLICATION

During the application of the product, the application instruction must always be observed.

**COROFLAKE T PRIMER** is applied to the substrate using an airless air spray system or by rolling or brushing. The primer must be applied to cover. Subsequent coatings can be applied after hardening of the primer according to the table "Recoat Time".

**Note:** During primer application, the lined surface should be shaded from direct or indirect sunlight whenever possible.

### MIXING RATIO

The primer and coating components are supplied in pre-measured units so that weighing or measuring of the components is kept to a minimum. After the unit has been mixed it shall be used within the specified pot life.

Primer	Parts by Weight	Parts by Volume
<b>COROFLAKE T PRIMER</b>	100	100
<b>HARDENER No. 1 CLEAR</b>	2	2.05

### CONSUMPTION

Product	Thickness [µm]	Coverage [g/m²]
<b>COROFLAKE T PRIMER</b>	covering	ca. 150

The information about coverage is an average for spray applications. Actual coverage depends on the object geometry and the method of application. It can vary.

### POT LIFE / WORKING TIME [min]

Product	15°C	20°C	30°C
<b>COROFLAKE T PRIMER</b>	ca. 60	ca. 50	ca. 30

### RECOAT TIME (20°C)

Product	Min. [h]	Max. [Days]
<b>COROFLAKE T PRIMER</b>	ca. 4	ca. 3

### CLEANING

Clean all equipment with **SOLVENT T-100** immediately after use. Frequency of cleaning will depend upon amount applied, temperature and elapsed time, including any delays.

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# COROFLAKE T PRIMER

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
COROFLAKE T PRIMER	5 kg	590 3035
COROFLAKE T PRIMER	20 kg	590 3033
HARDENER No. 1 CLEAR	0.1 kg	590 0181
HARDENER No. 1 CLEAR	0.4 kg	590 0019
SOLVENT T-100	4 kg	590 0617
SOLVENT T-100	8 kg	590 0600

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
COROFLAKE T PRIMER	5 - 20°C	4 Months
HARDENER No. 1 CLEAR	5 - 20°C	12 Months
SOLVENT T-100	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Density (Mixture)	EN ISO 2811 (ASTM D1475)	g/cm <sup>3</sup>	1.06
Min. Adhesion Strength Steel	EN ISO 4624 (ASTM D4541)	N/mm <sup>2</sup>	7
Viscosity	EN ISO 2555 (ASTM D2196)	mPa·s	350 ± 50
Max. Operating Temperature	-	°C	Depends on the subsequent coating system

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# PRODUCT INFORMATION

## COROFLAKE 10

### PRODUCT DESCRIPTION

**COROFLAKE 10** is a two-component, glass flake filled polymer coating based on a chemical and thermal resistant Bisphenol polyester resin. The C-glass flake fillers are oriented parallel to the substrate surface to form a high level of protection against permeation and ensure a long service life.

### COATING LAYERS CONSUMPTION

The coating system consists of the two-component **COROFLAKE N PRIMER** and at least two coats of the two-component **COROFLAKE 10** topcoat applied by trowel at a target thickness of approx. 1000 µm DFT per coat. The total applied DFT is based on the chemical and thermal load present and can be up to 3.0 mm.

### FIELDS OF APPLICATION

Due to the good chemical resistance to mineral acids, such as phosphoric acid and diluted sulphuric acid as well as other inorganic chemicals, **COROFLAKE 10** is the ideal corrosion protection system for plant components and vessels in the chemical and fertilizer industry.

### FEATURES

- Wide chemical resistance
- Excellent permeation resistance
- Outstanding adhesion to steel
- Application by trowelling

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are steel components. Components to be coated shall be designed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

Surfaces to be coated must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht # 28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 20 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate.

### ENVIRONMENTAL CONDITIONS

Throughout the coating process, the temperatures of the substrate and coating materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### APPLICATION

During the application of the product, the application instruction must always be observed.

**COROFLAKE N PRIMER** is applied to the substrate using an airless air spray system or by rolling. Thereafter the two

**COROFLAKE 10** coats shall be trowel applied. The surface of the lining must be smoothed with a roller dampened with **SMOOTHING LIQUID F12**. Special applications may require additional sealing (**COROFLAKE 10** sealing). The sealing is applied as uniform as possible in a target thickness of approx. 100 µm using a mohair roller.

**Note:** During application, the lined surface should be shaded from direct or indirect sunlight whenever possible.

### MIXING RATIO

The primer and coating components are supplied in pre-measured units so that weighing or measuring of the components is kept to a minimum. After the unit has been mixed it shall be used within the specified pot life.

Primer	Parts by Weight	Parts by Volume
<b>COROFLAKE N PRIMER</b>	100	100
<b>HARDENER No. 1 CLEAR</b>	2	2.01
Coating	Parts by Weight	Parts by Volume
<b>COROFLAKE 10</b>	100	100
<b>HARDENER No. 2 CLEAR</b>	1.50	1.53
<b>PIGMENT SOLUTION P1</b> (2 <sup>nd</sup> topcoat)	0.50	0.60

### CONSUMPTION PER COAT

Product	Thickness [µm]	Coverage [g/m <sup>2</sup> ]
<b>COROFLAKE N PRIMER</b>	covering	ca. 150
<b>COROFLAKE 10</b>	ca. 800 - 1000	ca. 1500 - 1700

The information about coverage is an average. Actual coverage depends on the object geometry and the method of application. It can vary.

### POT LIFE / WORKING TIME [min]

Product	15°C	20°C	30°C
<b>COROFLAKE N PRIMER</b>	ca. 60	ca. 40	ca. 20
<b>COROFLAKE 10</b>	ca. 90	ca. 60	ca. 30

### RECOAT TIME (20°C)

Product	Min. [h]	Max. [Days]
<b>COROFLAKE N PRIMER</b>	ca. 8	ca. 14
<b>COROFLAKE 10</b>	ca. 4	ca. 7

### CLEANING

Clean all equipment with **SOLVENT T-100** immediately after use.

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# COROFLAKE 10

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
COROFLAKE 10	5 kg	590 0978
COROFLAKE 10	20 kg	590 0961
COROFLAKE N PRIMER	5 kg	590 0480
COROFLAKE N PRIMER	20 kg	590 0040
SMOOTHING LIQUID F12	4 kg	590 0095
HARDENER No. 1 CLEAR	0.1 kg	590 0181
HARDENER No. 1 CLEAR	0.4 kg	590 0019
HARDENER No. 2 CLEAR	0.3 kg	590 1166
PIGMENT SOLUTION P1	0.1 kg	590 0844
SOLVENT T-100	4 kg	590 0617
SOLVENT T-100	8 kg	590 0600

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
COROFLAKE 10	5 - 20°C	6 Months
COROFLAKE N PRIMER	5 - 20°C	6 Months
SMOOTHING LIQUID F12	5 - 20°C	12 Months
HARDENER No. 1 CLEAR	5 - 20°C	12 Months
HARDENER No. 2 CLEAR	5 - 20°C	12 Months
PIGMENT SOLUTION P1	5 - 20°C	12 Months
SOLVENT T-100	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Abrasion	ASTM D4060	mg	68
Modulus of Elasticity (Bend Test)	EN ISO 178 (ASTM D790)	N/mm <sup>2</sup>	7500 ± 1500
Hardness Barcol	EN 59 (ASTM D2583)	-	≥ 30
Min. Adhesion Strength Steel	EN ISO 4624 (ASTM D4541)	N/mm <sup>2</sup>	4
Test Voltage (earliest after 24 hours)	EN 14879-2	kV / 100µm DFT	0.5
Viscosity	EN ISO 2555 (ASTM D2196)	mPa·s	7750 ± 750
Linear Coefficient of Thermal Expansion	ISO 11359-2 (ASTM C531)	1/K	25-30 x 10 <sup>-6</sup>
Water Vapour Permeability	ASTM E-96; Method E	perm-inch	0.002
Tensile Strength	EN ISO 527 (ASTM D638)	N/mm <sup>2</sup>	28
Max. Operating Temperature Liquids	-	°C	+80
Max. Operating Temperature Dry (Flue Gas)	-	°C	+110

**Note:** The indicated temperatures are dependent on the present load and may vary

Information given in the fact sheet above corresponds to the current knowledge available to us regarding our products at the time of its drafting and is intended as a guideline for informational purposes. However, because of the multiple possibilities regarding possible applications, processing and on site conditions, any information given in the fact sheet above is not legally binding, in particular, without being limited to, such information shall not be interpreted as a warranty of merchantability or of fitness for a particular purpose. Customer therefore is advised to conduct its own testing or make an inquiry with our technical department before ordering. We reserve the right to change the product at any time, in particular, without being limited to, minor changes because of advancements in technology. If by way of exception, the information given in the fact sheet above is incorporated by reference into any contract concluded with us under German Law, such information, shall only be interpreted as determining the specific requirements of the contractual products as set out in § 434 BGB (German Civil Code) and shall not be interpreted as constituting a guarantee of condition.

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# PRODUCT INFORMATION

## COROFLAKE 14

### PRODUCT DESCRIPTION

**COROFLAKE 14** is a two-component, vapour diffusion resistant, glass flake filled polymer coating based on a chemical and thermal resistant Bisphenol-A vinyl ester resin. **COROFLAKE 14** is the ideal corrosion protection if high chemical resistance is required at high medium temperatures. Furthermore, **COROFLAKE 14** is characterized by its good abrasion resistance. The parallel to the substrate oriented C-glass flakes provide an excellent diffusion barrier and thus ensure a long service life. The very high diffusion resistance is a particular feature of **COROFLAKE 14**.

### COATING LAYERS CONSUMPTION

The coating system consists of the two-component **COROFLAKE N PRIMER** and at least two coats of the two-component **COROFLAKE 14** topcoat applied by trowel at a target thickness of approx. 1000 µm DFT per coat. The total applied DFT is based on the chemical and thermal load present and can be up to 3.0 mm.

### FIELDS OF APPLICATION

Typical applications of **COROFLAKE 14** are components and vessels in the chemical-, steel-, pulp & paper-industry as well as in flue gas desulphurisation plants.

### FEATURES

- Excellent chemical resistance to inorganic acids, lye and oxidizing chemicals
- Excellent permeation resistance
- Good dry temperature stability
- Outstanding adhesion to steel
- Good abrasion resistance
- Application by trowelling

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are steel components. Components to be coated shall be designed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

Surfaces to be coated must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht # 28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 70 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate.

### ENVIRONMENTAL CONDITIONS

Throughout the coating process, the temperatures of the substrate and coating materials shall be maintained within the range specified by TIP TOP. All surfaces shall be main-

tained at a temperature at least 3K above the dew point in order to prevent condensation.

### APPLICATION

During the application of the product, the application instruction must always be observed.

**COROFLAKE N PRIMER** is applied to the substrate using an airless air spray system or by rolling. Thereafter the two **COROFLAKE 14** coats shall be trowel applied. The surface of the lining must be smoothed with a roller dampened with **SMOOTHING LIQUID F12**. Special applications may require additional sealing (**COROFLAKE 14** sealing). The sealing is applied as uniform as possible in a target thickness of approx. 100 µm using a mohair roller.

**Note:** During application, the lined surface should be shaded from direct or indirect sunlight whenever possible.

### MIXING RATIO

The primer and coating components are supplied in pre-measured units so that weighing or measuring of the components is kept to a minimum. After the unit has been mixed it shall be used within the specified pot life.

Primer	Parts by Weight	Parts by Volume
<b>COROFLAKE N PRIMER</b>	100	100
<b>HARDENER No. 1 CLEAR</b>	2	2.01

Coating	Parts by Weight	Parts by Volume
<b>COROFLAKE 14</b>	100	100
<b>HARDENER No. 1 CLEAR</b>	2	2.32
<b>PIGMENT SOLUTION P1</b> (2 <sup>nd</sup> topcoat)	0.50	0.60

### CONSUMPTION PER COAT

Product	Thickness [µm]	Coverage [g/m <sup>2</sup> ]
<b>COROFLAKE N PRIMER</b>	covering	ca. 150
<b>COROFLAKE 14</b>	ca. 800 - 1000	ca. 1500 - 1700

The information about coverage is an average. Actual coverage depends on the object geometry and the method of application. It can vary.

### POT LIFE / WORKING TIME [min]

Product	15°C	20°C	30°C
<b>COROFLAKE N PRIMER</b>	ca. 60	ca. 40	ca. 20
<b>COROFLAKE 14</b>	ca. 90	ca. 60	ca. 30

### RECOAT TIME (20°C)

Product	Min. [h]	Max. [Days]
<b>COROFLAKE N PRIMER</b>	ca. 8	ca. 14
<b>COROFLAKE 14</b>	ca. 12	ca. 7

### CLEANING

Clean all equipment with **SOLVENT T-100** immediately after use.

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# COROFLAKE 14

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
COROFLAKE 14	5 kg	590 0954
COROFLAKE 14	20 kg	590 0947
COROFLAKE N PRIMER	5 kg	590 0480
COROFLAKE N PRIMER	20 kg	590 0040
SMOOTHING LIQUID F12	4 kg	590 0095
HARDENER No. 1 CLEAR	0.1 kg	590 0181
HARDENER No. 1 CLEAR	0.4 kg	590 0019
PIGMENT SOLUTION P1	0.1 kg	590 0844
SOLVENT T-100	4 kg	590 0617
SOLVENT T-100	8 kg	590 0600

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
COROFLAKE 14	5 - 20°C	6 Months
COROFLAKE N PRIMER	5 - 20°C	6 Months
SMOOTHING LIQUID F12	5 - 20°C	12 Months
HARDENER No. 1 CLEAR	5 - 20°C	12 Months
PIGMENT SOLUTION P1	5 - 20°C	12 Months
SOLVENT T-100	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Abrasion	ASTM D4060	mg	68
Modulus of Elasticity (Bend Test)	EN ISO 178 (ASTM D790)	N/mm <sup>2</sup>	6500 ± 1500
Hardness Barcol	EN 59 (ASTM D2583)	-	≥ 30
Min. Adhesion Strength Steel	EN ISO 4624 (ASTM D4541)	N/mm <sup>2</sup>	4
Test Voltage (earliest after 24 hours)	EN 14879-2	kV / 100µm DFT	0.5
Viscosity	EN ISO 2555 (ASTM D2196)	mPa·s	4750 ± 250
Linear Coefficient of Thermal Expansion	ISO 11359-2 (ASTM C531)	1/K	25-30 x 10 <sup>-6</sup>
Water Vapour Permeability	ASTM E-96; Method E	perm-inch	0.0001
Tensile Strength	EN ISO 527 (ASTM D638)	N/mm <sup>2</sup>	30
Max. Operating Temperature Liquids	-	°C	+90
Max. Operating Temperature Dry (Flue Gas)	-	°C	+120

**Note:** The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## COROFLAKE 18

### PRODUCT DESCRIPTION

**COROFLAKE 18** is a two-component, vapour diffusion resistant, C-glass flake filled polymer coating based on a chemical and thermal resistant Novolac vinyl ester resin. **COROFLAKE 18** is the ideal corrosion protection if high chemical resistance is required at high medium temperatures. Furthermore, **COROFLAKE 18** is characterized by its good abrasion resistance. The parallel to the substrate oriented C-glass flakes provide an excellent diffusion barrier and thus ensure a long service life.

### COATING LAYERS CONSUMPTION

The coating system consists of the two-component **COROFLAKE S PRIMER** and at least two coats of the two-component **COROFLAKE 18** topcoat applied by trowel at a target thickness of approx. 1000 µm DFT per coat. The total applied DFT is based on the chemical and thermal load present and can be up to 3.0 mm

### FIELDS OF APPLICATION

Typical applications of **COROFLAKE 18** are high loaded components and tanks in process plants in the chemical industry, dye industry and flue gas desulphurisation plants.

### FEATURES

- High dry temperature stability
- Excellent permeation resistance
- Excellent chemical resistance to inorganic and organic acids, aliphatic and aromatic solvents as well as diluted lye
- Outstanding adhesion to steel
- Good abrasion resistance
- Application by trowelling

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are steel components. Components to be coated shall be designed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

Surfaces to be coated must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht # 28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 70 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate.

### ENVIRONMENTAL CONDITIONS

Throughout the coating process, the temperatures of the substrate and coating materials shall be maintained within the range specified by TIP TOP. All surfaces shall be main-

tained at a temperature at least 3K above the dew point in order to prevent condensation.

### APPLICATION

During the application of the product, the application instruction must always be observed.

**COROFLAKE S PRIMER** is applied to the substrate using an airless air spray system or by rolling. Thereafter the two **COROFLAKE 18** coats shall be trowel applied. The surface of the lining must be smoothed with a roller dampened with **SMOOTHING LIQUID F12**. Special applications may require additional sealing (**COROFLAKE 18** sealing). The sealing is applied as uniform as possible in a target thickness of approx. 100 µm using a mohair roller.

**Note:** During application, the lined surface should be shaded from direct or indirect sunlight whenever possible.

### MIXING RATIO

The primer and coating components are supplied in pre-measured units so that weighing or measuring of the components is kept to a minimum. After the unit has been mixed it shall be used within the specified pot life.

Primer	Parts by Weight	Parts by Volume
<b>COROFLAKE S PRIMER</b>	100	100
<b>HARDENER No. 1 CLEAR</b>	2	2.11

Coating	Parts by Weight	Parts by Volume
<b>COROFLAKE 18</b>	100	100
<b>HARDENER No. 1 CLEAR</b>	2	2.32
<b>PIGMENT SOLUTION P1</b> (2 <sup>nd</sup> topcoat)	0.5	0.60

### CONSUMPTION PER COAT

Product	Thickness [µm]	Coverage [g/m <sup>2</sup> ]
<b>COROFLAKE S PRIMER</b>	covering	ca. 150
<b>COROFLAKE 18</b>	ca. 800 - 1000	ca. 1500 - 1700

The information about coverage is an average. Actual coverage depends on the object geometry and the method of application. It can vary.

### POT LIFE / WORKING TIME [min]

Product	15°C	20°C	30°C
<b>COROFLAKE S PRIMER</b>	ca. 60	ca. 40	ca. 20
<b>COROFLAKE 18</b>	ca. 90	ca. 60	ca. 30

### RECOAT TIME (20°C)

Product	Min. [h]	Max. [Days]
<b>COROFLAKE S PRIMER</b>	ca. 6	ca. 7
<b>COROFLAKE 18</b>	ca. 12	ca. 3

### CLEANING

Clean all equipment with **SOLVENT T-100** immediately after use.

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# COROFLAKE 18

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
COROFLAKE 18	5 kg	590 0507
COROFLAKE 18	20 kg	590 0150
COROFLAKE S PRIMER	5 kg	590 0167
COROFLAKE S PRIMER	20 kg	590 0033
SMOOTHING LIQUID F12	4 kg	590 0095
HARDENER No. 1 CLEAR	0.1 kg	590 0181
HARDENER No. 1 CLEAR	0.4 kg	590 0019
PIGMENT SOLUTION P1	0.1 kg	590 0844
SOLVENT T-100	4 kg	590 0617
SOLVENT T-100	8 kg	590 0600

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
COROFLAKE 18	5 - 20°C	3 Months
COROFLAKE S PRIMER	5 - 20°C	6 Months
SMOOTHING LIQUID F12	5 - 20°C	12 Months
HARDENER No. 1 CLEAR	5 - 20°C	12 Months
PIGMENT SOLUTION P1	5 - 20°C	12 Months
SOLVENT T-100	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Abrasion	ASTM D4060	mg	68
Modulus of Elasticity (Bend Test)	EN ISO 178 (ASTM D790)	N/mm <sup>2</sup>	6500 ± 1500
Hardness Barcol	EN 59 (ASTM D2583)	-	≥ 30
Min. Adhesion Strength Steel	EN ISO 4624 (ASTM D4541)	N/mm <sup>2</sup>	4
Test Voltage (earliest after 24 hours)	EN 14879-2	kV / 100µm DFT	0.5
Viscosity	EN ISO 2555 (ASTM D2196)	mPa·s	4750 ± 250
Linear Coefficient of Thermal Expansion	ISO 11359-2 (ASTM C531)	1/K	25-30 x 10 <sup>-6</sup>
Water Vapour Permeability	ASTM E-96; Method E	perm-inch	0.0001
Tensile Strength	EN ISO 527 (ASTM D638)	N/mm <sup>2</sup>	30
Max. Operating Temperature Liquids	-	°C	+90
Max. Operating Temperature Dry (Flue Gas)	-	°C	+160

**Note:** The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## COROFLAKE 23

### PRODUCT DESCRIPTION

**COROFLAKE 23** is a two-component; vapour diffusion resistant, inert flake filled polymer coating based on a chemical and thermal resistant Novolac vinyl ester resin, which has been designed especially for flue gas desulphurization systems.

**COROFLAKE 23** is the ideal corrosion protection if high chemical resistance is required at high medium temperatures. The parallel to the substrate oriented inert flakes provide an excellent diffusion barrier and thus ensure a long service life.

### COATING LAYERS CONSUMPTION

The coating system consists of the two-component **COROFLAKE S PRIMER** and at least two, generally three coats of the two-component **COROFLAKE 23** topcoat applied at approx. 500 - 700 µm DFT per coat, alternating in beige and pink colours. The total applied DFT is based on the chemical and thermal load present and can be up to 2.5 mm.

### FIELDS OF APPLICATION

**COROFLAKE 23** is used mainly in raw gas and clean gas ducts, gas pre-heater, heat exchangers, flue gas scrubbers, wet electric filters and stacks of flue gas desulphurization plants. Furthermore it is also used in other plant components which are exposed to acid fumes and gases. **COROFLAKE 23** is also suitable as corrosion protection for storage and process tanks, wastewater treatment plants, stack gas scrubbers, waste incineration plants and biogas plants. **COROFLAKE 23** is further used as a basecoat for **COROFLAKE 23 LSE** or as a topcoat for **COROFLAKE 23 M**.

### APPROVALS

**COROFLAKE 23** is approved (**Z-59.13-283**) by the German Institute of Construction Technology (DIBt) for steel storage vessels.

### FEATURES

- High temperature stability up to +180°C
- Excellent permeation resistance
- Excellent chemical resistance to inorganic and organic acids, lye and organic solvents
- Outstanding adhesion to steel
- Application by spraying, brushing or rolling
- Can be exposed to process conditions shortly after application

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are steel components. Components to be coated shall be designed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

Surfaces to be coated must be dry and free of contaminants. All contaminants, including non-visible detectable

contaminants, must be removed in accordance with DIN Fachbericht # 28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 70 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate.

### ENVIRONMENTAL CONDITIONS

Throughout the coating process, the temperatures of the substrate and coating materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### APPLICATION

During the application of the product, the application instruction must always be observed.

**COROFLAKE S PRIMER** and each **COROFLAKE 23** topcoat are applied to the substrate using an airless air spray system or by rolling or brushing.

In case **COROFLAKE 23** is applied by brushing or rolling, additional coats may be required to achieve the required total DFT.

**Note:** During application, the lined surface should be shaded from direct or indirect sunlight whenever possible.

### MIXING RATIO

The primer and coating components are supplied in pre-measured units so that weighing or measuring of the components is kept to a minimum. After the unit has been mixed it shall be used within the specified pot life.

Primer	Parts by Weight	Parts by Volume
<b>COROFLAKE S PRIMER</b>	100	100
<b>HARDENER No. 1 CLEAR</b>	2	2.11

Coating	Parts by Weight	Parts by Volume
<b>COROFLAKE 23</b>	100	100
<b>HARDENER No. 1 CLEAR</b>	2	2.30

### CONSUMPTION PER COAT

Product	Thickness [µm]	Coverage [g/m²]
<b>COROFLAKE S PRIMER</b>	covering	ca. 150
<b>COROFLAKE 23</b>	ca. 500 - 700	ca. 900 - 1100

The information about coverage is an average for spray applications. Actual coverage depends on the object geometry and the method of application. It can vary.

### POT LIFE / WORKING TIME [min]

Product	15°C	20°C	30°C
<b>COROFLAKE S PRIMER</b>	ca. 60	ca. 40	ca. 20
<b>COROFLAKE 23</b>	ca. 90	ca. 60	ca. 30

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# COROFLAKE 23

## RECOAT TIME (20°C)

Product	Min. [h]	Max. [Days]
COROFLAKE S PRIMER	ca. 6	ca. 7
COROFLAKE 23	ca. 4	ca. 3

## CLEANING

Clean all equipment with **SOLVENT T-100** immediately after use. Frequency of cleaning will depend upon amount applied, temperature and elapsed time, including any delays.

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
COROFLAKE 23	5 kg	590 0514
COROFLAKE 23	20 kg	590 0057
COROFLAKE S PRIMER	5 kg	590 0167
COROFLAKE S PRIMER	20 kg	590 0033
HARDENER No. 1 CLEAR	0.1 kg	590 0181
HARDENER No. 1 CLEAR	0.4 kg	590 0019
HARDENER No. 1 RED	0.1 kg	590 0356
HARDENER No. 1 RED	0.4 kg	590 0112
SOLVENT T-100	4 kg	590 0617
SOLVENT T-100	8 kg	590 0600

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
COROFLAKE 23	5 - 20°C	6 Months
COROFLAKE S PRIMER	5 - 20°C	6 Months
HARDENER No. 1 CLEAR	5 - 20°C	12 Months
HARDENER No. 1 RED	5 - 20°C	12 Months
SOLVENT T-100	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Abrasion	ASTM D4060	mg	90
Density (Mixture)	EN ISO 2811 (ASTM D1475)	g/cm <sup>3</sup>	1.19 ± 0.03
Modulus of Elasticity (Bend Test)	EN ISO 178 (ASTM D790)	N/mm <sup>2</sup>	3500 ± 500
Hardness Barcol	EN 59 (ASTM D2583)	-	≥ 35
Min. Adhesion Strength Steel	EN ISO 4624 (ASTM D4541)	N/mm <sup>2</sup>	7
Test Voltage (earliest after 24 hours)	EN 14879-2	kV / 100µm DFT	0.5
Viscosity	EN ISO 2555 (ASTM D2196)	mPa·s	3000 ± 250
Water Vapour Permeability	ASTM E-96; Method E	perm-inch	0.0016
Tensile Strength	EN ISO 527 (ASTM D638)	N/mm <sup>2</sup>	20
Max. Operating Temperature Liquids	-	°C	+75
Max. Operating Temperature Dry (Flue Gas)	-	°C	+180
Short-term Operating Temperature Dry (Flue Gas)	-	°C	+220

**Note:** The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## COROFLAKE 23 LSE

### PRODUCT DESCRIPTION

**COROFLAKE 23 LSE** is a two-component, PTFE flake filled polymer coating based on a Novolac vinyl ester resin which has been designed especially for chemical plants and vessels where deposits must be avoided. By using PTFE flakes, **COROFLAKE 23 LSE** achieves excellent non-stick properties combined with good thermal and chemical resistance.

### COATING LAYERS CONSUMPTION

The coating system consists of the two-component **COROFLAKE 23 LSE** non-stick topcoat. The total applied DFT is approx. 500 µm per coat.

### FIELDS OF APPLICATION

**COROFLAKE 23 LSE** is applied as topcoat / finish coat over polymer coatings based on Novolac vinyl ester resins to increase the non-stick properties. **COROFLAKE 23 LSE** is used mainly for the coating of components where deposits must be avoided (e.g. silos).

### FEATURES

- Low surface energy finish
- Reduces process deposit build-up on the surface
- Excellent chemical resistance to inorganic acids, lye and organic solvents
- Outstanding adhesion to polymer coatings based on vinyl ester resins
- Easily cleaned
- Application by spraying

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are coatings based on Novolac vinyl ester resins. Components to be coated shall be designed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

The subsequent layer of coating can be applied onto the previously applied layer straightforward without surface preparation. But the time interval between the consecutive coatings should not exceed a maximum of 72 hours. If this condition is not met, the surface of the previous layer needs to be roughened by abrasive blasting.

### ENVIRONMENTAL CONDITIONS

Throughout the coating process, the temperatures of the substrate and coating materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### APPLICATION

During the application of the product, the application instruction must always be observed.

**COROFLAKE 23 LSE** topcoat is only applied using an airless air spray system.

**Note:** During application, the lined surface should be shaded from direct or indirect sunlight whenever possible.

### MIXING RATIO

The primer and coating components are supplied in pre-measured units so that weighing or measuring of the components is kept to a minimum. After the unit has been mixed it shall be used within the specified pot life.

Coating	Parts by Weight	Parts by Volume
<b>COROFLAKE 23 LSE</b>	100	100
<b>HARDENER No. 1 CLEAR</b>	2	2.19

### CONSUMPTION

Product	Thickness [µm]	Coverage [g/m <sup>2</sup> ]
<b>COROFLAKE 23 LSE</b>	ca. 500 - 700	ca. 900 - 1100

The information about coverage is an average for spray applications. Actual coverage depends on the object geometry and the method of application. It can vary.

### POT LIFE / WORKING TIME [min]

Product	15°C	20°C	30°C
<b>COROFLAKE 23 LSE</b>	ca. 90	ca. 60	ca. 30

### CLEANING

Clean all equipment with **SOLVENT T-100** immediately after use. Frequency of cleaning will depend upon amount applied, temperature and elapsed time, including any delays.

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# COROFLAKE 23 LSE

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
COROFLAKE 23 LSE	5 kg	590 0813
COROFLAKE 23 LSE	20 kg	590 0806
HARDENER No. 1 CLEAR	0.1 kg	590 0181
HARDENER No. 1 CLEAR	0.4 kg	590 0019
SOLVENT T-100	4 kg	590 0617
SOLVENT T-100	8 kg	590 0600

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
COROFLAKE 23 LSE	5 - 20°C	6 Months
HARDENER No. 1 CLEAR	5 - 20°C	12 Months
SOLVENT T-100	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Density (Mixture)	EN ISO 2811 (ASTM D1475)	g/cm <sup>3</sup>	1.13 ± 0.05
Modulus of Elasticity (Bend Test)	EN ISO 178 (ASTM D790)	N/mm <sup>2</sup>	3000 ± 500
Hardness Shore D	DIN ISO 7619 (ASTM D2240)	-	≥ 70
Min. Adhesion Strength Steel	EN ISO 4624 (ASTM D4541)	N/mm <sup>2</sup>	7
Test Voltage (earliest after 24 hours)	EN 14879-2	kV / 100µm DFT	0.5
Viscosity	EN ISO 2555 (ASTM D2196)	mPa·s	2750 ± 250
Linear Coefficient of Thermal Expansion	ISO 11359-2 (ASTM C531)	1/K	25-30 x 10 <sup>-6</sup>
Tensile Strength	EN ISO 527 (ASTM D638)	N/mm <sup>2</sup>	20
Max. Operating Temperature Liquids	-	°C	+65
Max. Operating Temperature Dry (Flue Gas)	-	°C	+180

**Note:** The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## COROFLAKE 23 M

### PRODUCT DESCRIPTION

**COROFLAKE 23 M** is a combination of a fibreglass mat reinforced laminate lining, based on a Bisphenol-A vinyl ester resin and with an inert flake filled topcoat, based on a high chemical and thermal resistant Novolac vinyl ester resin. Due to the excellent mechanical properties, **COROFLAKE 23 M** can cover cracks up to 0.2 mm according to DIBt (German Institute for Construction Technology) guidelines.

### COATING LAYERS CONSUMPTION

The laminate lining consists of the two-component **COROFLAKE N PRIMER**, the three-component basecoat, the two-component reinforced layer with one 300 g/m<sup>2</sup> ECR-fibreglass as well as one 30 g/m<sup>2</sup> C-glass surface veil and at least two coats of the two component **COROFLAKE 23** topcoat. The total applied DFT is based on the chemical and thermal load present and can be up to approx. 2.0 - 3.0 mm. If a high-voltage testing of the laminate lining on concrete is required, **COROFLAKE N PRIMER AS** must be used as primer instead.

### FIELDS OF APPLICATION

Due to its good crack bridging properties, **COROFLAKE 23 M** is ideal for use of concrete structures such as absorbers, vessels, floors and pits. Due to the excellent chemical resistance **COROFLAKE 23 M** can be also used in many other areas, such as bio gas plants or concrete silos.

### FEATURES

- Excellent chemical resistance to strong inorganic acids, lye and organic solvents
- Universal application
- Crack-bridging properties
- Outstanding adhesion to concrete
- Can be exposed to process conditions shortly after application

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of concrete, screed or plaster. Components to be coated shall be designed and manufactured in accordance with EN 14879-1. In addition, DIN 1045 must also be observed.

### SURFACE PRE-TREATMENT

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup> and minimum compressive strength of 25 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%.

### ENVIRONMENTAL CONDITIONS

Throughout the coating process, the temperatures of the substrate and coating materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### APPLICATION

During the application of the product, the application instruction must always be observed.

Trowel applies the basecoat onto the primed surface at approx. 1.0 - 1.5 mm. Upon placement of the basecoat, the 300 g/m<sup>2</sup> ECR-fibreglass mat is pressed onto the surface and saturated by roller with resin mixture. Afterwards a 30 g/m<sup>2</sup> C-glass surface veil is pressed onto the surface and saturated by roller with resin mixture. Finally two coats of **COROFLAKE 23** are applied in DFT of 500 - 700 µm per coat as final topcoat. The **COROFLAKE 23** topcoat is applied using an airless air spray system or by rolling or brushing.

In case **COROFLAKE 23** is applied by brushing or rolling, additional coats may be required to achieve the required total DFT.

**Note:** During application, the lined surface should be shaded from direct or indirect sunlight whenever possible.

### MIXING RATIO

The primer and coating components are supplied in pre-measured units so that weighing or measuring of the components is kept to a minimum. After the unit has been mixed it shall be used within the specified pot life.

Primer	Parts by Weight	Parts by Volume
<b>COROFLAKE N PRIMER</b>	100	100
<b>HARDENER No. 1 CLEAR</b>	2	2.01

Basecoat	Parts by Weight	Parts by Volume
<b>COROFLAKE N PRIMER</b>	100	100
<b>HARDENER No. 1 CLEAR</b>	2	2.01
<b>FILLER F1</b>	250	247.62

Laminate Layer	Parts by Weight	Parts by Volume
<b>COROFLAKE N PRIMER</b>	100	100
<b>HARDENER No. 1 CLEAR</b>	2	2.01

Topcoat	Parts by Weight	Parts by Volume
<b>COROFLAKE 23</b>	100	100
<b>HARDENER No. 1 CLEAR / RED</b>	2	2.30

### CONSUMPTION

Layer	Product	Coverage [g/m <sup>2</sup> ]
Primer	<b>COROFLAKE N PRIMER</b>	ca. 300
Basecoat	<b>COROFLAKE N PRIMER</b>	ca. 1000
	<b>FILLER F1</b>	ca. 2500
Laminate Layer	<b>COROFLAKE N PRIMER</b>	ca. 660
	1 x ECR-fibreglass mat 300 g/m <sup>2</sup>	ca. 330
	1 x C-glass surface veil 30 g/m <sup>2</sup>	ca. 33
Topcoat	<b>COROFLAKE 23</b>	ca. 900 - 1100*

\* Per layer

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# COROFLAKE 23 M

## POT LIFE / WORKING TIME [min]

Product	15 °C	20 °C	30 °C
COROFLAKE N PRIMER	ca. 60	ca. 40	ca. 20
COROFLAKE 23	ca. 90	ca. 60	ca. 30

## RECOAT TIME (20 °C)

Product	Min. [h]	Max. [Days]
COROFLAKE N PRIMER	ca. 8	ca. 14
COROFLAKE 23	ca. 4	ca. 3

## CLEANING

Clean all equipment with **SOLVENT T-100** immediately after use.

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
C-glass surface veil 30 g/m <sup>2</sup>	227.5 m <sup>2</sup>	590 9800
COROFLAKE N PRIMER	5 kg	590 0480
COROFLAKE N PRIMER	20 kg	590 0040
COROFLAKE 23	5 kg	590 0514
COROFLAKE 23	20 kg	590 0057
ECR-fibreglass mat 300 g/m <sup>2</sup>	20 m <sup>2</sup>	590 0239
ECR-fibreglass mat 300 g/m <sup>2</sup>	50 m <sup>2</sup>	590 0246

Product	Size	Article No.
FILLER F1	25 kg	591 0140
HARDENER No. 1 CLEAR	0.1 kg	590 0181
HARDENER No. 1 CLEAR	0.4 kg	590 0019
HARDENER No. 1 RED	0.1 kg	590 0356
HARDENER No. 1 RED	0.4 kg	590 0112
SOLVENT T-100	4 kg	590 0617
SOLVENT T-100	8 kg	590 0600

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
COROFLAKE 23	5 - 20 °C	6 Months
COROFLAKE N PRIMER	5 - 20 °C	6 Months
FILLER F1	-	24 Months
HARDENER No. 1 CLEAR	5 - 20 °C	12 Months
HARDENER No. 1 RED	5 - 20 °C	12 Months
SOLVENT T-100	5 - 25 °C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Abrasion	ASTM D4060	mg	90
Modulus of Elasticity (Bend Test)	EN ISO 178 (ASTM D790)	N/mm <sup>2</sup>	3650 ± 150
Hardness Barcol	EN 59 (ASTM D2583)	-	≥ 35
Min. Adhesion Strength Concrete	EN ISO 4624 (ASTM D7234)	N/mm <sup>2</sup>	1.5*
Test Voltage (earliest after 24 hours)	EN 14879-2	kV / 100µm DFT	0.5
Viscosity	EN ISO 2555 (ASTM D2196)	mPa·s	3000 ± 250
Linear Coefficient of Thermal Expansion	ISO 11359-2 (ASTM C531)	1/K	25-30 x 10 <sup>-6</sup>
Max. Operating Temperature Liquids	-	°C	+75

\* Depending on the concrete strength

**Note:** The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## COROFLAKE 23 T

### PRODUCT DESCRIPTION

**COROFLAKE 23 T** is a two-component, vapour diffusion resistant, inert flake filled polymer coating based on a chemical and thermal resistant Novolac vinyl ester resin. **COROFLAKE 23 T** can be applied in layer thicknesses up to 1000 µm per coat.

**COROFLAKE 23 T** is the ideal corrosion protection if high chemical resistance is required at high medium temperatures. The parallel to the substrate oriented inert flakes provide an excellent diffusion barrier and thus ensure a long service life.

### COATING LAYERS CONSUMPTION

The coating system consists of the two-component **COROFLAKE S PRIMER** and at least one, generally two coats of the two-component **COROFLAKE 23 T** topcoat applied at approx. 800 - 1000 µm DFT per coat. Depending on the present load, **COROFLAKE 23 T** is applied in one or several coats, alternating in beige and pink colours. The total applied DFT is based on the chemical and thermal load present and can be up to 2.5 mm.

### FIELDS OF APPLICATION

**COROFLAKE 23 T** is used mainly in flue gas ducts, gas gas heaters, residue collecting tanks and stacks of flue gas desulphurisation plants (FGD). Further fields of application are biogas plants, wastewater treatment plants as well as other structural components servicing under corrosive conditions.

### FEATURES

- High temperature stability up to +180°C
- Excellent chemical resistance to inorganic and organic acids, lye and organic solvents
- Outstanding adhesion to steel
- Application by spraying, brushing or rolling
- Can be exposed to process conditions shortly after application

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are steel components. Components to be coated shall be designed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

Surfaces to be coated must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht # 28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 70 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate.

### ENVIRONMENTAL CONDITIONS

Throughout the coating process, the temperatures of the substrate and coating materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### APPLICATION

During the application of the product, the application instruction must always be observed.

**COROFLAKE S PRIMER** and each **COROFLAKE 23 T** topcoat are applied to the substrate using an airless air spray system or by rolling or brushing.

In case **COROFLAKE 23 T** is applied by brushing or rolling, additional coats may be required to achieve the required total DFT.

**Note:** During application, the lined surface should be shaded from direct or indirect sunlight whenever possible.

### MIXING RATIO

The primer and coating components are supplied in pre-measured units so that weighing or measuring of the components is kept to a minimum. After the unit has been mixed it shall be used within the specified pot life.

Primer	Parts by Weight	Parts by Volume
<b>COROFLAKE S PRIMER</b>	100	100
<b>HARDENER No. 1 CLEAR</b>	2	2.11

Coating	Parts by Weight	Parts by Volume
<b>COROFLAKE 23 T</b>	100	100
<b>HARDENER No. 1 CLEAR</b>	2	2.30

### CONSUMPTION PER COAT

Product	Thickness [µm]	Coverage [g/m²]
<b>COROFLAKE S PRIMER</b>	covering	ca. 150
<b>COROFLAKE 23 T</b>	ca. 800 - 1000	ca. 1500 - 1700

The information about coverage is an average for spray applications. Actual coverage depends on the object geometry and the method of application. It can vary.

### POT LIFE / WORKING TIME [min]

Product	15°C	20°C	30°C
<b>COROFLAKE S PRIMER</b>	ca. 60	ca. 40	ca. 20
<b>COROFLAKE 23 T</b>	ca. 90	ca. 60	ca. 30

### RECOAT TIME (20°C)

Product	Min. [h]	Max. [Days]
<b>COROFLAKE S PRIMER</b>	ca. 6	ca. 7
<b>COROFLAKE 23 T</b>	ca. 4	ca. 3

### CLEANING

Clean all equipment with **SOLVENT T-100** immediately after use. Frequency of cleaning will depend upon amount applied, temperature and elapsed time, including any delays.

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# COROFLAKE 23 T

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
COROFLAKE 23 T	20 kg	590 0060
COROFLAKE S PRIMER	5 kg	590 0167
COROFLAKE S PRIMER	20 kg	590 0033
HARDENER No. 1 CLEAR	0.1 kg	590 0181
HARDENER No. 1 CLEAR	0.4 kg	590 0019
HARDENER No. 1 RED	0.1 kg	590 0356
HARDENER No. 1 RED	0.4 kg	590 0112
SOLVENT T-100	4 kg	590 0617
SOLVENT T-100	8 kg	590 0600

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
COROFLAKE 23 T	5 - 20°C	6 Months
COROFLAKE S PRIMER	5 - 20°C	6 Months
HARDENER No. 1 CLEAR	5 - 20°C	12 Months
HARDENER No. 1 RED	5 - 20°C	12 Months
SOLVENT T-100	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Abrasion	ASTM D4060	mg	95
Density (Mixture)	EN ISO 2811 (ASTM D1475)	g/cm <sup>3</sup>	1.19 ± 0.03
Modulus of Elasticity (Bend Test)	EN ISO 178 (ASTM D790)	N/mm <sup>2</sup>	3500 ± 500
Hardness Barcol	EN 59 (ASTM D2583)	-	35
Min. Adhesion Strength Steel	EN ISO 4624 (ASTM D4541)	N/mm <sup>2</sup>	7
Test Voltage (earliest after 24 hours)	EN 14879-2	kV / 100µm DFT	0.5
Viscosity	EN ISO 2555 (ASTM D2196)	mPa·s	3250 ± 250
Linear Coefficient of Thermal Expansion	ISO 11359-2 (ASTM C531)	1/K	27-30 x 10 <sup>-6</sup>
Tensile Strength	EN ISO 527 (ASTM D638)	N/mm <sup>2</sup>	19
Max. Operating Temperature Liquids	-	°C	+70
Max. Operating Temperature Dry (Flue Gas)	-	°C	+180
Short-term Operating Temperature Dry (Flue Gas)	-	°C	+200

**Note:** The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## COROFLAKE 24

### PRODUCT DESCRIPTION

**COROFLAKE 24** is a two-component; vapour diffusion resistant, inert flake filled polymer coating based on a chemical and thermal resistant Bisphenol-A vinyl ester resin, which has been designed especially for flue gas desulphurization systems.

**COROFLAKE 24** is the ideal corrosion protection if high chemical resistance is required. The parallel to the substrate oriented inert flakes provide an excellent diffusion barrier and thus ensure a long service life.

### COATING LAYERS CONSUMPTION

The coating system consists of the two-component **COROFLAKE N PRIMER** and at least two, generally three coats of the two-component **COROFLAKE 24** topcoat applied at approx. 500 - 700 µm DFT per coat, alternating in beige and pink colours. The total applied DFT is based on the chemical and thermal load present and can be up to 2.5 mm.

### FIELDS OF APPLICATION

**COROFLAKE 24** is used mainly in clean gas ducts, scrubbers and tanks of flue gas desulphurisation plants as well as cooling water pipes and seawater pipes. **COROFLAKE 24** is also suitable as corrosion protection for process tanks, sewage plants and for biogas plants. **COROFLAKE 24** has proven itself through its successful field performance at offshore applications, especially on the surfaces exposed to severe conditions due to tide in North Sea (Helgoland). Furthermore **COROFLAKE 24** is used as basecoat for **COROFLAKE 24 AR** or **COROFLAKE 24 LSE** and as topcoat for **COROFLAKE 24 M**.

### FEATURES

- Excellent permeation resistance
- Good chemical resistance to inorganic and organic acids, lye, organic solvents and in particular hypochlorite
- Universal application
- Outstanding adhesion to steel
- Application by spraying, brushing or rolling
- Can be exposed to process conditions shortly after application

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are steel components. Components to be coated shall be designed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

Surfaces to be coated must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht # 28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be

achieved. A minimum surface profile of Rz ≥ 70 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate.

### ENVIRONMENTAL CONDITIONS

Throughout the coating process, the temperatures of the substrate and coating materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### APPLICATION

During the application of the product, the application instruction must always be observed.

**COROFLAKE N PRIMER** and each **COROFLAKE 24** topcoat are applied to the substrate using an airless air spray system or by rolling or brushing.

In case **COROFLAKE 24** is applied by brushing or rolling, additional coats may be required to achieve the required total DFT.

**Note:** During application, the lined surface should be shaded from direct or indirect sunlight whenever possible.

### MIXING RATIO

The primer and coating components are supplied in pre-measured units so that weighing or measuring of the components is kept to a minimum. After the unit has been mixed it shall be used within the specified pot life.

Primer	Parts by Weight	Parts by Volume
<b>COROFLAKE N PRIMER</b>	100	100
<b>HARDENER No. 1 CLEAR</b>	2	2.01

Coating	Parts by Weight	Parts by Volume
<b>COROFLAKE 24</b>	100	100
<b>HARDENER No. 1 CLEAR</b>	2	2.22

### CONSUMPTION PER COAT

Product	Thickness [µm]	Coverage [g/m²]
<b>COROFLAKE N PRIMER</b>	covering	ca. 150
<b>COROFLAKE 24</b>	ca. 500 - 700	ca. 900 - 1100

The information about coverage is an average for spray applications. Actual coverage depends on the object geometry and the method of application. It can vary.

### POT LIFE / WORKING TIME [min]

Product	15°C	20°C	30°C
<b>COROFLAKE N PRIMER</b>	ca. 60	ca. 40	ca. 20
<b>COROFLAKE 24</b>	ca. 90	ca. 60	ca. 30

### RECOAT TIME (20°C)

Product	Min. [h]	Max. [Days]
<b>COROFLAKE N PRIMER</b>	ca. 8	ca. 14
<b>COROFLAKE 24</b>	ca. 4	ca. 7

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# COROFLAKE 24

## CLEANING

Clean all equipment with **SOLVENT T-100** immediately after use. Frequency of cleaning will depend upon amount applied, temperature and elapsed time, including any delays.

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
<b>COROFLAKE 24</b>	5 kg	590 0538
<b>COROFLAKE 24</b>	20 kg	590 0064
<b>COROFLAKE 24 GREY</b>	5 kg	590 0540
<b>COROFLAKE 24 GREY</b>	20 kg	590 0330
<b>COROFLAKE N PRIMER</b>	5 kg	590 0480
<b>COROFLAKE N PRIMER</b>	20 kg	590 0040
<b>HARDENER No. 1 CLEAR</b>	0.1 kg	590 0181
<b>HARDENER No. 1 CLEAR</b>	0.4 kg	590 0019
<b>HARDENER No. 1 RED</b>	0.1 kg	590 0356
<b>HARDENER No. 1 RED</b>	0.4 kg	590 0112
<b>SOLVENT T-100</b>	4 kg	590 0617
<b>SOLVENT T-100</b>	8 kg	590 0600

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
<b>COROFLAKE 24</b>	5 - 20°C	6 Months
<b>COROFLAKE 24 GREY</b>	5 - 20°C	6 Months
<b>COROFLAKE N PRIMER</b>	5 - 20°C	6 Months
<b>HARDENER No. 1 CLEAR</b>	5 - 20°C	12 Months
<b>HARDENER No. 1 RED</b>	5 - 20°C	12 Months
<b>SOLVENT T-100</b>	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Abrasion	ASTM D4060	mg	92
Density (Mixture)	EN ISO 2811 (ASTM D1475)	g/cm <sup>3</sup>	1.15 ± 0.02
Modulus of Elasticity (Bend Test)	EN ISO 178 (ASTM D790)	N/mm <sup>2</sup>	3000 ± 500
Hardness Barcol	EN 59 (ASTM D2583)	-	≥ 30
Min. Adhesion Strength Steel	EN ISO 4624 (ASTM D4541)	N/mm <sup>2</sup>	7
Test Voltage (earliest after 24 hours)	EN 14879-2	kV / 100µm DFT	0.5
Viscosity	EN ISO 2555 (ASTM D2196)	mPa·s	3250 ± 250
Linear Coefficient of Thermal Expansion	ISO 11359-2 (ASTM C531)	1/K	27-30 x 10 <sup>-6</sup>
Water Vapour Permeability	ASTM E-96; Method E	perm-inch	0.0014
Tensile Strength	EN ISO 527 (ASTM D638)	N/mm <sup>2</sup>	20
Max. Operating Temperature Liquids	-	°C	+75
Max. Operating Temperature Dry (Flue Gas)	-	°C	+120

**Note:** The indicated temperatures are dependent on the present load and may vary

Information given in the fact sheet above corresponds to the current knowledge available to us regarding our products at the time of its drafting and is intended as a guideline for informational purposes. However, because of the multiple possibilities regarding possible applications, processing and on site conditions, any information given in the fact sheet above is not legally binding, in particular, without being limited to, such information shall not be interpreted as a warranty of merchantability or of fitness for a particular purpose. Customer therefore is advised to conduct its own testing or make an inquiry with our technical department before ordering. We reserve the right to change the product at any time, in particular, without being limited to, minor changes because of advancements in technology. If by way of exception, the information given in the fact sheet above is incorporated by reference into any contract concluded with us under German Law, such information, shall only be interpreted as determining the specific requirements of the contractual products as set out in § 434 BGB (German Civil Code) and shall not be interpreted as constituting a guarantee of condition.

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# PRODUCT INFORMATION

## COROFLAKE 24 AR TC

### PRODUCT DESCRIPTION

**COROFLAKE 24 AR TC** is a two-component, high abrasion resistant polymer coating based on a Bisphenol-A vinyl ester resin which has been designed especially for chemical plants and vessels where abrasion must be avoided. By using special fillers, **COROFLAKE 24 AR TC** achieves excellent abrasion resistance combined with good thermal and chemical resistance.

### COATING LAYERS CONSUMPTION

The coating system consists of the two-component **COROFLAKE 24 AR TC** topcoat. The total applied DFT is approx. 500 µm per coat.

### FIELDS OF APPLICATION

**COROFLAKE 24 AR TC** is applied as topcoat over polymer coatings based on Bisphenol-A vinyl ester resins to increase the abrasion resistance. **COROFLAKE 24 AR TC** is used mainly in absorbers and tanks of flue gas desulphurization plants and in plants and storage vessels in the chemical industry, where high abrasion occurs due to solids.

### FEATURES

- High abrasion resistance
- Good chemical resistance
- Good dry temperature stability
- Outstanding adhesion to polymer coatings based on Bisphenol-A vinyl ester resins
- Application by spraying

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are coatings based on Bisphenol-A vinyl ester resins. Components to be coated shall be constructed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

The subsequent layer of coating can be applied onto the previously applied layer straightforward without surface preparation. But the time interval between the consecutive coatings should not exceed a maximum of 72 hours. If this condition is not met, the surface of the previous layer needs to be roughened by abrasive blasting.

### ENVIRONMENTAL CONDITIONS

Throughout the coating process, the temperatures of the substrate and coating materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### APPLICATION

During the application of the product, the application instruction must always be observed.

**COROFLAKE 24 AR TC** topcoat is only applied using an airless air spray system.

**Note:** During application, the lined surface should be shaded from direct or indirect sunlight whenever possible.

### MIXING RATIO

The primer and coating components are supplied in pre-measured units so that weighing or measuring of the components is kept to a minimum. After the unit has been mixed it shall be used within the specified pot life.

Coating	Parts by Weight	Parts by Volume
<b>COROFLAKE 24 AR TC</b>	100	100
<b>HARDENER No. 1 CLEAR</b>	2	2.38

### CONSUMPTION

Product	Thickness [µm]	Coverage [g/m <sup>2</sup> ]
<b>COROFLAKE 24 AR TC</b>	ca. 400 - 600	ca. 900 - 1100

The information about coverage is an average for spray applications. Actual coverage depends on the object geometry and the method of application. It can vary.

### POT LIFE / WORKING TIME [min]

Product	15°C	20°C	30°C
<b>COROFLAKE 24 AR TC</b>	ca. 90	ca. 60	ca. 30

### CLEANING

Clean all equipment with **SOLVENT T-100** immediately after use. Frequency of cleaning will depend upon amount applied, temperature and elapsed time, including any delays.

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# COROFLAKE 24 AR TC

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
COROFLAKE 24 AR TC	5 kg	590 2010
COROFLAKE 24 AR TC	20 kg	590 2000
HARDENER No. 1 CLEAR	0.1 kg	590 0181
HARDENER No. 1 CLEAR	0.4 kg	590 0019
SOLVENT T-100	4 kg	590 0617
SOLVENT T-100	8 kg	590 0600

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
COROFLAKE 24 AR TC	5 - 20 °C	6 Months
HARDENER No. 1 CLEAR	5 - 20 °C	12 Months
SOLVENT T-100	5 - 25 °C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Abrasion	ASTM D4060	mg	55
Density (Mixture)	EN ISO 2811 (ASTM D1475)	g/cm <sup>3</sup>	1.23 ± 0.03
Hardness Barcol	EN 59 (ASTM D2583)	-	≥ 35
Min. Adhesion Strength Steel	EN ISO 4624 (ASTM D4541)	N/mm <sup>2</sup>	7
Test Voltage (earliest after 24 hours)	EN 14879-2	kV / 100µm DFT	0.5
Viscosity	EN ISO 2555 (ASTM D2196)	mPa·s	2750 ± 250
Linear Coefficient of Thermal Expansion	ISO 11359-2 (ASTM C531)	1/K	27-30 x 10 <sup>-6</sup>
Tensile Strength	EN ISO 527 (ASTM D638)	N/mm <sup>2</sup>	20
Max. Operating Temperature Liquids	-	°C	+70
Max. Operating Temperature Dry (Flue Gas)	-	°C	+120

**Note:** The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## COROFLAKE 24 LSE

### PRODUCT DESCRIPTION

**COROFLAKE 24 LSE** is a two-component, PTFE flake filled polymer coating based on a Novolac vinyl ester resin which has been designed especially for chemical plants and vessels where deposits must be avoided. By using PTFE flakes, **COROFLAKE 24 LSE** achieves excellent non-stick properties combined with good thermal and chemical resistance.

### COATING LAYERS CONSUMPTION

The coating system consists of the two-component **COROFLAKE 24 LSE** non-stick topcoat. The total applied DFT is approx. 500 µm per coat.

### FIELDS OF APPLICATION

**COROFLAKE 24 LSE** is applied as topcoat over polymer coatings based on Bisphenol-A vinyl ester resins to increase the non-stick properties. **COROFLAKE 24 LSE** is used mainly for the coating of components where deposits must be avoided (e.g. silos).

### FEATURES

- Low surface energy finish
- Reduces process deposit build-up on the surface
- Excellent chemical resistance to inorganic acids, lye and organic solvents
- Outstanding adhesion to polymer coatings based on Bisphenol-A vinyl ester resins
- Easily cleaned
- Application by spraying

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are coatings based on Bisphenol-A vinyl ester resins. Components to be coated shall be constructed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

The subsequent layer of coating can be applied onto the previously applied layer straightforward without surface preparation. But the time interval between the consecutive coatings should not exceed a maximum of 72 hours. If this condition is not met, the surface of the previous layer needs to be roughened by abrasive blasting.

### ENVIRONMENTAL CONDITIONS

Throughout the coating process, the temperatures of the substrate and coating materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### APPLICATION

During the application of the product, the application instruction must always be observed.

**COROFLAKE 24 LSE** topcoat is only applied using an airless air spray system.

**Note:** During application, the lined surface should be shaded from direct or indirect sunlight whenever possible.

### MIXING RATIO

The primer and coating components are supplied in pre-measured units so that weighing or measuring of the components is kept to a minimum. After the unit has been mixed it shall be used within the specified pot life.

Coating	Parts by Weight	Parts by Volume
<b>COROFLAKE 24 LSE</b>	100	100
<b>HARDENER No. 1 CLEAR</b>	2	2.19

### CONSUMPTION

Product	Thickness [µm]	Coverage [g/m <sup>2</sup> ]
<b>COROFLAKE 24 LSE</b>	ca. 500 - 700	ca. 900 - 1100

The information about coverage is an average for spray applications. Actual coverage depends on the object geometry and the method of application. It can vary.

### POT LIFE / WORKING TIME [min]

Product	15°C	20°C	30°C
<b>COROFLAKE 24 LSE</b>	ca. 90	ca. 60	ca. 30

### CLEANING

Clean all equipment with **SOLVENT T-100** immediately after use. Frequency of cleaning will depend upon amount applied, temperature and elapsed time, including any delays.

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# COROFLAKE 24 LSE

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
COROFLAKE 24 LSE	5 kg	590 1458
COROFLAKE 24 LSE	20 kg	590 1441
HARDENER No. 1 CLEAR	0.1 kg	590 0181
HARDENER No. 1 CLEAR	0.4 kg	590 0019
SOLVENT T-100	4 kg	590 0617
SOLVENT T-100	8 kg	590 0600

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
COROFLAKE 24 LSE	5 - 20 °C	6 Months
HARDENER No. 1 CLEAR	5 - 20 °C	12 Months
SOLVENT T-100	5 - 25 °C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Density (Mixture)	EN ISO 2811 (ASTM D1475)	g/cm <sup>3</sup>	1.09 ± 0.03
Modulus of Elasticity (Bend Test)	EN ISO 178 (ASTM D790)	N/mm <sup>2</sup>	3000 ± 500
Hardness Shore D	DIN ISO 7619 (ASTM D2240)	-	≥ 70
Min. Adhesion Strength Steel	EN ISO 4624 (ASTM D4541)	N/mm <sup>2</sup>	7
Test Voltage (earliest after 24 hours)	EN 14879-2	kV / 100µm DFT	0.5
Viscosity	EN ISO 2555 (ASTM D2196)	mPa·s	3250 ± 250
Linear Coefficient of Thermal Expansion	ISO 11359-2 (ASTM C531)	1/K	25-30 x 10 <sup>-6</sup>
Tensile Strength	EN ISO 527 (ASTM D638)	N/mm <sup>2</sup>	20
Max. Operating Temperature Liquids	-	°C	+65
Max. Operating Temperature Dry (Flue Gas)	-	°C	+120

**Note:** The indicated temperatures are dependent on the present load and may vary

Information given in the fact sheet above corresponds to the current knowledge available to us regarding our products at the time of its drafting and is intended as a guideline for informational purposes. However, because of the multiple possibilities regarding possible applications, processing and on site conditions, any information given in the fact sheet above is not legally binding, in particular, without being limited to, such information shall not be interpreted as a warranty of merchantability or of fitness for a particular purpose. Customer therefore is advised to conduct its own testing or make an inquiry with our technical department before ordering. We reserve the right to change the product at any time, in particular, without being limited to, minor changes because of advancements in technology. If by way of exception, the information given in the fact sheet above is incorporated by reference into any contract concluded with us under German Law, such information, shall only be interpreted as determining the specific requirements of the contractual products as set out in § 434 BGB (German Civil Code) and shall not be interpreted as constituting a guarantee of condition.

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# PRODUCT INFORMATION

## COROFLAKE 24 M

### PRODUCT DESCRIPTION

**COROFLAKE 24 M** is a combination of a fibreglass mat reinforced laminate lining with an inert flake filled topcoat, both based on a high chemical and thermal resistant Bisphenol-A vinyl ester resin. Due to the excellent mechanical properties, **COROFLAKE 24 M** can cover cracks up to 0.2 mm according to DIBt (German Institute for Construction Technology) guidelines.

### COATING LAYERS CONSUMPTION

The laminate lining consists of the two-component **COROFLAKE N PRIMER**, the three-component **LINING 65** basecoat, the two-component **LINING 65** reinforced layer with one 300 g/m<sup>2</sup> ECR-fibreglass mat as well as one 30 g/m<sup>2</sup> C-glass surface veil and at least two coats of the two-component **COROFLAKE 24** topcoat. The total applied DFT is based on the chemical and thermal load present and can be up to approx. 2.0 - 3.0 mm. If a high-voltage testing of the laminate lining on concrete is required, **COROFLAKE N PRIMER AS** must be used as primer instead.

### FIELDS OF APPLICATION

Due to its good crack bridging properties, **COROFLAKE 24 M** is ideal for use of concrete structures such as floors, vessels and pits. It is particularly suitable in flue gas desulphurisation plants according to the sea water process. Due to the excellent chemical resistance **COROFLAKE 24 M** can be also used in many other areas, such as bio gas plants or concrete silos.

### FEATURES

- Good chemical resistance
- Universal application
- Crack-bridging properties
- Outstanding adhesion to concrete
- Can be exposed to process conditions shortly after application

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of concrete, screed or plaster. Components to be coated shall be designed and manufactured in accordance with EN 14879-1. In addition, DIN 1045 must also be observed.

### SURFACE PRE-TREATMENT

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup> and minimum compressive strength of 25 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%.

### ENVIRONMENTAL CONDITIONS

Throughout the coating process, the temperatures of the substrate and coating materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### APPLICATION

During the application of the product, the application instruction must always be observed.

Trowel applies the basecoat onto the primed substrate at approx. 1.0 - 1.5 mm. Upon placement of the basecoat, the 300 g/m<sup>2</sup> ECR-fibreglass mat is pressed onto the surface and saturated by roller with resin mixture. Afterwards a 30 g/m<sup>2</sup> C-glass surface veil is pressed onto the surface and saturated by roller with resin mixture. Finally two coats of **COROFLAKE 24** are applied in DFT of 500 - 700 µm per coat as final topcoat. The **COROFLAKE 24** topcoat is applied using an airless air spray system or by rolling or brushing.

In case **COROFLAKE 24** is applied by brushing or rolling, additional coats may be required to achieve the required total DFT.

**Note:** During application, the lined surface should be shaded from direct or indirect sunlight whenever possible.

### MIXING RATIO

The primer and coating components are supplied in pre-measured units so that weighing or measuring of the components is kept to a minimum. After the unit has been mixed it shall be used within the specified pot life.

Primer	Parts by Weight	Parts by Volume
<b>COROFLAKE N PRIMER</b>	100	100
<b>HARDENER No. 1 CLEAR</b>	2	2.01

Basecoat	Parts by Weight	Parts by Volume
<b>LINING 65 RESIN</b>	100	100
<b>HARDENER No. 1 CLEAR</b>	2	2.09
<b>FILLER F1</b>	250	247.62

Laminate Layer	Parts by Weight	Parts by Volume
<b>LINING 65 RESIN</b>	100	100
<b>HARDENER No. 1 CLEAR</b>	2	2.09

Topcoat	Parts by Weight	Parts by Volume
<b>COROFLAKE 24</b>	100	100
<b>HARDENER No. 1 CLEAR / RED</b>	2	2.22

### CONSUMPTION

Layer	Product	Coverage [g/m <sup>2</sup> ]
Primer	<b>COROFLAKE N PRIMER</b>	ca. 300
Basecoat	<b>LINING 65 RESIN</b>	ca. 1000
	<b>FILLER F1</b>	ca. 2500
Laminate Layer	<b>LINING 65 RESIN</b>	ca. 660
	1 x ECR-fibreglass mat 300 g/m <sup>2</sup>	ca. 330
	1 x C-glass surface veil 30 g/m <sup>2</sup>	ca. 33
Topcoat	<b>COROFLAKE 24</b>	ca. 900 - 1100*

\* Per layer

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# COROFLAKE 24 M

## POT LIFE / WORKING TIME [min]

Product	15 °C	20 °C	30 °C
COROFLAKE N PRIMER	ca. 60	ca. 40	ca. 20
COROFLAKE 24	ca. 90	ca. 60	ca. 30

## RECOAT TIME (20 °C)

Product	Min. [h]	Max. [Days]
COROFLAKE N PRIMER	ca. 8	ca. 14
COROFLAKE 24	ca. 4	ca. 7

## CLEANING

Clean all equipment with **SOLVENT T-100** immediately after use.

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
C-glass surface veil 30 g/m <sup>2</sup>	227.5 m <sup>2</sup>	590 9800
<b>COROFLAKE 24</b>	5 kg	590 0538
<b>COROFLAKE 24</b>	20 kg	590 0064
<b>COROFLAKE N PRIMER</b>	5 kg	590 0480
<b>COROFLAKE N PRIMER</b>	20 kg	590 0040
ECR-fibreglass mat 300 g/m <sup>2</sup>	20 m <sup>2</sup>	590 0239
ECR-fibreglass mat 300 g/m <sup>2</sup>	50 m <sup>2</sup>	590 0246

Product	Size	Article No.
<b>FILLER F1</b>	25 kg	591 0140
<b>HARDENER No. 1 CLEAR</b>	0.1 kg	590 0181
<b>HARDENER No. 1 CLEAR</b>	0.4 kg	590 0019
<b>HARDENER No. 1 RED</b>	0.1 kg	590 0356
<b>HARDENER No. 1 RED</b>	0.4 kg	590 0112
<b>LINING 65 RESIN</b>	5 kg	590 0435
<b>LINING 65 RESIN</b>	20 kg	590 0411
<b>SOLVENT T-100</b>	4 kg	590 0617
<b>SOLVENT T-100</b>	8 kg	590 0600

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
<b>COROFLAKE 24</b>	5 - 20 °C	6 Months
<b>COROFLAKE N PRIMER</b>	5 - 20 °C	6 Months
<b>FILLER F1</b>	-	24 Months
<b>HARDENER No. 1 CLEAR</b>	5 - 20 °C	12 Months
<b>HARDENER No. 1 RED</b>	5 - 20 °C	12 Months
<b>LINING 65 RESIN</b>	5 - 20 °C	6 Months
<b>SOLVENT T-100</b>	5 - 25 °C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Abrasion	ASTM D4060	mg	92
Modulus of Elasticity (Bend Test)	EN ISO 178 (ASTM D790)	N/mm <sup>2</sup>	3650 ± 150
Hardness Barcol	EN 59 (ASTM D2583)	-	≥ 30
Min. Adhesion Strength Concrete	EN ISO 4624 (ASTM D7234)	N/mm <sup>2</sup>	1.5*
Test Voltage (earliest after 24 hours)	EN 14879-2	kV / 100µm DFT	0.5
Viscosity	EN ISO 2555 (ASTM D2196)	mPa·s	3250 ± 250
Linear Coefficient of Thermal Expansion	ISO 11359-2 (ASTM C531)	1/K	25-30 x 10 <sup>-6</sup>
Tensile Strength	EN ISO 527 (ASTM D638)	N/mm <sup>2</sup>	75
Max. Operating Temperature Liquids	-	°C	+75

\* Depending on the concrete strength

**Note:** The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## COROFLAKE 25

### PRODUCT DESCRIPTION

**COROFLAKE 25** is a two-component; vapour diffusion resistant, inert flake filled polymer coating based on a chemical and thermal resistant modified polyester resin. The parallel to the substrate oriented inert flakes provide an excellent diffusion barrier and thus ensure a long service life.

### COATING LAYERS CONSUMPTION

The coating system consists of the two-component **COROFLAKE N PRIMER** and at least two, generally three coats of the two-component **COROFLAKE 25** topcoat applied at approx. 500 - 700 µm DFT per coat, alternating in beige and pink colours. The total applied DFT is based on the chemical and thermal load present and can be up to 2.5 mm.

### FIELDS OF APPLICATION

**COROFLAKE 25** is suitable for corrosion protection in the chemical industry, metal processing industry and in waste water treatment plants.

### FEATURES

- Excellent permeation resistance
- Good chemical resistance to mineral acids, lye and salt solutions
- Outstanding adhesion to steel
- Application by spraying, brushing or rolling

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are steel components. Components to be coated shall be designed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

Surfaces to be coated must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht # 28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 70 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate.

### ENVIRONMENTAL CONDITIONS

Throughout the coating process, the temperatures of the substrate and coating materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### APPLICATION

During the application of the product, the application instruction must always be observed.

**COROFLAKE N PRIMER** and each **COROFLAKE 25** topcoat are applied to the substrate using an airless air spray system or by rolling or brushing.

In case **COROFLAKE 25** is applied by brushing or rolling, additional coats may be required to achieve the required total DFT.

**Note:** During application, the lined surface should be shaded from direct or indirect sunlight whenever possible.

### MIXING RATIO

The primer and coating components are supplied in pre-measured units so that weighing or measuring of the components is kept to a minimum. After the unit has been mixed it shall be used within the specified pot life.

Primer	Parts by Weight	Parts by Volume
<b>COROFLAKE N PRIMER</b>	100	100
<b>HARDENER No. 1 CLEAR</b>	2	2.01

Coating	Parts by Weight	Parts by Volume
<b>COROFLAKE 25</b>	100	100
<b>HARDENER No. 2 CLEAR</b>	1.5	2.24

### CONSUMPTION PER COAT

Product	Thickness [µm]	Coverage [g/m²]
<b>COROFLAKE N PRIMER</b>	covering	ca. 150
<b>COROFLAKE 25</b>	ca. 500 - 700	ca. 900 - 1100

The information about coverage is an average for spray applications. Actual coverage depends on the object geometry and the method of application. It can vary.

### POT LIFE / WORKING TIME [min]

Product	15°C	20°C	30°C
<b>COROFLAKE N PRIMER</b>	ca. 60	ca. 40	ca. 20
<b>COROFLAKE 25</b>	ca. 90	ca. 60	ca. 30

### RECOAT TIME (20°C)

Product	Min. [h]	Max. [Days]
<b>COROFLAKE N PRIMER</b>	ca. 8	ca. 14
<b>COROFLAKE 25</b>	ca. 4	ca. 3

### CLEANING

Clean all equipment with **SOLVENT T-100** immediately after use. Frequency of cleaning will depend upon amount applied, temperature and elapsed time, including any delays.

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# COROFLAKE 25

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
COROFLAKE 25	5 kg	590 0992
COROFLAKE 25	20 kg	590 0985
COROFLAKE N PRIMER	5 kg	590 0480
COROFLAKE N PRIMER	20 kg	590 0040
HARDENER No. 1 CLEAR	0.1 kg	590 0181
HARDENER No. 1 CLEAR	0.4 kg	590 0019
HARDENER No. 2 CLEAR	0.3 kg	590 1166
HARDENER No. 2 RED	0.3 kg	590 1355
SOLVENT T-100	4 kg	590 0617
SOLVENT T-100	8 kg	590 0600

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
COROFLAKE 25	5 - 20°C	6 Months
COROFLAKE N PRIMER	5 - 20°C	6 Months
HARDENER No. 1 CLEAR	5 - 20°C	12 Months
HARDENER No. 2 CLEAR	5 - 20°C	12 Months
HARDENER No. 2 RED	5 - 20°C	12 Months
SOLVENT T-100	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Abrasion	ASTM D4060	mg	78
Density (Mixture)	EN ISO 2811 (ASTM D1475)	g/cm <sup>3</sup>	1.18 ± 0.04
Modulus of Elasticity (Bend Test)	EN ISO 178 (ASTM D790)	N/mm <sup>2</sup>	3000 ± 500
Hardness Barcol	EN 59 (ASTM D2583)	-	≥ 35
Min. Adhesion Strength Steel	EN ISO 4624 (ASTM D4541)	N/mm <sup>2</sup>	7
Test Voltage (earliest after 24 hours)	EN 14879-2	kV / 100µm DFT	0.5
Viscosity	EN ISO 2555 (ASTM D2196)	mPa·s	3750 ± 250
Linear Coefficient of Thermal Expansion	ISO 11359-2 (ASTM C531)	1/K	27-30 x 10 <sup>-6</sup>
Water Vapour Permeability	ASTM E-96; Method E	perm-inch	0.0014
Tensile Strength	EN ISO 527 (ASTM D638)	N/mm <sup>2</sup>	18
Max. Operating Temperature Liquids	-	°C	+70
Max. Operating Temperature Dry (Flue Gas)	-	°C	+100

**Note:** The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## COROFLAKE 27

### PRODUCT DESCRIPTION

**COROFLAKE 27** is a two-component; vapour diffusion resistant, inert flake filled polymer coating based on a chemical and thermal resistant, flexibilized vinyl ester resin, which has been designed especially for extreme loads with high rates of temperature change. The parallel to the substrate oriented inert flakes provide an excellent diffusion barrier and thus ensure a long service life.

### COATING LAYERS CONSUMPTION

The coating system consists of the two-component **COROFLAKE S PRIMER** (steel) and at least two, generally three coats of the two-component **COROFLAKE 27** topcoat applied at approx. 400 - 600 µm DFT per coat, alternating in beige and pink colours. The total applied DFT is based on the chemical and thermal load present and can be up to 2.0 mm.

If **COROFLAKE 27** is applied to concrete, **COROFLAKE N PRIMER** or alternatively **COROFLAKE N PRIMER AS** must be used instead of **COROFLAKE S PRIMER**.

### FIELDS OF APPLICATION

**COROFLAKE 27** is used mainly for corrosion protection in mixing chambers, ducts and stacks of flue gas desulphurization plants, where frequent temperature changes may occur. **COROFLAKE 27** can also be used in other plant parts, where frequent temperature changes may occur.

### FEATURES

- Excellent thermal shock resistance
- Excellent permeation resistance
- Excellent chemical resistance
- Outstanding adhesion to steel and concrete
- Application by spraying, brushing or rolling

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of steel, concrete, screed or plaster. Components to be coated shall be designed and manufactured in accordance with EN 14879-1. For components made of concrete, screed or plaster DIN 1045 must also be observed.

### SURFACE PRE-TREATMENT

#### C-STEEL

Surfaces to be coated must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht # 28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 70 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate.

### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup> and minimum compressive strength of 25 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%.

### ENVIRONMENTAL CONDITIONS

Throughout the coating process, the temperatures of the substrate and coating materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### APPLICATION

During the application of the product, the application instruction must always be observed. **COROFLAKE S PRIMER**, **COROFLAKE N PRIMER** and the **COROFLAKE 27** topcoats are applied to the substrate using an airless air spray system or by rolling or brushing.

In case **COROFLAKE 27** is applied by brushing or rolling, additional coats may be required to achieve the required total DFT.

**Note:** During application, the lined surface should be shaded from direct or indirect sunlight whenever possible.

### MIXING RATIO

The primer and coating components are supplied in pre-measured units so that weighing or measuring of the components is kept to a minimum. After the unit has been mixed it shall be used within the specified pot life.

Primer	Parts by Weight	Parts by Volume
<b>COROFLAKE N PRIMER</b>	100	100
<b>HARDENER No. 1 CLEAR</b>	2	2.11
<b>COROFLAKE S PRIMER</b>	100	100
<b>HARDENER No. 1 CLEAR</b>	2	2.11
Coating	Parts by Weight	Parts by Volume
<b>COROFLAKE 27</b>	100	100
<b>HARDENER No. 1 CLEAR</b>	2	2.26

### CONSUMPTION PER COAT

Product	Thickness [µm]	Coverage [g/m <sup>2</sup> ]
<b>COROFLAKE S PRIMER</b>	covering	ca. 150 (steel)
<b>COROFLAKE N PRIMER</b>	covering	ca. 300 (concrete)
<b>COROFLAKE 27</b>	ca. 400 - 600	ca. 800 - 1000

The information about coverage is an average for spray applications. Actual coverage depends on the object geometry and the method of application. It can vary.

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# COROFLAKE 27

## POT LIFE / WORKING TIME [min]

Product	15°C	20°C	30°C
COROFLAKE N PRIMER	ca. 60	ca. 40	ca. 20
COROFLAKE S PRIMER	ca. 60	ca. 40	ca. 20
COROFLAKE 27	ca. 90	ca. 60	ca. 30

## RECOAT TIME (20°C)

Product	Min. [h]	Max. [Days]
COROFLAKE N PRIMER	ca. 8	ca. 14
COROFLAKE S PRIMER	ca. 6	ca. 7
COROFLAKE 27	ca. 4	ca. 3

## CLEANING

Clean all equipment with **SOLVENT T-100** immediately after use. Frequency of cleaning will depend upon amount applied, temperature and elapsed time, including any delays.

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
COROFLAKE 27	5 kg	590 0730
COROFLAKE 27	20 kg	590 0740

Product	Size	Article No.
COROFLAKE N PRIMER	5 kg	590 0480
COROFLAKE N PRIMER	20 kg	590 0040
COROFLAKE S PRIMER	5 kg	590 0167
COROFLAKE S PRIMER	20 kg	590 0033
HARDENER No. 1 CLEAR	0.1 kg	590 0181
HARDENER No. 1 CLEAR	0.4 kg	590 0019
HARDENER No. 1 RED	0.1 kg	590 0356
HARDENER No. 1 RED	0.4 kg	590 0112
SOLVENT T-100	4 kg	590 0617
SOLVENT T-100	8 kg	590 0600

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
COROFLAKE 27	5 - 20°C	6 Months
COROFLAKE N PRIMER	5 - 20°C	6 Months
COROFLAKE S PRIMER	5 - 20°C	6 Months
HARDENER No. 1 CLEAR	5 - 20°C	12 Months
HARDENER No. 1 RED	5 - 20°C	12 Months
SOLVENT T-100	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Abrasion	ASTM D4060	mg	92
Density (Mixture)	EN ISO 2811 (ASTM D1475)	g/cm <sup>3</sup>	1.16 ± 0.02
Modulus of Elasticity (Bend Test)	EN ISO 178 (ASTM D790)	N/mm <sup>2</sup>	3000 ± 500
Hardness Barcol	EN 59 (ASTM D2583)	-	≥ 30
Min. Adhesion Strength Concrete	EN ISO 4624 (ASTM D7234)	N/mm <sup>2</sup>	1.5*
Min. Adhesion Strength Steel	EN ISO 4624 (ASTM D4541)	N/mm <sup>2</sup>	7
Test Voltage (earliest after 24 hours)	EN 14879-2	kV / 100µm DFT	0.5 (steel)
Viscosity	EN ISO 2555 (ASTM D2196)	mPa·s	3000 ± 250
Linear Coefficient of Thermal Expansion	ISO 11359-2 (ASTM C531)	1/K	27-30 x 10 <sup>-6</sup>
Water Vapour Permeability	ASTM E-96; Method E	perm-inch	0.0014
Tensile Strength	EN ISO 527 (ASTM D638)	N/mm <sup>2</sup>	48
Max. Operating Temperature Liquids	-	°C	+70
Max. Operating Temperature Dry (Flue Gas)	-	°C	+180

\* Depending on the concrete strength

**Note:** The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## COROFLAKE 28

### PRODUCT DESCRIPTION

**COROFLAKE 28** is a two-component; vapour diffusion resistant, C-glass flake filled polymer coating based on a chemical and thermal resistant Novolac vinyl ester resin, which has been designed especially for flue gas desulphurization systems.

The parallel to the substrate oriented C-glass flakes provide an excellent diffusion barrier and thus ensure a long service life.

### COATING LAYERS CONSUMPTION

The coating system consists of the two-component **COROFLAKE S PRIMER** and at least two, generally three coats of the two-component **COROFLAKE 28** topcoat applied at approx. 400 - 600 µm DFT per coat, alternating in beige and pink colours. The total applied DFT is based on the chemical and thermal load present and can be up to 2.5 mm.

### FIELDS OF APPLICATION

**COROFLAKE 28** is used mainly in flue gas ducts, heat exchangers, stacks and gas pre-heaters of flue gas desulphurization plants. Furthermore it is also used successfully in other process plants.

### FEATURES

- High temperature stability up to +180°C
- Excellent permeation resistance
- Excellent chemical resistance
- Outstanding adhesion to steel
- Application by spraying, brushing or rolling
- Can be exposed to process conditions shortly after application

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are steel components. Components to be coated shall be designed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

Surfaces to be coated must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht # 28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 70 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate.

### ENVIRONMENTAL CONDITIONS

Throughout the coating process, the temperatures of the substrate and coating materials shall be maintained within the range specified by TIP TOP. All surfaces shall be main-

tained at a temperature at least 3K above the dew point in order to prevent condensation.

### APPLICATION

During the application of the product, the application instruction must always be observed. **COROFLAKE S PRIMER** and each **COROFLAKE 28** topcoat are applied to the substrate using an airless air spray system or by rolling or brushing. In case **COROFLAKE 28** is applied by brushing or rolling, additional coats may be required to achieve the required total DFT.

**Note:** During application, the lined surface should be shaded from direct or indirect sunlight whenever possible.

### MIXING RATIO

The primer and coating components are supplied in pre-measured units so that weighing or measuring of the components is kept to a minimum. After the unit has been mixed it shall be used within the specified pot life.

Primer	Parts by Weight	Parts by Volume
<b>COROFLAKE S PRIMER</b>	100	100
<b>HARDENER No. 1 CLEAR</b>	2	2.11

Coating	Parts by Weight	Parts by Volume
<b>COROFLAKE 28</b>	100	100
<b>HARDENER No. 1 CLEAR</b>	2	2.32

### CONSUMPTION PER COAT

Product	Thickness [µm]	Coverage [g/m²]
<b>COROFLAKE S PRIMER</b>	covering	ca. 150
<b>COROFLAKE 28</b>	ca. 400 - 600	ca. 800 - 1000

The information about coverage is an average for spray applications. Actual coverage depends on the object geometry and the method of application. It can vary.

### POT LIFE / WORKING TIME [min]

Product	15°C	20°C	30°C
<b>COROFLAKE S PRIMER</b>	ca. 60	ca. 40	ca. 20
<b>COROFLAKE 28</b>	ca. 90	ca. 60	ca. 30

### RECOAT TIME (20°C)

Product	Min. [h]	Max. [Days]
<b>COROFLAKE S PRIMER</b>	ca. 6	ca. 7
<b>COROFLAKE 28</b>	ca. 4	ca. 3

### CLEANING

Clean all equipment with **SOLVENT T-100** immediately after use. Frequency of cleaning will depend upon amount applied, temperature and elapsed time, including any delays.

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# COROFLAKE 28

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
COROFLAKE 28	5 kg	590 0552
COROFLAKE 28	20 kg	590 0071
COROFLAKE S PRIMER	5 kg	590 0167
COROFLAKE S PRIMER	20 kg	590 0033
HARDENER No. 1 CLEAR	0.1 kg	590 0181
HARDENER No. 1 CLEAR	0.4 kg	590 0019
HARDENER No. 1 RED	0.1 kg	590 0356
HARDENER No. 1 RED	0.4 kg	590 0112
SOLVENT T-100	4 kg	590 0617
SOLVENT T-100	8 kg	590 0600

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
COROFLAKE 28	5 - 20°C	5 Months
COROFLAKE S PRIMER	5 - 20°C	6 Months
HARDENER No. 1 CLEAR	5 - 20°C	12 Months
HARDENER No. 1 RED	5 - 20°C	12 Months
SOLVENT T-100	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Abrasion	ASTM D4060	mg	90
Density (Mixture)	EN ISO 2811 (ASTM D1475)	g/cm <sup>3</sup>	1.20 ± 0.04
Modulus of Elasticity (Bend Test)	EN ISO 178 (ASTM D790)	N/mm <sup>2</sup>	4000 ± 500
Hardness Barcol	EN 59 (ASTM D2583)	-	35
Min. Adhesion Strength Steel	EN ISO 4624 (ASTM D4541)	N/mm <sup>2</sup>	7
Test Voltage (earliest after 24 hours)	EN 14879-2	kV / 100µm DFT	0.5
Viscosity	EN ISO 2555 (ASTM D2196)	mPa·s	2550 ± 250
Linear Coefficient of Thermal Expansion	ISO 11359-2 (ASTM C531)	1/K	27-30 x 10 <sup>-6</sup>
Water Vapour Permeability	ASTM E-96; Method E	perm-inch	0.001
Tensile Strength	EN ISO 527 (ASTM D638)	N/mm <sup>2</sup>	40
Max. Operating Temperature Liquids	-	°C	+70
Max. Operating Temperature Dry (Flue Gas)	-	°C	+180
Short-term Operating Temperature Dry (Flue Gas)	-	°C	+200

**Note:** The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## COROFLAKE 28 AR TC

### PRODUCT DESCRIPTION

**COROFLAKE 28 AR TC** is a two-component, high abrasion resistant polymer coating based on a Novolac vinyl ester resin which has been designed especially for chemical plants and vessels where abrasion must be avoided. By using special fillers, **COROFLAKE 28 AR TC** achieves excellent abrasion resistance combined with good thermal and chemical resistance.

### COATING LAYERS CONSUMPTION

The coating system consists of the two-component **COROFLAKE 28 AR TC** topcoat. The total applied DFT is approx. 500 µm per coat.

### FIELDS OF APPLICATION

**COROFLAKE 28 AR TC** is applied as topcoat over polymer coatings based on Novolac vinyl ester resins to increase the abrasion resistance. **COROFLAKE 28 AR TC** is used mainly in plants and storage vessels in the chemical industry, where high abrasion occurs due to solids.

### FEATURES

- High abrasion resistance
- Good chemical resistance
- High dry temperature stability
- Outstanding adhesion to polymer coatings based on Novolac vinyl ester resins
- Application by spraying

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are coatings based on Novolac vinyl ester resins. Components to be coated shall be designed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

The subsequent layer of coating can be applied onto the previously applied layer straightforward without surface preparation. But the time interval between the consecutive coatings should not exceed a maximum of 72 hours. If this condition is not met, the surface of the previous layer needs to be roughened by abrasive blasting.

### ENVIRONMENTAL CONDITIONS

Throughout the coating process, the temperatures of the substrate and coating materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### APPLICATION

During the application of the product, the application instruction must always be observed.

**COROFLAKE 28 AR TC** topcoat is only applied using an airless air spray system.

**Note:** During application, the lined surface should be shaded from direct or indirect sunlight whenever possible.

### MIXING RATIO

The primer and coating components are supplied in pre-measured units so that weighing or measuring of the components is kept to a minimum. After the unit has been mixed it shall be used within the specified pot life.

Coating	Parts by Weight	Parts by Volume
<b>COROFLAKE 28 AR TC</b>	100	100
<b>HARDENER No. 1 CLEAR</b>	2	2.51

### CONSUMPTION

Product	Thickness [µm]	Coverage [g/m <sup>2</sup> ]
<b>COROFLAKE 28 AR TC</b>	ca. 400 - 600	ca. 900 - 1100

The information about coverage is an average for spray applications. Actual coverage depends on the object geometry and the method of application. It can vary.

### POT LIFE / WORKING TIME [min]

Product	15°C	20°C	30°C
<b>COROFLAKE 28 AR TC</b>	ca. 90	ca. 60	ca. 30

### CLEANING

Clean all equipment with **SOLVENT T-100** immediately after use. Frequency of cleaning will depend upon amount applied, temperature and elapsed time, including any delays.

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# COROFLAKE 28 AR TC

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
COROFLAKE 28 AR TC	5 kg	590 1180
COROFLAKE 28 AR TC	20 kg	590 1173
HARDENER No. 1 CLEAR	0.1 kg	590 0181
HARDENER No. 1 CLEAR	0.4 kg	590 0019
SOLVENT T-100	4 kg	590 0617
SOLVENT T-100	8 kg	590 0600

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
COROFLAKE 28 AR TC	5 - 20°C	4 Months
HARDENER No. 1 CLEAR	5 - 20°C	12 Months
SOLVENT T-100	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Abrasion	ASTM D4060	mg	55
Density (Mixture)	EN ISO 2811 (ASTM D1475)	g/cm <sup>3</sup>	1.30 ± 0.02
Modulus of Elasticity (Bend Test)	EN ISO 178 (ASTM D790)	N/mm <sup>2</sup>	4000 ± 500
Hardness Barcol	EN 59 (ASTM D2583)	-	35
Min. Adhesion Strength Steel	EN ISO 4624 (ASTM D4541)	N/mm <sup>2</sup>	7
Test Voltage (earliest after 24 hours)	EN 14879-2	kV / 100µm DFT	0.5
Viscosity	EN ISO 2555 (ASTM D2196)	mPa·s	2750 ± 250
Linear Coefficient of Thermal Expansion	ISO 11359-2 (ASTM C531)	1/K	27-30 x 10 <sup>-6</sup>
Tensile Strength	EN ISO 527 (ASTM D638)	N/mm <sup>2</sup>	40
Max. Operating Temperature Liquids	-	°C	+70
Max. Operating Temperature Dry (Flue Gas)	-	°C	+180
Short-term Operating Temperature Dry (Flue Gas)	-	°C	+200

**Note:** The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## COROFLAKE 29

### PRODUCT DESCRIPTION

**COROFLAKE 29** is a two-component; vapour diffusion resistant, C-glass flake filled polymer coating based on a chemical and thermal resistant Novolac vinyl ester resin, which has been designed especially for flue gas desulphurization plants where very high temperatures may occur. **COROFLAKE 29** is the ideal corrosion protection, when a high chemical resistance combined with a very high temperature resistance is required. The parallel to the substrate oriented C-glass flakes provide an excellent diffusion barrier and thus ensure a long service life.

### COATING LAYERS CONSUMPTION

The coating system consists of the two-component **COROFLAKE S PRIMER** and three coats of the two-component **COROFLAKE 29** topcoat applied at approx. 500 - 700 µm DFT per coat, alternating in beige and pink colours. The total applied DFT is based on the chemical and thermal load present and can be up to 2.5 mm.

### FIELDS OF APPLICATION

**COROFLAKE 29** is mainly used in gas pre-heaters, heat exchangers, stacks and flue gas ducts of flue gas desulphurization plants.

### FEATURES

- Excellent temperature stability up to +230°C
- Excellent permeation resistance
- Excellent chemical resistance to highly concentrated hydrochloric and sulphuric acid
- Outstanding adhesion to steel
- Application by spraying, brushing or rolling
- Can be exposed to process conditions shortly after application

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are steel components. Components to be coated shall be designed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

Surfaces to be coated must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht # 28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 70 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate.

### ENVIRONMENTAL CONDITIONS

Throughout the coating process, the temperatures of the substrate and coating materials shall be maintained within

the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### APPLICATION

During the application of the product, the application instruction must always be observed.

**COROFLAKE T PRIMER** and each **COROFLAKE 29** topcoat are applied to the substrate using an airless air spray system or by rolling or brushing.

In case **COROFLAKE 29** is applied by brushing or rolling, additional coats may be required to achieve the required total DFT.

**Note:** During application, the lined surface should be shaded from direct or indirect sunlight whenever possible.

### MIXING RATIO

The primer and coating components are supplied in pre-measured units so that weighing or measuring of the components is kept to a minimum. After the unit has been mixed it shall be used within the specified pot life.

Primer	Parts by Weight	Parts by Volume
<b>COROFLAKE T PRIMER</b>	100	100
<b>HARDENER No. 1 CLEAR</b>	2	2.11

Coating	Parts by Weight	Parts by Volume
<b>COROFLAKE 29</b>	100	100
<b>HARDENER No. 1 CLEAR</b>	2	2.26

### CONSUMPTION PER COAT

Product	Thickness [µm]	Coverage [g/m²]
<b>COROFLAKE T PRIMER</b>	covering	ca. 150
<b>COROFLAKE 29</b>	ca. 400 - 600	ca. 800 - 1000

The information about coverage is an average for spray applications. Actual coverage depends on the object geometry and the method of application. It can vary.

### POT LIFE / WORKING TIME [min]

Product	15°C	20°C	30°C
<b>COROFLAKE T PRIMER</b>	ca. 60	ca. 50	ca. 30
<b>COROFLAKE 29</b>	ca. 90	ca. 60	ca. 30

### RECOAT TIME (20°C)

Product	Min. [h]	Max. [Days]
<b>COROFLAKE T PRIMER</b>	ca. 4	ca. 3
<b>COROFLAKE 29</b>	ca. 4	ca. 3

### CLEANING

Clean all equipment with **SOLVENT T-100** immediately after use. Frequency of cleaning will depend upon amount applied, temperature and elapsed time, including any delays.

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# COROFLAKE 29

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
COROFLAKE 29	5 kg	590 0460
COROFLAKE 29	20 kg	590 0470
COROFLAKE T PRIMER	5 kg	590 3035
COROFLAKE T PRIMER	20 kg	590 3033
HARDENER No. 1 CLEAR	0.1 kg	590 0181
HARDENER No. 1 CLEAR	0.4 kg	590 0019
HARDENER No. 1 RED	0.1 kg	590 0356
HARDENER No. 1 RED	0.4 kg	590 0112
SOLVENT T-100	4 kg	590 0617
SOLVENT T-100	8 kg	590 0600

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
COROFLAKE 29	5 - 20°C	4 Months
COROFLAKE T PRIMER	5 - 20°C	4 Months
HARDENER No. 1 CLEAR	5 - 20°C	12 Months
HARDENER No. 1 RED	5 - 20°C	12 Months
SOLVENT T-100	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Abrasion	ASTM D4060	mg	90
Density (Mixture)	EN ISO 2811 (ASTM D1475)	g/cm <sup>3</sup>	1.17 ± 0.02
Modulus of Elasticity (Bend Test)	EN ISO 178 (ASTM D790)	N/mm <sup>2</sup>	6500 ± 500
Hardness Barcol	EN 59 (ASTM D2583)	-	≥ 30
Min. Adhesion Strength Steel	EN ISO 4624 (ASTM D4541)	N/mm <sup>2</sup>	7
Test Voltage (earliest after 24 hours)	EN 14879-2	kV / 100µm DFT	0.5
Viscosity	EN ISO 2555 (ASTM D2196)	mPa·s	3250 ± 250
Linear Coefficient of Thermal Expansion	ISO 11359-2 (ASTM C531)	1/K	27-30 x 10 <sup>-6</sup>
Water Vapour Permeability	ASTM E-96; Method E	perm-inch	0.001
Tensile Strength	EN ISO 527 (ASTM D638)	N/mm <sup>2</sup>	25
Max. Operating Temperature Liquids	-	°C	+70
Max. Operating Temperature Dry (Flue Gas)	-	°C	+230

**Note:** The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## COROFLAKE 34

### PRODUCT DESCRIPTION

**COROFLAKE 34** is a two-component, C-glass flake filled polymer coating based on a chemical resistant Bisphenol-A vinyl ester resin. Due to its excellent chemical resistance, **COROFLAKE 34** can be used universally in almost all branches of industry. The parallel to the substrate oriented C-glass flakes provide an excellent diffusion barrier and thus ensure a long service life.

### COATING LAYERS CONSUMPTION

The coating system consists of the two-component **COROFLAKE N PRIMER** and at least two coats of the two-component **COROFLAKE 34** topcoat applied at approx. 400 - 600 µm DFT per coat, alternating in beige and pink colours. The total applied DFT is based on the chemical and thermal load present and can be up to 2.5 mm.

### FIELDS OF APPLICATION

**COROFLAKE 34** is suitable for the protection against acids, diluted lye and in particular to hypochlorite solutions. Due to its excellent chemical resistance, **COROFLAKE 34** can be used universally in almost all industries.

### FEATURES

- Excellent permeation resistance
- Excellent chemical resistance to highly concentrated hydrochloric and sulphuric acid
- Universal application
- Outstanding adhesion to steel
- Application by spraying, brushing or rolling
- Can be exposed to process conditions shortly after application

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are steel components. Components to be coated shall be designed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

Surfaces to be coated must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht # 28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 70 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate.

### ENVIRONMENTAL CONDITIONS

Throughout the coating process, the temperatures of the substrate and coating materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### APPLICATION

During the application of the product, the application instruction must always be observed.

**COROFLAKE N PRIMER** and each **COROFLAKE 34** topcoat are applied to the substrate using an airless air spray system or by rolling or brushing.

In case **COROFLAKE 34** is applied by brushing or rolling, additional coats may be required to achieve the required total DFT.

**Note:** During application, the lined surface should be shaded from direct or indirect sunlight whenever possible.

### MIXING RATIO

The primer and coating components are supplied in pre-measured units so that weighing or measuring of the components is kept to a minimum. After the unit has been mixed it shall be used within the specified pot life.

Primer	Parts by Weight	Parts by Volume
<b>COROFLAKE N PRIMER</b>	100	100
<b>HARDENER No. 1 CLEAR</b>	2	2.01

Coating	Parts by Weight	Parts by Volume
<b>COROFLAKE 34</b>	100	100
<b>HARDENER No. 1 CLEAR</b>	2	2.26

### CONSUMPTION PER COAT

Product	Thickness [µm]	Coverage [g/m²]
<b>COROFLAKE N PRIMER</b>	covering	ca. 150
<b>COROFLAKE 34</b>	ca. 400 - 600	ca. 800 - 1000

The information about coverage is an average for spray applications. Actual coverage depends on the object geometry and the method of application. It can vary.

### POT LIFE / WORKING TIME [min]

Product	15°C	20°C	30°C
<b>COROFLAKE N PRIMER</b>	ca. 60	ca. 40	ca. 20
<b>COROFLAKE 34</b>	ca. 90	ca. 60	ca. 30

### RECOAT TIME (20°C)

Product	Min. [h]	Max. [Days]
<b>COROFLAKE N PRIMER</b>	ca. 8	ca. 14
<b>COROFLAKE 34</b>	ca. 4	ca. 3

### CLEANING

Clean all equipment with **SOLVENT T-100** immediately after use. Frequency of cleaning will depend upon amount applied, temperature and elapsed time, including any delays.

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# COROFLAKE 34

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
COROFLAKE 34	5 kg	590 1317
COROFLAKE 34	20 kg	590 1300
COROFLAKE N PRIMER	5 kg	590 0480
COROFLAKE N PRIMER	20 kg	590 0040
HARDENER No. 1 CLEAR	0.1 kg	590 0181
HARDENER No. 1 CLEAR	0.4 kg	590 0019
HARDENER No. 1 RED	0.1 kg	590 0356
HARDENER No. 1 RED	0.4 kg	590 0112
SOLVENT T-100	4 kg	590 0617
SOLVENT T-100	8 kg	590 0600

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
COROFLAKE 34	5 - 20°C	6 Months
COROFLAKE N PRIMER	5 - 20°C	6 Months
HARDENER No. 1 CLEAR	5 - 20°C	12 Months
HARDENER No. 1 RED	5 - 20°C	12 Months
SOLVENT T-100	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Abrasion	ASTM D4060	mg	90
Density (Mixture)	EN ISO 2811 (ASTM D1475)	g/cm <sup>3</sup>	1.17 ± 0.03
Modulus of Elasticity (Bend Test)	EN ISO 178 (ASTM D790)	N/mm <sup>2</sup>	3000 ± 500
Hardness Barcol	EN 59 (ASTM D2583)	-	≥ 30
Min. Adhesion Strength Steel	EN ISO 4624 (ASTM D4541)	N/mm <sup>2</sup>	7
Test Voltage (earliest after 24 hours)	EN 14879-2	kV / 100µm DFT	0.5
Viscosity	EN ISO 2555 (ASTM D2196)	mPa·s	2750 ± 250
Linear Coefficient of Thermal Expansion	ISO 11359-2 (ASTM C531)	1/K	27-30 x 10 <sup>-6</sup>
Water Vapour Permeability	ASTM E-96; Method E	perm-inch	0.0012
Max. Operating Temperature Liquids	-	°C	+75
Max. Operating Temperature Dry (Flue Gas)	-	°C	+120

**Note:** The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## COROFLAKE 60

### PRODUCT DESCRIPTION

**COROFLAKE 60** is a two-component, inert flake filled polymer coating based on a polyamid-epoxy resin. The inert flake fillers are oriented parallel to the substrate surface to form a high level of protection against permeation and ensure a long service life. Due to the adduct curing of **COROFLAKE 60** a moisture compatibility and a curing at temperatures of min. +3°C can be achieved.

### COATING LAYERS CONSUMPTION

The coating system consists of the two-component **COROFLAKE 68 PRIMER** and at least two coats of the two-component **COROFLAKE 60** topcoat applied at approx. 200 µm DFT per coat.

### FIELDS OF APPLICATION

**COROFLAKE 60** is used both for the protection of concrete and steel. **COROFLAKE 60** is mainly used in steel tanks and concrete pits. Furthermore, **COROFLAKE 60** is used for the corrosion protection of walls and construction components in industrial plants

### FEATURES

- Excellent chemical resistance to lye and diluted acids
- Easy Processing
- Good moisture compatible
- Good permeation resistance
- Application by spraying, brushing or rolling
- Can be exposed to process conditions shortly after application

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of steel, concrete, screed or plaster. Components to be coated shall be designed and manufactured in accordance with EN 14879-1. For components made of concrete, screed or plaster DIN 1045 must also be observed.

### SURFACE PRE-TREATMENT

#### C-STEEL

Surfaces to be coated must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht # 28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 70 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate.

#### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup> and minimum compressive strength

of 25 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%.

### ENVIRONMENTAL CONDITIONS

Throughout the coating process, the temperatures of the substrate and coating materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### APPLICATION

During the application of the product, the application instruction must always be observed.

**COROFLAKE 68 PRIMER** and each **COROFLAKE 60** topcoat are applied to the substrate using an airless air spray system or by rolling or brushing.

In case **COROFLAKE 60** is applied by brushing or rolling, additional coats may be required to achieve the required total DFT.

**Note:** During application, the lined surface should be shaded from direct or indirect sunlight whenever possible. In atmospheric exposure coatings based on epoxy resins have the tendency to chalking with time.

### MIXING RATIO

The primer and coating components are supplied in pre-measured units so that weighing or measuring of the components is kept to a minimum. After the unit has been mixed it shall be used within the specified pot life.

Primer	Parts by Weight	Parts by Volume
<b>COROFLAKE 68 PRIMER</b>	100	100
<b>HARDENER No. 4</b>	30	33.69

Coating	Parts by Weight	Parts by Volume
<b>COROFLAKE 60 COMP. A</b>	100	100
<b>COROFLAKE 60 COMP. B</b>	75	75.63

### CONSUMPTION PER COAT

Product	Thickness [µm]	Coverage [g/m <sup>2</sup> ]
<b>COROFLAKE 68 PRIMER</b>	covering	ca. 150 (steel)
<b>COROFLAKE 68 PRIMER</b>	covering	ca. 300 (concrete)
<b>COROFLAKE 60</b>	ca. 200	ca. 300

The information about coverage is an average for spray applications. Actual coverage depends on the object geometry and the method of application. It can vary.

### POT LIFE / WORKING TIME [min]

Product	15°C	20°C	30°C
<b>COROFLAKE 68 PRIMER</b>	ca. 120	ca. 60	ca. 30
<b>COROFLAKE 60</b>	ca. 120	ca. 60	ca. 30

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# COROFLAKE 60

## RECOAT TIME (20°C)

Product	Min. [h]	Max. [Days]
COROFLAKE 68 PRIMER	ca. 12	ca. 7
COROFLAKE 60	ca. 4	ca. 7

## CLEANING

Clean all equipment with **SOLVENT T-100** immediately after use. Frequency of cleaning will depend upon amount applied, temperature and elapsed time, including any delays.

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
COROFLAKE 60 COMP. A	12 kg	590 0648
COROFLAKE 60 COMP. B	9 kg	590 0916
COROFLAKE 68 PRIMER	12 kg	590 0851
HARDENER No. 4	3.6 kg	590 0875
SOLVENT T-100	4 kg	590 0617
SOLVENT T-100	8 kg	590 0600

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
COROFLAKE 60 COMP. A	5 - 25°C	12 Months
COROFLAKE 60 COMP. B	5 - 25°C	12 Months
COROFLAKE 68 PRIMER	5 - 25°C	12 Months
HARDENER No. 4	5 - 25°C	12 Months
SOLVENT T-100	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Abrasion	ASTM D4060	mg	100
Density (Mixture)	EN ISO 2811 (ASTM D1475)	g/cm <sup>3</sup>	COMP. A: 1.20 ± 0.04 / COMP. B: 1.19 ± 0.02
Modulus of Elasticity (Bend Test)	EN ISO 178 (ASTM D790)	N/mm <sup>2</sup>	3250 ± 250
Hardness Barcol	EN 59 (ASTM D2583)	-	35
Min. Adhesion Strength Concrete	EN ISO 4624 (ASTM D7234)	N/mm <sup>2</sup>	1.5*
Min. Adhesion Strength Steel	EN ISO 4624 (ASTM D4541)	N/mm <sup>2</sup>	≥ 10
Test Voltage (earliest after 24 hours)	EN 14879-2	kV / 100µm DFT	0.5 (steel)
Viscosity	EN ISO 2555 (ASTM D2196)	mPa·s	COMP. A: 8000 ± 1000 / COMP. B: 7300 ± 1000
Linear Coefficient of Thermal Expansion	ISO 11359-2 (ASTM C531)	1/K	30 x 10 <sup>-6</sup>
Water Vapour Permeability	ASTM E-96; Method E	perm-inch	0.07
Tensile Strength	EN ISO 527 (ASTM D638)	N/mm <sup>2</sup>	30
Max. Operating Temperature Liquids	-	°C	+50
Max. Operating Temperature Dry (Flue Gas)	-	°C	+110

\* Depending on the concrete strength

**Note:** The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## COROFLAKE 200

### PRODUCT DESCRIPTION

**COROFLAKE 200** is a two-component, C-glass flake filled polymer coating based on a chemical and thermal resistant Novolac vinyl ester resin. The parallel to the substrate oriented C-glass flakes provide an excellent diffusion barrier and thus ensure a long service life.

### COATING LAYERS CONSUMPTION

The coating system consists of the two-component **COROFLAKE 68 PRIMER** and at least two coats of the two-component **COROFLAKE 200** topcoat applied at approx. 400 - 600 µm DFT per coat.

### FIELDS OF APPLICATION

**COROFLAKE 200** is used for the protection of steel structures which are exposed to acids and lye. Furthermore **COROFLAKE 200** is especially suitable for the steel constructions in hydraulic engineering field. **COROFLAKE 200** has been extensively and successfully tested in this regard and can be used as a reliable corrosion protection in cooling water pipes, pumps (water pumps), water tanks, pressure pipes and shut off valves. **COROFLAKE 200** stands out with its excellent resistance against concentrated sulfuric acid and 50% sodium hydroxide (caustic soda) solution besides many other chemicals.

### FEATURES

- Easy Processing
- Solvent free
- Excellent chemical resistance to lye and acids
- Outstanding adhesion to steel and concrete
- Application by spraying, brushing or rolling

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are steel components. Components to be coated shall be designed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

Surfaces to be coated must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht # 28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 70 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate.

### ENVIRONMENTAL CONDITIONS

Throughout the coating process, the temperatures of the substrate and coating materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### APPLICATION

During the application of the product, the application instruction must always be observed. **COROFLAKE 68 PRIMER** and each **COROFLAKE 200** topcoat are applied to the substrate using an airless air spray system or by rolling or brushing. In case **COROFLAKE 200** is applied by brushing or rolling, additional coats may be required to achieve the required total DFT.

**Note:** During application, the lined surface should be shaded from direct or indirect sunlight whenever possible. In atmospheric exposure coatings based on epoxy resins have the tendency to chalking with time.

### MIXING RATIO

The primer and coating components are supplied in pre-measured units so that weighing or measuring of the components is kept to a minimum. After the unit has been mixed it shall be used within the specified pot life.

Primer	Parts by Weight	Parts by Volume
<b>COROFLAKE 68 PRIMER</b>	100	100
<b>HARDENER No. 4</b>	30	33.69

Coating	Parts by Weight	Parts by Volume
<b>COROFLAKE 200 COMP. A</b>	100	100
<b>COROFLAKE 200 COMP. B</b>	21.4	29.81

### CONSUMPTION PER COAT

Product	Thickness [µm]	Coverage [g/m²]
<b>COROFLAKE 68 PRIMER</b>	covering	ca. 150
<b>COROFLAKE 200</b>	ca. 400 - 600	ca. 800 - 1000

The information about coverage is an average for spray applications. Actual coverage depends on the object geometry and the method of application. It can vary.

### POT LIFE / WORKING TIME [min]

Product	15°C	20°C	30°C
<b>COROFLAKE 68 PRIMER</b>	ca. 120	ca. 60	ca. 30
<b>COROFLAKE 200</b>	ca. 60	ca. 40	ca. 20

### RECOAT TIME (20°C)

Product	Min. [h]	Max. [Days]
<b>COROFLAKE 68 PRIMER</b>	ca. 12	ca. 7
<b>COROFLAKE 200</b>	ca. 4	ca. 2

### CLEANING

Clean all equipment with **SOLVENT T-100** immediately after use. Frequency of cleaning will depend upon amount applied, temperature and elapsed time, including any delays.

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# COROFLAKE 200

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
COROFLAKE 200 COMP. A	14 kg	590 0710
COROFLAKE 200 COMP. B	3 kg	590 0796
COROFLAKE 68 PRIMER	12 kg	590 0851
HARDENER No. 4	3.6 kg	590 0875
SOLVENT T-100	4 kg	590 0617
SOLVENT T-100	8 kg	590 0600

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
COROFLAKE 200 COMP. A	5 - 25°C	12 Months
COROFLAKE 200 COMP. B	5 - 25°C	12 Months
COROFLAKE 68 PRIMER	5 - 25°C	12 Months
HARDENER No. 4	5 - 25°C	12 Months
SOLVENT T-100	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Density (Mixture)	EN ISO 2811 (ASTM D1475)	g/cm <sup>3</sup>	COMP. A: 1.20 ± 0.03 / COMP. B: 1.01 ± 0.03
Modulus of Elasticity (Bend Test)	EN ISO 178 (ASTM D790)	N/mm <sup>2</sup>	10000 ± 2000
Min. Adhesion Strength Steel	EN ISO 4624 (ASTM D4541)	N/mm <sup>2</sup>	7
Test Voltage (earliest after 24 hours)	EN 14879-2	kV / 100µm DFT	0.5
Viscosity	EN ISO 2555 (ASTM D2196)	mPa·s	COMP. A: 14000 ± 4000 / COMP. B: 800 ± 100
Linear Coefficient of Thermal Expansion	ISO 11359-2 (ASTM C531)	1/K	27-30 x 10 <sup>-6</sup>
Tensile Strength	EN ISO 527 (ASTM D638)	N/mm <sup>2</sup>	23
Max. Operating Temperature Liquids	-	°C	+60
Max. Operating Temperature Dry (Flue Gas)	-	°C	+95

**Note:** The indicated temperatures are dependent on the present load and may vary

Information given in the fact sheet above corresponds to the current knowledge available to us regarding our products at the time of its drafting and is intended as a guideline for informational purposes. However, because of the multiple possibilities regarding possible applications, processing and on site conditions, any information given in the fact sheet above is not legally binding, in particular, without being limited to, such information shall not be interpreted as a warranty of merchantability or of fitness for a particular purpose. Customer therefore is advised to conduct its own testing or make an inquiry with our technical department before ordering. We reserve the right to change the product at any time, in particular, without being limited to, minor changes because of advancements in technology. If by way of exception, the information given in the fact sheet above is incorporated by reference into any contract concluded with us under German Law, such information, shall only be interpreted as determining the specific requirements of the contractual products as set out in § 434 BGB (German Civil Code) and shall not be interpreted as constituting a guarantee of condition.

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# PRODUCT INFORMATION

## COROFLAKE 200 M

### PRODUCT DESCRIPTION

**COROFLAKE 200 M** is a combination of a fibreglass mat reinforced laminate lining with an inert flake filled topcoat, both based on a high chemical and thermal resistant Bisphenol-A vinyl ester resin. Due to the excellent mechanical properties, **COROFLAKE 200 M** can cover cracks up to 0.3 mm according to DIBt (German Institute for Construction Technology) guidelines.

### COATING LAYERS CONSUMPTION

The laminate lining is consists of the two-component **COROFLAKE 68 PRIMER**, the three-component basecoat, the two-component reinforced layer with one 300 g/m<sup>2</sup> ECR-fibreglass mat as well as one 30 g/m<sup>2</sup> C-glass surface veil and at least two coats of the two component **COROFLAKE 200** topcoat. The total applied DFT is based on the chemical and thermal load present and can be up to approx. 2.0 - 3.0 mm. If a high-voltage testing of the laminate lining on concrete is required, **COROFLAKE N PRIMER AS** must be used as primer instead.

### FIELDS OF APPLICATION

Due to its good crack bridging properties, **COROFLAKE 200 M** is ideal for use of concrete structures such as floors, trenches and pits which are exposed to acids and lye. **COROFLAKE 200 M** is characterized by a very good resistance to concentrated sulphuric acid and 50% sodium hydroxide.

### FEATURES

- Easy to apply
- Solvent free
- Excellent chemical resistance to lye and acids
- Outstanding adhesion to steel and concrete

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of concrete, screed or plaster. Components to be coated shall be designed and manufactured in accordance with EN 14879-1. In addition, DIN 1045 must also be observed.

### SURFACE PRE-TREATMENT

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup> and minimum compressive strength of 25 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%.

### ENVIRONMENTAL CONDITIONS

Throughout the coating process, the temperatures of the substrate and coating materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### APPLICATION

During the application of the product, the application instruction must always be observed.

Trowel applies the basecoat onto the primed substrate at approx. 1.0 - 1.5 mm. Upon placement of the basecoat, the 300 g/m<sup>2</sup> ECR-fibreglass mat is pressed onto the surface and saturated by roller with resin mixture. Afterwards a 30 g/m<sup>2</sup> C-glass surface veil is pressed onto the surface and saturated by roller with resin mixture. Finally two coats of **COROFLAKE 200** are applied in DFT of 400 - 600 µm per coat as final topcoat. The **COROFLAKE 200** topcoat is applied using an airless air spray system or by rolling or brushing.

In case **COROFLAKE 200** is applied by brushing or rolling, additional coats may be required to achieve the required total DFT.

**Note:** During application, the lined surface should be shaded from direct or indirect sunlight whenever possible. In atmospheric exposure coatings based on epoxy resins have the tendency to chalking with time.

### MIXING RATIO

The primer and coating components are supplied in pre-measured units so that weighing or measuring of the components is kept to a minimum. After the unit has been mixed it shall be used within the specified pot life.

Primer	Parts by Weight	Parts by Volume
<b>COROFLAKE 68 PRIMER</b>	100	100
<b>HARDENER No. 4</b>	30	33.69

Basecoat	Parts by Weight	Parts by Volume
<b>COROFLAKE 68 PRIMER</b>	100	100
<b>HARDENER No. 4</b>	30	33.69
<b>FILLER F1</b>	240	260.57

Laminate Layer	Parts by Weight	Parts by Volume
<b>COROFLAKE 68 PRIMER</b>	100	100
<b>HARDENER No. 4</b>	30	33.69

Topcoat	Parts by Weight	Parts by Volume
<b>COROFLAKE 200 COMP. A</b>	100	100
<b>COROFLAKE 200 COMP. B</b>	21.4	29,81

### CONSUMPTION

Layer	Product	Coverage [g/m <sup>2</sup> ]
Primer	<b>COROFLAKE 68 PRIMER</b>	ca. 300
Basecoat	<b>COROFLAKE 68 PRIMER</b>	ca.1000
	<b>FILLER F1</b>	ca. 2400
Laminate Layer	<b>COROFLAKE 68 PRIMER</b>	ca. 660
	1 x ECR-fibreglass mat 300 g/m <sup>2</sup>	ca. 330
	1 x C-glass surface veil 30 g/m <sup>2</sup>	ca. 33
Topcoat	<b>COROFLAKE 200</b>	ca. 800 - 1000*

\* Per layer

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# COROFLAKE 200 M

## POT LIFE / WORKING TIME [min]

Product	15 °C	20 °C	30 °C
<b>COROFLAKE 68 PRIMER</b>	ca. 120	ca. 60	ca. 30
<b>COROFLAKE 200</b>	ca. 60	ca. 40	ca. 20

## RECOAT TIME (20 °C)

Product	Min. [h]	Max. [Days]
<b>COROFLAKE 68 PRIMER</b>	ca. 12	ca. 7
<b>COROFLAKE 200</b>	ca. 4	ca. 2

## CLEANING

Clean all equipment with **SOLVENT T-100** immediately after use. Frequency of cleaning will depend upon amount applied, temperature and elapsed time, including any delays.

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
C-glass surface veil 30 g/m <sup>2</sup>	227.5 m <sup>2</sup>	590 9800
<b>COROFLAKE 200 COMP. A</b>	14 kg	590 0710
<b>COROFLAKE 200 COMP. B</b>	3 kg	590 0796
<b>COROFLAKE 68 PRIMER</b>	12 kg	590 0851

Product	Size	Article No.
ECR-fibreglass mat 300 g/m <sup>2</sup>	20 m <sup>2</sup>	590 0239
ECR-fibreglass mat 300 g/m <sup>2</sup>	50 m <sup>2</sup>	590 0246
<b>FILLER F1</b>	25 kg	591 0140
<b>HARDENER No. 4</b>	3.6 kg	590 0875
<b>SOLVENT T-100</b>	4 kg	590 0617
<b>SOLVENT T-100</b>	8 kg	590 0600

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
<b>COROFLAKE 200 COMP. A</b>	5 - 25 °C	12 Months
<b>COROFLAKE 200 COMP. B</b>	5 - 25 °C	12 Months
<b>COROFLAKE 68 PRIMER</b>	5 - 25 °C	12 Months
<b>FILLER F1</b>	-	24 Months
<b>HARDENER No. 4</b>	5 - 25 °C	12 Months
<b>SOLVENT T-100</b>	5 - 25 °C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Modulus of Elasticity (Bend Test)	EN ISO 178 (ASTM D790)	N/mm <sup>2</sup>	5000 ± 1000
Hardness Barcol	EN 59 (ASTM D2583)	-	20 - 30
Min. Adhesion Strength Concrete	EN ISO 4624 (ASTM D7234)	N/mm <sup>2</sup>	1.5*
Test Voltage (earliest after 24 hours)	EN 14879-2	kV / 100µm DFT	0.5
Viscosity	EN ISO 2555 (ASTM D2196)	mPa·s	COMP. A: 14000 ± 4000 / COMP. B: 800 ± 100
Linear Coefficient of Thermal Expansion	ISO 11359-2 (ASTM C531)	1/K	27-30 x 10 <sup>-6</sup>
Tensile Strength	EN ISO 527 (ASTM D638)	N/mm <sup>2</sup>	65
Max. Operating Temperature Liquids	-	°C	+60
Max. Operating Temperature Dry (Flue Gas)	-	°C	+95

\* Depending on the concrete strength

**Note:** The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## COROFLAKE 650 FDA

### PRODUCT DESCRIPTION

**COROFLAKE 650 FDA** is a two-component polymer coating based on an epoxy resin. The coating system offers good chemical resistance to many media which are used in the food and beverage industry. **COROFLAKE 650 FDA** cures with a smooth surface.

### COATING LAYERS CONSUMPTION

The coating system consists of at least two coats of the two-component **COROFLAKE 650 FDA** topcoat applied at approx. 150 µm DFT per coat. On concrete surfaces the two-component **COROFLAKE 68 PRIMER** is additionally required.

### FIELDS OF APPLICATION

**COROFLAKE 650 FDA** is used especially for the protection of concrete and steel components which are exposed from mild to corrosive conditions. The coating composition of **COROFLAKE 650 FDA** complies to the FDA guideline 21 CFR 177.2420 and can be used in these areas. Typical applications are the corrosion protection of drinking water tanks, vessels in the food and beverage industry as well as components in the water treatment industry.

### APPROVALS

**COROFLAKE 650 FDA** complies with the Code of Federal Regulation (21 CFR § 175.300) of the Food and Drug Administration (FDA).

### FEATURES

- Suitable for food
- Complies with FDA guidelines
- Good chemical resistance
- Curing even at high humidity
- Application by spraying, brushing or rolling

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of steel, concrete, screed or plaster. Components to be coated shall be designed and manufactured in accordance with EN 14879-1. For components made of concrete, screed or plaster DIN 1045 must also be observed.

### SURFACE PRE-TREATMENT

#### C-STEEL

Surfaces to be coated must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht # 28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 70 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate.

### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup> and minimum compressive strength of 25 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%.

### ENVIRONMENTAL CONDITIONS

Throughout the coating process, the temperatures of the substrate and coating materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### APPLICATION

During the application of the product, the application instruction must always be observed.

**COROFLAKE 68 PRIMER** and each **COROFLAKE 650 FDA** topcoat are applied to the substrate using an airless air spray system or by rolling or brushing.

In case **COROFLAKE 650 FDA** is applied by brushing or rolling, additional coats may be required to achieve the required total DFT.

**Note:** During application, the lined surface should be shaded from direct or indirect sunlight whenever possible. In atmospheric exposure coatings based on epoxy resins have the tendency to chalking with time.

### MIXING RATIO

The primer and coating components are supplied in pre-measured units so that weighing or measuring of the components is kept to a minimum. After the unit has been mixed it shall be used within the specified pot life.

Primer	Parts by Weight	Parts by Volume
<b>COROFLAKE 68 PRIMER</b>	100	100
<b>HARDENER No. 4</b>	30	33.69

Coating	Parts by Weight	Parts by Volume
<b>COROFLAKE 650 FDA COMP. A</b>	100	100
<b>COROFLAKE 650 FDA COMP. B</b>	16.67	24.65

### CONSUMPTION PER COAT

Product	Thickness [µm]	Coverage [g/m <sup>2</sup> ]
<b>COROFLAKE 68 PRIMER</b>	covering	ca. 300 (concrete)
<b>COROFLAKE 650 FDA</b>	150	ca. 400

The information about coverage is an average for spray applications. Actual coverage depends on the object geometry and the method of application. It can vary.

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# COROFLAKE 650 FDA

## POT LIFE / WORKING TIME [min]

Product	15°C	20°C	30°C
COROFLAKE 68 PRIMER	ca. 120	ca. 60	ca. 30
COROFLAKE 650 FDA	ca. 16 h	ca. 10 h	ca. 5 h

## RECOAT TIME (20°C)

Product	Min. [h]	Max. [Days]
COROFLAKE 68 PRIMER	ca. 12	ca. 7
COROFLAKE 650 FDA	-	-

## CLEANING

Clean all equipment with **SOLVENT T-100** immediately after use. Frequency of cleaning will depend upon amount applied, temperature and elapsed time, including any delays.

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
COROFLAKE 650 FDA COMP. A	18 kg	590 3085
COROFLAKE 650 FDA COMP. B	3 kg	590 9089
COROFLAKE 68 PRIMER	12 kg	590 0851
HARDENER No. 4	3.6 kg	590 0875
SOLVENT T-100	4 kg	590 0617
SOLVENT T-100	8 kg	590 0600

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
COROFLAKE 650 FDA COMP. A	5 - 25°C	12 Months
COROFLAKE 650 FDA COMP. B	5 - 25°C	12 Months
COROFLAKE 68 PRIMER	5 - 25°C	12 Months
HARDENER No. 4	5 - 25°C	12 Months
SOLVENT T-100	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Abrasion	ASTM D4060	mg	210
Modulus of Elasticity (Bend Test)	EN ISO 178 (ASTM D790)	N/mm <sup>2</sup>	3250 ± 250
Hardness Shore D	DIN ISO 7619 (ASTM D2240)	-	≥ 70
Min. Adhesion Strength Concrete	EN ISO 4624 (ASTM D7234)	N/mm <sup>2</sup>	1.5*
Min. Adhesion Strength Steel	EN ISO 4624 (ASTM D4541)	N/mm <sup>2</sup>	7
Test Voltage (earliest after 24 hours)	EN 14879-2	kV / 100µm DFT	0.5 (steel)
Viscosity	EN ISO 2555 (ASTM D2196)	mPa·s	COMP. A: 3150 ± 450 / COMP. B: 1000 ± 250
Linear Coefficient of Thermal Expansion	ISO 11359-2 (ASTM C531)	1/K	27-30 x 10 <sup>-6</sup>
Max. Operating Temperature Liquids	-	°C	+50
Max. Operating Temperature Dry (Flue Gas)	-	°C	+110

\* Depending on the concrete strength

**Note:** The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## COROFLAKE 3000

### PRODUCT DESCRIPTION

**COROFLAKE 3000** is a three-component, vapour diffusion resistant, with special C-glass flake filled polymer coating based on a chemical and thermal resistant modified vinyl ester resin, which has been designed especially for plants with high wet temperatures. The parallel to the substrate oriented C-glass flakes provide an excellent diffusion barrier and thus ensure a long service life.

### COATING LAYERS CONSUMPTION

The coating system consists of the two-component **COROFLAKE T PRIMER** and at least two, generally three coats of the two-component **COROFLAKE 3000** topcoat applied at approx. 500 - 700 µm DFT per coat, alternating in beige and grey colours. The total applied DFT is based on the chemical and thermal load present and can be up to 2.5 mm.

### FIELDS OF APPLICATION

Due to the low water vapour diffusion rate, the very high temperature resistance and the excellent chemical resistance to inorganic acids and organic chemicals, **COROFLAKE 3000** is the ideal corrosion protection system for flue gas ducts, heat exchanger sand stacks of flue gas desulphurization plant as well as gas scrubbers in waste incineration plants and plants for CO<sub>2</sub> reduction. **COROFLAKE 3000** is also used in tanks and thickeners of mineral processing plants as well as in process vessels in the chemical industry.

### FEATURES

- Excellent wet temperature stability up to +90°C
- Excellent permeation resistance
- Excellent chemical resistance
- Outstanding adhesion to steel
- Application by spraying, brushing or rolling
- Can be exposed to process conditions shortly after application

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are steel components. Components to be coated shall be designed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

Surfaces to be coated must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht # 28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 70 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate.

### ENVIRONMENTAL CONDITIONS

Throughout the coating process, the temperatures of the substrate and coating materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### APPLICATION

During the application of the product, the application instruction must always be observed.

**COROFLAKE T PRIMER** and each **COROFLAKE 3000** topcoat are applied to the substrate using an airless air spray system or by rolling or brushing.

In case **COROFLAKE 3000** is applied by brushing or rolling, additional coats may be required to achieve the required total DFT.

**Note:** During application, the lined surface should be shaded from direct or indirect sunlight whenever possible.

### MIXING RATIO

The primer and coating components are supplied in pre-measured units so that weighing or measuring of the components is kept to a minimum. After the unit has been mixed it shall be used within the specified pot life.

Primer	Parts by Weight	Parts by Volume
<b>COROFLAKE T PRIMER</b>	100	100
<b>HARDENER No. 1 CLEAR</b>	2	2.05

Coating	Parts by Weight	Parts by Volume
<b>COROFLAKE 3000 COMP. A</b>	100	100
<b>COROFLAKE 3000 COMP. C</b>	1.2	1.27
<b>COROFLAKE 3000 COMP. B</b>	25.6	27.06

### CONSUMPTION PER COAT

Product	Thickness [µm]	Coverage [g/m <sup>2</sup> ]
<b>COROFLAKE T PRIMER</b>	covering	ca. 150
<b>COROFLAKE 3000</b>	ca. 500 - 700	ca. 1000 - 1200

The information about coverage is an average for spray applications. Actual coverage depends on the object geometry and the method of application. It can vary.

### POT LIFE / WORKING TIME [min]

Product	15°C	20°C	30°C
<b>COROFLAKE T PRIMER</b>	ca. 60	ca. 50	ca. 30
<b>COROFLAKE 3000</b>	ca. 60	ca. 45	ca. 20

### RECOAT TIME (20°C)

Product	Min. [h]	Max. [Days]
<b>COROFLAKE T PRIMER</b>	ca. 4	ca. 3
<b>COROFLAKE 3000</b>	-	ca. 1

### CLEANING

Clean all equipment with **SOLVENT T-100** immediately after use. Frequency of cleaning will depend upon amount applied, temperature and elapsed time, including any delays.

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# COROFLAKE 3000

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
COROFLAKE 3000 COMP. A	15 kg	590 3000
COROFLAKE 3000 COMP. A GREY	15 kg	590 3005
COROFLAKE 3000 COMP. B	3.84 kg	590 3010
COROFLAKE 3000 COMP. C	0.18 kg	590 3020
COROFLAKE T PRIMER	5 kg	590 3035
COROFLAKE T PRIMER	20 kg	590 3033
HARDENER No. 1 CLEAR	0.1 kg	590 0181
HARDENER No. 1 CLEAR	0.4 kg	590 0019
SOLVENT T-100	4 kg	590 0617
SOLVENT T-100	8 kg	590 0600

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
COROFLAKE 3000 COMP. A	5 - 20°C	3 Months
COROFLAKE 3000 COMP. A GREY	5 - 20°C	3 Months
COROFLAKE 3000 COMP. B	5 - 20°C	6 Months
COROFLAKE 3000 COMP. C	5 - 20°C	6 Months
COROFLAKE T PRIMER	5 - 20°C	4 Months
HARDENER No. 1 CLEAR	5 - 20°C	12 Months
SOLVENT T-100	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Density (Mixture)	EN ISO 2811 (ASTM D1475)	g/cm <sup>3</sup>	1.30
Hardness Barcol	EN 59 (ASTM D2583)	-	≥ 35
Min. Adhesion Strength Steel	EN ISO 4624 (ASTM D4541)	N/mm <sup>2</sup>	≥ 7
Test Voltage (earliest after 24 hours)	EN 14879-2	kV / 100µm DFT	0.5
Viscosity	EN ISO 2555 (ASTM D2196)	mPa·s	2300 ± 250
Linear Coefficient of Thermal Expansion	ISO 11359-2 (ASTM C531)	1/K	4.8 x 10 <sup>-5</sup>
Water Vapour Permeability	DIN 53122	ng/Pa·s·m	0.1
Max. Operating Temperature Liquids	-	°C	+90
Max. Operating Temperature Dry (Flue Gas)	-	°C	+160

Note: The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## COROFLAKE C

### PRODUCT DESCRIPTION

**COROFLAKE C** is a two-component, graphite filled polymer coating based on a chemical and thermal resistant Novolac vinyl ester resin. **COROFLAKE C** achieves good electrical conductivity combined with good chemical and thermal resistance by using graphite flakes. The parallel to the substrate oriented graphite flakes provide an excellent diffusion barrier and thus ensure a long service life.

### COATING LAYERS CONSUMPTION

The coating system consists of the two-component conductive **COROFLAKE N PRIMER AS** and generally two coats of the two-component **COROFLAKE C** topcoat applied at approx. 500 - 700 µm DFT per coat. The total applied DFT is based on the chemical and thermal load present and can be up to 2.0 mm.

### FIELDS OF APPLICATION

Due to the special fillers, **COROFLAKE C** is electrically conductive and can therefore be applied in ex-proofed zones, ex-proofed facilities and wherever an electrically conductive coating is required.

**COROFLAKE C** does not contain silica based fillers and can withstand strong alkaline loads such as in caustic soda (sodium hydroxide) storage tanks. Furthermore **COROFLAKE C** can be used as a conductive topcoat for the systems **COROFLAKE 23**, **COROFLAKE 24** and **COROFLAKE 28**.

### FEATURES

- Excellent chemical resistance to inorganic acids, aliphatic and aromatic solvents and especially to hydrofluoric acid and lye
- Electrically conductive
- Non-sparking
- Excellent permeation resistance
- Application by spraying, brushing or rolling
- Can be exposed to process conditions shortly after application

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are steel components. Components to be coated shall be designed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

Surfaces to be coated must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht # 28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 70 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate.

### ENVIRONMENTAL CONDITIONS

Throughout the coating process, the temperatures of the substrate and coating materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### APPLICATION

During the application of the product, the application instruction must always be observed.

**COROFLAKE N PRIMER AS** and each **COROFLAKE C** topcoat are applied to the substrate using an airless air spray system or by rolling or brushing.

In case **COROFLAKE C** is applied by brushing or rolling, additional coats may be required to achieve the required total DFT.

**Note:** During application, the lined surface should be shaded from direct or indirect sunlight whenever possible.

### MIXING RATIO

The primer and coating components are supplied in pre-measured units so that weighing or measuring of the components is kept to a minimum. After the unit has been mixed it shall be used within the specified pot life.

Primer	Parts by Weight	Parts by Volume
<b>COROFLAKE N PRIMER AS</b>	100	100
<b>COROFLAKE ACCELERATOR NO. 1</b>	1 - 2	1.07 - 2.14
<b>HARDENER No. 1 CLEAR</b>	2	2.01

Coating	Parts by Weight	Parts by Volume
<b>COROFLAKE C</b>	100	100
<b>HARDENER No. 1 CLEAR</b>	2	2.32

### CONSUMPTION PER COAT

Product	Thickness [µm]	Coverage [g/m²]
<b>COROFLAKE N PRIMER AS</b>	covering	ca. 150
<b>COROFLAKE C</b>	ca. 500 - 700	ca. 900 - 1100

The information about coverage is an average for spray applications. Actual coverage depends on the object geometry and the method of application. It can vary.

### POT LIFE / WORKING TIME [min]

Product	15°C	20°C	30°C
<b>COROFLAKE N PRIMER AS</b>	ca. 60	ca. 30-40	ca. 10
<b>COROFLAKE C</b>	ca. 60	ca. 45	ca. 20

### RECOAT TIME (20°C)

Product	Min. [h]	Max. [Days]
<b>COROFLAKE N PRIMER AS</b>	ca. 4	ca. 14
<b>COROFLAKE C</b>	ca. 4	ca. 3

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# COROFLAKE C

## CLEANING

Clean all equipment with **SOLVENT T-100** immediately after use. Frequency of cleaning will depend upon amount applied, temperature and elapsed time, including any delays.

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
<b>COROFLAKE ACCELERATOR NO. 1</b>	0.4 kg	590 2985
<b>COROFLAKE C</b>	5 kg	590 0772
<b>COROFLAKE C</b>	20 kg	590 0758
<b>COROFLAKE N PRIMER AS</b>	5 kg	590 2983
<b>COROFLAKE N PRIMER AS</b>	20 kg	590 2990
<b>HARDENER No. 1 CLEAR</b>	0.1 kg	590 0181
<b>HARDENER No. 1 CLEAR</b>	0.4 kg	590 0019
<b>SOLVENT T-100</b>	4 kg	590 0617
<b>SOLVENT T-100</b>	8 kg	590 0600

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
<b>COROFLAKE ACCELERATOR NO. 1</b>	5 - 20°C	6 Months
<b>COROFLAKE C</b>	5 - 20°C	3 Months
<b>COROFLAKE N PRIMER AS</b>	5 - 20°C	6 Months
<b>HARDENER No. 1 CLEAR</b>	5 - 20°C	12 Months
<b>SOLVENT T-100</b>	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Abrasion	ASTM D4060	mg	70
Density (Mixture)	EN ISO 2811 (ASTM D1475)	g/cm <sup>3</sup>	1.20 ± 0.04
Modulus of Elasticity (Bend Test)	EN ISO 178 (ASTM D790)	N/mm <sup>2</sup>	4000 ± 500
Hardness Shore D	DIN ISO 7619 (ASTM D2240)	-	≥ 70
Min. Adhesion Strength Steel	EN ISO 4624 (ASTM D4541)	N/mm <sup>2</sup>	4
Viscosity	EN ISO 2555 (ASTM D2196)	mPa·s	3100 ± 300
Linear Coefficient of Thermal Expansion	ISO 11359-2 (ASTM C531)	1/K	30 x 10 <sup>-6</sup>
Water Vapour Permeability	ASTM E-96; Method E	perm-inch	0.0024
Max. Operating Temperature Liquids	-	°C	+70
Max. Operating Temperature Dry (Flue Gas)	-	°C	+180

**Note:** The indicated temperatures are dependent on the present load and may vary

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## DESCRIPTION

### LINING & TOPLINE

Product	Product Description
<b>LINING 65</b>	<b>LINING 65</b> is a fibreglass mat reinforced laminate lining, based on a chemical and thermal resistant Bisphenol-A vinyl ester resin. Due to the excellent mechanical properties, <b>LINING 65</b> can cover cracks up to 0.2 mm according to DIBt (German Institute for Construction Technology) guidelines and is therefore also suitable for concrete structures.
<b>LINING 65 W</b>	<b>LINING 65 W</b> is a fibreglass mat reinforced laminate lining, based on a chemical and thermal resistant Bisphenol-A vinyl ester resin with an abrasion resistant topcoat.
<b>LINING 68</b>	<b>LINING 68</b> is a fibreglass mat reinforced laminate lining based on a high-quality epoxy resin. Due to the excellent mechanical properties, <b>LINING 68</b> can cover cracks up to 0.2 mm according to DIBt (German Institute for Construction Technology) guidelines.
<b>LINING 68 M</b>	<b>LINING 68 M</b> is a fibreglass mat reinforced laminate lining based on a high-quality epoxy resin. Due to the excellent mechanical properties, <b>LINING 68</b> can cover cracks up to 0.2 mm according to DIBt (German Institute for Construction Technology) guidelines and is therefore suitable for concrete structures
<b>LINING 74 CONCRETE</b>	<b>LINING 74</b> is a fibreglass mat reinforced laminate lining based on two chemical and thermal resistant vinyl ester resins. Due to the excellent mechanical properties, <b>LINING 74</b> can cover cracks up to 0.2 mm according to DIBt (German Institute for Construction Technology) guidelines.
<b>LINING 74 STEEL</b>	<b>LINING 74</b> is a fibreglass mat reinforced laminate lining based on a chemical and thermal resistant Novolac vinyl ester resin.
<b>TOPLINE 665</b>	<b>TOPLINE 665</b> is a laminate reinforced, trowel applied coating system based on a chemical and thermal resistant Novolac vinyl ester resin.
<b>TOPLINE W</b>	<b>TOPLINE W</b> is a laminate reinforced, trowel applied coating system based on a chemical and thermal resistant Bisphenol-A vinyl ester resin with an abrasion resistant topcoat. <b>TOPLINE W</b> was designed especially for chemical plants and vessels, where in addition to the chemical and thermal stress a high abrasion occurs through solids.

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# OVERVIEW

## LINING & TOPLINE

Product	Polymer	Filler	Solvent	DFT	Application				Primer
					Roll	Trowel	Concrete	Steel	
<b>LINING 65</b>	Bisphenol-A Vinyl Ester Resin	Silica	Styrene (reactive)	3.0 - 4.0	X	X	X	X	<b>COROFLAKE N PRIMER</b> (Steel/Concrete) / <b>COROFLAKE N PRIMER AS</b> (Concrete)
<b>LINING 65 W</b>	Bisphenol-A Vinyl Ester Resin	Silica & Alumina	Styrene (reactive)	4.0 - 6.0	X	X	X	X	<b>COROFLAKE N PRIMER</b> (Steel/Concrete) / <b>COROFLAKE N PRIMER AS</b> (Concrete)
<b>LINING 68</b>	Novolac Epoxy Resin	Silica	-	≥ 2.5	X	X	X	X	<b>COROFLAKE 68 PRIMER</b>
<b>LINING 68 M</b>	Epoxy Resin	Silica & Inert-Flakes	-	2.5 - 3.5	X	X	X	-	<b>COROFLAKE 68 PRIMER</b>
<b>LINING 74 CONCRETE</b>	Modified Novolac Vinyl Ester Resin	Silica	Styrene (reactive)	3.0 - 4.0	X	X	X	-	<b>LINING 74 BASE COAT</b>
<b>LINING 74 STEEL</b>	Novolac Vinyl Ester Resin	Silica	Styrene (reactive)	3.0 - 4.0	X	X	-	X	<b>COROFLAKE S PRIMER</b>
<b>TOPLINE 665</b>	Novolac Vinyl Ester Resin	Silica	Styrene (reactive)	3.0 - 4.0	X	X	X	X	<b>COROFLAKE N PRIMER</b> (Steel/Concrete) / <b>COROFLAKE N PRIMER AS</b> (Concrete)
<b>TOPLINE W</b>	Bisphenol-A Vinyl Ester Resin	Silica & Alumina	Styrene (reactive)	3.0 - 4.0	X	X	X	X	<b>COROFLAKE N PRIMER</b> (Steel/Concrete) / <b>COROFLAKE N PRIMER AS</b> (Concrete)

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# PHYSICAL DATA LINING & TOPLINE



Product	Abrasion	Density	Compressive Strength	Modulus of Elasticity	Min. Adhesion Strength Concrete	Min. Adhesion Strength Steel	Hardness Barcol	Max. Temperature Wet	Viscosity	Linear Coefficient of Thermal Expansion	Water Vapour Permeability	Tensile Strength
	ASTM D4060 [mg]	EN ISO 2811 ASTM D1475 [g/cm <sup>3</sup> ]	EN ISO 604 ASTM D695 [N/mm <sup>2</sup> ]	EN ISO 178 ASTM D790 [N/mm <sup>2</sup> ]	EN ISO 4624 ASTM D4541 [N/mm <sup>2</sup> ]	EN ISO 4624 ASTM D4541 [N/mm <sup>2</sup> ]	EN 59 ASTM D2583 -	- [°C]	EN ISO 2555 ASTM D2196 [mPa·s]	ISO 11359-2 ASTM D2583 [1/K]	ASTM E-96, Method E [perm-inch]	EN ISO 527 ASTM D638 [N/mm <sup>2</sup> ]
LINING 65	---	1.04 ± 0.04	65	6000 - 8000	1.5*	7	≥ 30	+80	390 ± 50	27-30 x 10 <sup>-6</sup>	0.006	50
LINING 65 W	30	1.04 ± 0.04	65	6000 - 8000	1.5*	7	≥ 30	+80	390 ± 50	27-30 x 10 <sup>-6</sup>	0.006	50
LINING 68	---	1.14 ± 0.01	65	4000 - 6000	1.5*	7	≥ 20	+75	325 ± 50	27-30 x 10 <sup>-6</sup>	---	65
LINING 68 M	---	1.14 ± 0.01	65	4000 - 6000	1.5*	---	≥ 20	+75	325 ± 50	27-30 x 10 <sup>-6</sup>	---	65
LINING 74 CONCRETE	---	1.03 ± 0.03	65	6000 - 8000	1.5*	---	≥ 35	+80	425 ± 125	27-30 x 10 <sup>-6</sup>	---	50
LINING 74 STEEL	---	1.045 ± 0.025	65	6000 - 8000	---	7	≥ 35	+85	550 ± 150	27-30 x 10 <sup>-6</sup>	0.006	50
TOPLINE 665	70	1.045 ± 0.025	85	7000 - 10000	1.5*	7	35	+75	550 ± 150	27-30 x 10 <sup>-6</sup>	---	20
TOPLINE W	30	1.05 ± 0.03	85	7000 - 10000	1.5*	7	35	+80	1250 ± 250	27-30 x 10 <sup>-6</sup>	---	20

\* Depending on the concrete strength

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# PRODUCT INFORMATION

## LINING 65

### PRODUCT DESCRIPTION

**LINING 65** is a fibreglass mat reinforced laminate lining, based on a chemical and thermal resistant Bisphenol-A vinyl ester resin.

Due to the excellent mechanical properties, **LINING 65** can cover cracks up to 0.2 mm according to DIBt (German Institute for Construction Technology) guidelines and is therefore also suitable for concrete structures.

### COATING LAYERS CONSUMPTION

The laminate lining consists of the two-component **COROFLAKE N PRIMER**, the three-component **LINING 65** basecoat, the two-component **LINING 65** reinforced layer with usual two 450 g/m<sup>2</sup> ECR-fibreglass mats as well as a 30 g/m<sup>2</sup> C-glass surface veil and the two-component **LINING 65** sealing. The quantity and the basis weight of the glass mats is variable, depending on the load. The total applied DFT depends on the present chemical and thermal load and can be up to approx. 3.0 - 4.0 mm with two 450 g/m<sup>2</sup> glass mats. If a spark testing on concrete surfaces is required, **COROFLAKE N PRIMER AS** must be used as primer.

### FIELDS OF APPLICATION

The laminate system **LINING 65** is designed for the protection of concrete and steel components against organic and inorganic acids and bleaches. It is mainly used in concrete thickeners, containment areas, concrete pits and drains, steel vessels and wet electric filters. **LINING 65** is also very successfully used in absorbers, vessels and tanks in flue gas desulphurization plants. The field of application ranges from chemical industry over the pulp industry to steel and ore processing industry.

### FEATURES

- Resistance to continuous operating temperatures up to +80°C (liquids)
- Very good chemical resistance to inorganic and organic acids
- Good resistance to aliphatic solvents and oxidizing chemicals
- Excellent adhesion to concrete and steel
- Good crack-bridging properties
- Very good mechanical properties

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of steel, concrete, screed or plaster. Components to be coated shall be designed and manufactured in accordance with EN 14879-1. For components made of concrete, screed or plaster DIN 1045 must also be observed.

### SURFACE PRE-TREATMENT

#### C-STEEL

Surfaces to be coated must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht # 28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 70 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate.

#### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup> and minimum compressive strength of 25 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%.

### ENVIRONMENTAL CONDITIONS

Throughout the coating process, the temperatures of the substrate and coating materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### APPLICATION

During the application of the product, the application instruction must always be observed.

Trowel applies the **LINING 65** basecoat onto the primed substrate at approx. 1.0 - 1.5mm. Upon placement of the basecoat, the first ECR-fibreglass mat is pressed onto the surface and saturated by roller with **LINING 65** mixture. Onto the uncured layer the second ECR-fibreglass mat is pressed and saturated again by roller with **LINING 65** mixture. Then a 30 g/m<sup>2</sup> C-glass surface veil is pressed onto the surface and saturated by roller with **LINING 65** mixture. Finally the **LINING 65** sealing is rolled twice onto the surface. 5% **THIN FILM CURING AGENT** are added additionally to the second **LINING 65** sealing.

**Note:** During application, the lined surface should be shaded from direct or indirect sunlight whenever possible.

### MIXING RATIO

The primer and coating components are supplied in pre-measured units so that weighing or measuring of the components is kept to a minimum. After the unit has been mixed it shall be used within the specified pot life.

Primer	Parts by Weight	Parts by Volume
<b>COROFLAKE N PRIMER</b>	100	100
<b>HARDENER No. 1 CLEAR</b>	2	2.01
Basecoat	Parts by Weight	Parts by Volume
<b>LINING 65 RESIN</b>	100	100
<b>HARDENER No. 1 CLEAR</b>	2	2.09
<b>FILLER F1</b>	250	247.62
Laminate Layer	Parts by Weight	Parts by Volume
<b>LINING 65 RESIN</b>	100	100
<b>HARDENER No. 1 CLEAR</b>	2	2.09

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## LINING 65

Sealing	Parts by Weight	Parts by Volume
<b>LINING 65 RESIN</b>	100	100
<b>HARDENER No. 1 CLEAR</b>	2	2.09
<b>THIN FILM CURING AGENT</b> (2 <sup>nd</sup> Sealing)	5	6,12

### CONSUMPTION

Layer	Product	Coverage [g/m <sup>2</sup> ]
Primer	<b>COROFLAKE N PRIMER</b>	ca. 300 (Concrete) / ca. 150 (Steel)
Basecoat	<b>LINING 65 RESIN</b>	ca. 1000
	<b>FILLER F1</b>	ca. 2500
Laminate Layer	<b>LINING 65 RESIN</b>	ca. 2000
	2 x ECR-fibreglass mats 450 g/m <sup>2</sup>	ca. 1000
	1 x C-glass surface veil 30 g/m <sup>2</sup>	ca. 33
1 <sup>st</sup> Sealing	<b>LINING 65 RESIN</b>	ca. 150
2 <sup>nd</sup> Sealing	<b>LINING 65 RESIN</b>	ca. 150
	<b>THIN FILM CURING AGENT</b>	ca. 10

### POT LIFE / WORKING TIME [min]

Product	15°C	20°C	30°C
<b>COROFLAKE N PRIMER</b>	ca. 60	ca. 40	ca. 20
<b>LINING 65</b>	ca. 60	ca. 45	ca. 25

### RECOAT TIME (20°C)

Product	Min. [h]	Max. [Days]
<b>COROFLAKE N PRIMER</b>	ca. 8	ca. 14
<b>LINING 65</b>	ca. 4	ca. 7

### CLEANING

Clean all equipment with **SOLVENT T-100** immediately after use.

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

### PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
C-glass surface veil 30 g/m <sup>2</sup>	227.5 m <sup>2</sup>	590 9800
<b>COROFLAKE N PRIMER</b>	5 kg	590 0480
<b>COROFLAKE N PRIMER</b>	20 kg	590 0040
ECR-fibreglass mat 450 g/m <sup>2</sup>	20 m <sup>2</sup>	590 0260
ECR-fibreglass mat 450 g/m <sup>2</sup>	50 m <sup>2</sup>	590 0277
<b>FILLER F1</b>	25 kg	591 0140
<b>HARDENER No. 1 CLEAR</b>	0.1 kg	590 0181

Product	Size	Article No.
<b>HARDENER No. 1 CLEAR</b>	0.4 kg	590 0019
<b>LINING 65 RESIN</b>	5 kg	590 0435
<b>LINING 65 RESIN</b>	20 kg	590 0411
<b>SOLVENT T-100</b>	4 kg	590 0617
<b>SOLVENT T-100</b>	8 kg	590 0600
<b>THIN FILM CURING AGENT</b>	0.75 kg	590 0214

### STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
<b>COROFLAKE N PRIMER</b>	5 - 20°C	6 Months
<b>FILLER F1</b>	-	24 Months
<b>HARDENER No. 1 CLEAR</b>	5 - 20°C	12 Months
<b>LINING 65 RESIN</b>	5 - 20°C	6 Months
<b>SOLVENT T-100</b>	5 - 25°C	60 Months
<b>THIN FILM CURING AGENT</b>	5 - 20°C	12 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

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## LINING 65

Technical Data	Standard	Unit	Value
Compressive Strength (Laminate Layer)	EN ISO 604 (ASTM D695)	N/mm <sup>2</sup>	65
Modulus of Elasticity (Bend Test)	EN ISO 178 (ASTM D790)	N/mm <sup>2</sup>	6000 - 8000
Hardness Barcol	EN 59 (ASTM D2583)	-	≥ 30
Min. Adhesion Strength Concrete	EN ISO 4624 (ASTM D7234)	N/mm <sup>2</sup>	1.5*
Min. Adhesion Strength Steel	EN ISO 4624 (ASTM D4541)	N/mm <sup>2</sup>	7
Test Voltage (earliest after 24 hours)	EN 14879-2	kV / 100µm DFT	0.5
Viscosity	EN ISO 2555 (ASTM D2196)	mPa·s	390 ± 50
Linear Coefficient of Thermal Expansion	ISO 11359-2 (ASTM C531)	1/K	27-30 x 10 <sup>-6</sup>
Water Vapour Permeability	ASTM E-96; Method E	perm-inch	0.006
Tensile Strength	EN ISO 527 (ASTM D638)	N/mm <sup>2</sup>	50
Max. Operating Temperature Liquids	-	°C	+80

\* Depending on the concrete strength

**Note:** The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## LINING 65 W

### PRODUCT DESCRIPTION

**LINING 65 W** is a fibreglass mat reinforced laminate lining, based on a chemical and thermal resistant Bisphenol-A vinyl ester resin with an abrasion resistant topcoat.

### COATING LAYERS CONSUMPTION

The laminate lining consists of the two-component **COROFLAKE N PRIMER**, the three-component **LINING 65** basecoat, the two-component **LINING 65** reinforced layer with two 450 g/m<sup>2</sup> ECR-fibreglass mats and the three-component topcoat. The total applied DFT is based on the chemical and thermal load present and can be up to approx. 4.0 - 6.0 mm. If a high-voltage testing of the laminate lining on concrete is required, **COROFLAKE N PRIMER AS** must be used as primer.

### FIELDS OF APPLICATION

The laminate system **LINING 65 W** is designed for the protection of concrete and steel components against wear and corrosion. It is mainly used in plant sections where very good wear and abrasion resistance is required. The main applications are agitator vessels and absorbers in flue gas desulphurization plants.

### FEATURES

- Excellent abrasion resistance
- Resistance to continuous operating temperatures up to +80°C (liquids)
- Very good chemical resistance to inorganic and organic acids
- Good resistance to aliphatic solvents
- Excellent adhesion to concrete and steel
- Very good mechanical properties

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of steel, concrete, screed or plaster. Components to be coated shall be designed and manufactured in accordance with EN 14879-1. For components made of concrete, screed or plaster DIN 1045 must also be observed.

### SURFACE PRE-TREATMENT

#### C-STEEL

Surfaces to be coated must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht # 28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 70 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate.

#### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such

as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup> and minimum compressive strength of 25 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%.

### ENVIRONMENTAL CONDITIONS

Throughout the coating process, the temperatures of the substrate and coating materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### APPLICATION

During the application of the product, the application instruction must always be observed.

Trowel applies the **LINING 65** basecoat onto the primed substrate at approx. 1.0 - 1.5mm. Upon placement of the basecoat, the first 450 g/m<sup>2</sup> ECR-fibreglass mat is pressed onto the surface and saturated by roller with **LINING 65** mixture. Onto the uncured layer the second 450 g/m<sup>2</sup> ECR-fibreglass mat is pressed and saturated again by roller with **LINING 65** mixture. Finally the topcoat is trowel applied in a thickness of approx. 1.0 - 1.5 mm. The surface of the topcoat must be smoothed with a roller or wide brush dampened with **SMOOTHING LIQUID F12**.

**Note:** During application, the lined surface should be shaded from direct or indirect sunlight whenever possible.

### MIXING RATIO

The primer and coating components are supplied in pre-measured units so that weighing or measuring of the components is kept to a minimum. After the unit has been mixed it shall be used within the specified pot life.

Primer	Parts by Weight	Parts by Volume
<b>COROFLAKE N PRIMER</b>	100	100
<b>HARDENER No. 1 CLEAR</b>	2	2.01

Basecoat	Parts by Weight	Parts by Volume
<b>LINING 65 RESIN</b>	100	100
<b>HARDENER No. 1 CLEAR</b>	2	2.09
<b>FILLER F1</b>	250	247.62

Laminate Layer	Parts by Weight	Parts by Volume
<b>LINING 65 RESIN</b>	100	100
<b>HARDENER No. 1 CLEAR</b>	2	2.09

Topcoat	Parts by Weight	Parts by Volume
<b>TOPLINE W RESIN</b>	100	100
<b>HARDENER No. 1 CLEAR</b>	2	2.03
<b>POWDER W1</b>	260	130

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# LINING 65 W

## CONSUMPTION

Layer	Product	Coverage [g/m <sup>2</sup> ]
Primer	<b>COROFLAKE N PRIMER</b>	ca. 300 (Concrete) / ca. 150 (Steel)
Basecoat	<b>LINING 65 RESIN</b>	ca. 1000
	<b>FILLER F1</b>	ca. 2500
Laminate Layer	<b>LINING 65 RESIN</b>	ca. 2000
	2 x ECR-fibreglass mats 450 g/m <sup>2</sup>	ca. 1000
Topcoat	<b>TOPLINE W RESIN</b>	ca. 1000
	<b>POWDER W1</b>	ca. 2600
	<b>SMOOTHING LIQUID F12</b>	ca. 150

## POT LIFE / WORKING TIME [min]

Product	15°C	20°C	30°C
<b>COROFLAKE N PRIMER</b>	ca. 60	ca. 40	ca. 20
<b>LINING 65</b>	ca. 60	ca. 45	ca. 25
<b>TOPLINE W</b>	ca. 90	ca. 60	ca. 30

## RECOAT TIME (20°C)

Product	Min. [h]	Max. [Days]
<b>COROFLAKE N PRIMER</b>	ca. 8	ca. 14
<b>LINING 65</b>	ca. 4	ca. 7
<b>TOPLINE W</b>	ca. 6	ca. 7

## CLEANING

Clean all equipment with **SOLVENT T-100** immediately after use.

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
<b>COROFLAKE N PRIMER</b>	5 kg	590 0480
<b>COROFLAKE N PRIMER</b>	20 kg	590 0040
ECR-fibreglass mat 450 g/m <sup>2</sup>	20 m <sup>2</sup>	590 0260
ECR-fibreglass mat 450 g/m <sup>2</sup>	50 m <sup>2</sup>	590 0277
<b>FILLER F1</b>	25 kg	591 0140
<b>SMOOTHING LIQUID F12</b>	4 kg	590 0095
<b>HARDENER No. 1 CLEAR</b>	0.1 kg	590 0181
<b>HARDENER No. 1 CLEAR</b>	0.4 kg	590 0019
<b>LINING 65 RESIN</b>	5 kg	590 0435
<b>LINING 65 RESIN</b>	20 kg	590 0411
<b>POWDER W1</b>	22.7 kg	590 0208
<b>SOLVENT T-100</b>	4 kg	590 0617
<b>SOLVENT T-100</b>	8 kg	590 0600

Product	Size	Article No.
<b>TOPLINE W RESIN</b>	5 kg	590 0459
<b>TOPLINE W RESIN</b>	20 kg	590 0143

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
<b>COROFLAKE N PRIMER</b>	5 - 20°C	6 Months
<b>FILLER F1</b>	-	24 Months
<b>SMOOTHING LIQUID F12</b>	5 - 20°C	12 Months
<b>HARDENER No. 1 CLEAR</b>	5 - 20°C	12 Months
<b>LINING 65 RESIN</b>	5 - 20°C	6 Months
<b>POWDER W1</b>	-	24 Months
<b>SOLVENT T-100</b>	5 - 25°C	60 Months
<b>TOPLINE W RESIN</b>	5 - 20°C	6 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

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## LINING 65 W

Technical Data	Standard	Unit	Value
Abrasion	ASTM D4060	mg	30
Compressive Strength (Laminate Layer)	EN ISO 604 (ASTM D695)	N/mm <sup>2</sup>	65
Modulus of Elasticity (Bend Test)	EN ISO 178 (ASTM D790)	N/mm <sup>2</sup>	6000 - 8000
Hardness Barcol	EN 59 (ASTM D2583)	-	≥ 30
Min. Adhesion Strength Concrete	EN ISO 4624 (ASTM D7234)	N/mm <sup>2</sup>	1.5*
Min. Adhesion Strength Steel	EN ISO 4624 (ASTM D4541)	N/mm <sup>2</sup>	7
Test Voltage (earliest after 24 hours)	EN 14879-2	kV / 100µm DFT	0.5
Viscosity	EN ISO 2555 (ASTM D2196)	mPa·s	390 ± 50
Linear Coefficient of Thermal Expansion	ISO 11359-2 (ASTM C531)	1/K	27-30 x 10 <sup>-6</sup>
Water Vapour Permeability	ASTM E-96; Method E	perm-inch	0.006
Tensile Strength	EN ISO 527 (ASTM D638)	N/mm <sup>2</sup>	50
Max. Operating Temperature Liquids	-	°C	+80

\* Depending on the concrete strength

**Note:** The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## LINING 68

### PRODUCT DESCRIPTION

**LINING 68** is a fibreglass mat reinforced laminate lining based on a high-quality epoxy resin. Due to the excellent mechanical properties, **LINING 68** can cover cracks up to 0.2 mm according to DIBt (German Institute for Construction Technology) guidelines.

### COATING LAYERS CONSUMPTION

The laminate lining consists of the two-component **COROFLAKE 68 PRIMER**, the three-component **LINING 68** basecoat, the two-component **LINING 68** reinforced layer with two 300 g/m<sup>2</sup> ECR-fibreglass mats and the two-component **LINING 68** sealing. The total applied DFT is based on the chemical and thermal load present and can be up to approx. 2.5 - 3.5 mm.

### FIELDS OF APPLICATION

The laminate system **LINING 68** is designed for the protection of tanks, reaction vessels, pits and sumps against lye, diluted acids mineral oils and limestone. Due to its good adhesion, **LINING 68** can be applied to different substrates.

### FEATURES

- Resistance to continuous operating temperatures up to +75°C (liquids)
- Very good chemical resistance to lye, diluted inorganic acids and mineral oils
- Excellent adhesion to concrete and steel
- Good crack-bridging properties
- Very good mechanical properties

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of steel, concrete, screed or plaster. Components to be coated shall be designed and manufactured in accordance with EN 14879-1. For components made of concrete, screed or plaster DIN 1045 must also be observed.

### SURFACE PRE-TREATMENT

#### C-STEEL

Surfaces to be coated must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht # 28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 70 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate.

#### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup> and minimum compressive strength

of 25 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%.

### ENVIRONMENTAL CONDITIONS

Throughout the coating process, the temperatures of the substrate and coating materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### APPLICATION

During the application of the product, the application instruction must always be observed.

Trowel applies the **LINING 68** basecoat onto the primed substrate at approx. 1.0 - 1.5mm. Upon placement of the basecoat, the first 300 g/m<sup>2</sup> ECR-fibreglass mat is pressed onto the surface and saturated by roller with **LINING 68** mixture. Onto the uncured layer the second 300 g/m<sup>2</sup> ECR-fibreglass mat is pressed and saturated again by roller with **LINING 68** mixture. Finally the **COROFLAKE 68** sealing is rolled twice onto the surface. Alternative, **COROFLAKE 60** can be also used as final topcoat.

**Note:** During application, the lined surface should be shaded from direct or indirect sunlight whenever possible. In atmospheric exposure coatings based on epoxy resins have the tendency to chalking with time.

### MIXING RATIO

The primer and coating components are supplied in pre-measured units so that weighing or measuring of the components is kept to a minimum. After the unit has been mixed it shall be used within the specified pot life.

Primer	Parts by Weight	Parts by Volume
<b>COROFLAKE 68 PRIMER</b>	100	100
<b>HARDENER No. 4</b>	30	33.69

Basecoat	Parts by Weight	Parts by Volume
<b>COROFLAKE 68 PRIMER</b>	100	100
<b>HARDENER No. 4</b>	30	33.69
<b>FILLER F1</b>	240	260.57

Laminate Layer	Parts by Weight	Parts by Volume
<b>COROFLAKE 68 PRIMER</b>	100	100
<b>HARDENER No. 4</b>	30	33.69

Topcoat	Parts by Weight	Parts by Volume
<b>COROFLAKE 68 PRIMER</b>	100	100
<b>HARDENER No. 4</b>	30	33.69

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# LINING 68

## CONSUMPTION

Layer	Product	Coverage [g/m <sup>2</sup> ]
Primer	<b>COROFLAKE 68 PRIMER</b>	ca. 300 (Concrete) / ca. 150 (Steel)
Basecoat	<b>COROFLAKE 68 PRIMER</b>	ca. 1000
	<b>FILLER F1</b>	ca. 2400
Laminate Layer	<b>COROFLAKE 68 PRIMER</b>	ca. 1320
	2 x ECR-fibreglass mats 300 g/m <sup>2</sup>	ca. 660
Topcoat	<b>COROFLAKE 68 PRIMER</b>	ca. 300*

\* Per layer

## POT LIFE / WORKING TIME [min]

Product	15°C	20°C	30°C
<b>COROFLAKE 68 PRIMER</b>	ca. 120	ca. 60	ca. 30

## RECOAT TIME (20°C)

Product	Min. [h]	Max. [Days]
<b>COROFLAKE 68 PRIMER</b>	ca. 12	ca. 7

## CLEANING

Clean all equipment with **SOLVENT T-100** immediately after use.

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
C-glass surface veil 30 g/m <sup>2</sup>	227.5 m <sup>2</sup>	590 9800
<b>COROFLAKE 68 PRIMER</b>	12 kg	590 0851
<b>COROFLAKE 60 COMP. A</b>	12 kg	590 0648
<b>COROFLAKE 60 COMP. B</b>	9 kg	590 0916
ECR-fibreglass mat 300 g/m <sup>2</sup>	20 m <sup>2</sup>	590 0239
ECR-fibreglass mat 300 g/m <sup>2</sup>	50 m <sup>2</sup>	590 0246
<b>FILLER F1</b>	25 kg	591 0140
<b>HARDENER No. 4</b>	3.6 kg	590 0875
<b>SOLVENT T-100</b>	8 kg	590 0600
<b>SOLVENT T-100</b>	4 kg	590 0617

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
<b>COROFLAKE 60 COMP. A</b>	5 - 25°C	12 Months
<b>COROFLAKE 60 COMP. B</b>	5 - 25°C	12 Months
<b>COROFLAKE 68 PRIMER</b>	5 - 25°C	12 Months
<b>FILLER F1</b>	-	24 Months
<b>HARDENER No. 4</b>	5 - 25°C	12 Months
<b>SOLVENT T-100</b>	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Compressive Strength (Laminate Layer)	EN ISO 604 (ASTM D695)	N/mm <sup>2</sup>	65
Modulus of Elasticity (Bend Test)	EN ISO 178 (ASTM D790)	N/mm <sup>2</sup>	4000 - 6000
Hardness Barcol	EN 59 (ASTM D2583)	-	≥ 20
Min. Adhesion Strength Concrete	EN ISO 4624 (ASTM D7234)	N/mm <sup>2</sup>	1.5*
Min. Adhesion Strength Steel	EN ISO 4624 (ASTM D4541)	N/mm <sup>2</sup>	7
Test Voltage (earliest after 24 hours)	EN 14879-2	kV / 100µm DFT	0.5 (Steel)
Viscosity	EN ISO 2555 (ASTM D2196)	mPa·s	325 ± 50
Linear Coefficient of Thermal Expansion	ISO 11359-2 (ASTM C531)	1/K	27-30 x 10 <sup>-6</sup>
Tensile Strength	EN ISO 527 (ASTM D638)	N/mm <sup>2</sup>	65
Max. Operating Temperature Liquids	-	°C	+75

\* Depending on the concrete strength

**Note:** The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## LINING 68 M

### PRODUCT DESCRIPTION

**LINING 68 M** is a fibreglass mat reinforced laminate lining based on a high-quality epoxy resin. Due to the excellent mechanical properties, **LINING 68 M** can cover cracks up to 0.2 mm according to DIBt (German Institute for Construction Technology) guidelines and is therefore suitable for concrete structures

### COATING LAYERS CONSUMPTION

The laminate lining consists of the two-component **COROFLAKE 68 PRIMER**, the three-component **LINING 68 M** basecoat, the two-component **LINING 68 M** reinforced layer with two 300 g/m<sup>2</sup> ECR-fibreglass mats and min. two coats of the two-component **COROFLAKE 60** topcoat. The total applied DFT is based on the chemical and thermal load present and can be up to approx. 2.5 - 3.5 mm.

### FIELDS OF APPLICATION

The laminate system **LINING 68 M** is designed for the protection of concrete components and pits against lye and diluted acids. Due to its good resistance to biogas, it is mainly used in waste water treatment plants.

### FEATURES

- Resistance to continuous operating temperatures up to +75°C (liquids)
- Excellent chemical resistance lye and 50% sodium hydroxide solution
- Good crack-bridging properties
- Outstanding adhesion to concrete

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of concrete, screed or plaster. Components to be coated shall be designed and manufactured in accordance with EN 14879-1. In addition, DIN 1045 must also be observed.

### SURFACE PRE-TREATMENT

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup> and minimum compressive strength of 25 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%.

### ENVIRONMENTAL CONDITIONS

Throughout the coating process, the temperatures of the substrate and coating materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### APPLICATION

During the application of the product, the application instruction must always be observed.

Trowel applies the basecoat onto the primed substrate at approx. 1.0 - 1.5mm. Upon placement of the basecoat, the 300 g/m<sup>2</sup> ECR-fibreglass mat is pressed onto the surface and saturated by roller with resin mixture. Finally two coats of **COROFLAKE 60** are applied as final topcoat. The **COROFLAKE 60** topcoat is applied using an airless air spray system or by rolling or brushing.

In case **COROFLAKE 60** is applied by brushing or rolling, additional coats may be required to achieve the required total DFT.

**Note:** During application, the lined surface should be shaded from direct or indirect sunlight whenever possible. In atmospheric exposure coatings based on epoxy resins have the tendency to chalking with time.

### MIXING RATIO

The primer and coating components are supplied in pre-measured units so that weighing or measuring of the components is kept to a minimum. After the unit has been mixed it shall be used within the specified pot life.

Primer	Parts by Weight	Parts by Volume
<b>COROFLAKE 68 PRIMER</b>	100	100
<b>HARDENER No. 4</b>	30	33.69

Basecoat	Parts by Weight	Parts by Volume
<b>COROFLAKE 68 PRIMER</b>	100	100
<b>HARDENER No. 4</b>	30	33.69
<b>FILLER F1</b>	240	260.57

Laminate Layer	Parts by Weight	Parts by Volume
<b>COROFLAKE 68 PRIMER</b>	100	100
<b>HARDENER No. 4</b>	30	33.69

Topcoat	Parts by Weight	Parts by Volume
<b>COROFLAKE 60 COMP. A</b>	100	100
<b>COROFLAKE 60 COMP. B</b>	75	75,63

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# LINING 68 M

## CONSUMPTION

Layer	Product	Coverage [g/m <sup>2</sup> ]
Primer	<b>COROFLAKE 68 PRIMER</b>	ca. 300
Basecoat	<b>COROFLAKE 68 PRIMER</b>	ca. 1000
	<b>FILLER F1</b>	ca. 2400
Laminate Layer	<b>COROFLAKE 68 PRIMER</b>	ca. 660
	1 x ECR-fibreglass mat 300 g/m <sup>2</sup>	ca. 330
Topcoat	<b>COROFLAKE 60</b>	ca.300*

\* Per layer

## POT LIFE / WORKING TIME [min]

Product	15°C	20°C	30°C
<b>COROFLAKE 68 PRIMER</b>	ca. 120	ca. 60	ca. 30
<b>COROFLAKE 60</b>	ca. 120	ca. 60	ca. 30

## RECOAT TIME (20°C)

Product	Min. [h]	Max. [Days]
<b>COROFLAKE 68 PRIMER</b>	ca. 12	ca. 7
<b>COROFLAKE 60</b>	ca. 4	ca. 7

## CLEANING

Clean all equipment with **SOLVENT T-100** immediately after use.

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
C-glass surface veil 30 g/m <sup>2</sup>	227.5 m <sup>2</sup>	590 9800
<b>COROFLAKE 60 COMP. A</b>	12 kg	590 0648
<b>COROFLAKE 60 COMP. B</b>	9 kg	590 0916
<b>COROFLAKE 68 PRIMER</b>	12 kg	590 0851
ECR-fibreglass mat 300 g/m <sup>2</sup>	20 m <sup>2</sup>	590 0239
ECR-fibreglass mat 300 g/m <sup>2</sup>	50 m <sup>2</sup>	590 0246
<b>FILLER F1</b>	25 kg	591 0140
<b>HARDENER No. 4</b>	3.6 kg	590 0875
<b>SOLVENT T-100</b>	4 kg	590 0617
<b>SOLVENT T-100</b>	8 kg	590 0600

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
<b>COROFLAKE 60 COMP. A</b>	5 - 25°C	12 Months
<b>COROFLAKE 60 COMP. B</b>	5 - 25°C	12 Months
<b>COROFLAKE 68 PRIMER</b>	5 - 25°C	12 Months
<b>FILLER F1</b>	-	24 Months
<b>HARDENER No. 4</b>	5 - 25°C	12 Months
<b>SOLVENT T-100</b>	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Compressive Strength (Laminate Layer)	EN ISO 604 (ASTM D695)	N/mm <sup>2</sup>	65
Modulus of Elasticity (Bend Test)	EN ISO 178 (ASTM D790)	N/mm <sup>2</sup>	4000 - 6000
Hardness Barcol	EN 59 (ASTM D2583)	-	≥ 20
Min. Adhesion Strength Concrete	EN ISO 4624 (ASTM D7234)	N/mm <sup>2</sup>	1.5*
Viscosity	EN ISO 2555 (ASTM D2196)	mPa·s	325 ± 50
Linear Coefficient of Thermal Expansion	ISO 11359-2 (ASTM C531)	1/K	27-30 x 10 <sup>-6</sup>
Tensile Strength	EN ISO 527 (ASTM D638)	N/mm <sup>2</sup>	65
Max. Operating Temperature Liquids	-	°C	+75

\* Depending on the concrete strength

**Note:** The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## LINING 74 CONCRETE

### PRODUCT DESCRIPTION

**LINING 74** is a fibreglass mat reinforced laminate lining based on two chemical and thermal resistant vinyl ester resins. Due to the excellent mechanical properties, **LINING 74** can cover cracks up to 0.2 mm according to DIBt (German Institute for Construction Technology) guidelines.

### COATING LAYERS CONSUMPTION

The laminate lining consists of the two-component primer **LINING 74 BASE COAT**, the three-component **LINING 74** basecoat, the two-component **LINING 74** reinforced layer with usual two 450 g/m<sup>2</sup> ECR-fibreglass mats as well as one 30 g/m<sup>2</sup> surface veil and the two-component **LINING 74** sealing. The total applied DFT is based on the chemical and thermal load present and can be up to approx. 3.0 - 4.0 mm.

### FIELDS OF APPLICATION

The laminate system **LINING 74** is designed for the protection of concrete components against organic and inorganic acids, oxidizing acids, lye and organic solvents. It is mainly used in concrete tanks, thickeners, containment areas, concrete pits and drains.

### APPROVALS

**LINING 74** is approved (**Z-59.12-298**) by the German Institute of Construction Technology (DIBt) for steel storage vessels

### FEATURES

- Resistance to continuous operating temperatures up to +80°C (liquids)
- Excellent chemical resistance
- Outstanding adhesion to concrete
- Excellent mechanical properties
- Good crack-bridging properties

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of concrete, screed or plaster. Components to be coated shall be designed and manufactured in accordance with EN 14879-1. In addition, DIN 1045 must also be observed.

### SURFACE PRE-TREATMENT

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup> and minimum compressive strength of 25 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%.

### ENVIRONMENTAL CONDITIONS

Throughout the coating process, the temperatures of the substrate and coating materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### APPLICATION

During the application of the product, the application instruction must always be observed.

Trowel applies the **LINING 74** basecoat onto the primed substrate at approx. 1.0 - 1.5mm. Upon placement of the basecoat, the 1st 450 g/m<sup>2</sup> ECR-fibreglass mat is pressed onto the surface and saturated by roller with **LINING 74 BASE COAT** mixture. Onto the uncured layer the 2nd 450 g/m<sup>2</sup> ECR-fibreglass mat is pressed and saturated again by roller with **LINING 74 RESIN** mixture. Then a 30 g/m<sup>2</sup> C-glass surface veil is pressed onto the surface and saturated by roller with **LINING 74 RESIN** mixture. Finally the **LINING 74** sealing is rolled twice onto the surface. 5% **THIN FILM CURING AGENT** are added additionally to the second **LINING 74** sealing.

**Note:** During application, the lined surface should be shaded from direct or indirect sunlight whenever possible.

### MIXING RATIO

The primer and coating components are supplied in pre-measured units so that weighing or measuring of the components is kept to a minimum. After the unit has been mixed it shall be used within the specified pot life.

Primer	Parts by Weight	Parts by Volume
<b>LINING 74 BASE COAT</b>	100	100
<b>HARDENER No. 1 CLEAR</b>	2	1.99

Basecoat	Parts by Weight	Parts by Volume
<b>LINING 74 BASE COAT</b>	100	100
<b>HARDENER No. 1 CLEAR</b>	2	1.99
<b>FILLER F1</b>	240	235,43

Laminate Layer	Parts by Weight	Parts by Volume
<b>LINING 74 BASE COAT</b>	100	100
<b>HARDENER No. 1 CLEAR</b>	2	1.99
<b>LINING 74 RESIN</b>	100	100
<b>HARDENER No. 1 CLEAR</b>	2	1.99

Sealing	Parts by Weight	Parts by Volume
<b>LINING 74 RESIN</b>	100	100
<b>HARDENER No. 1 CLEAR</b>	2	2.09
<b>THIN FILM CURING AGENT</b> (2 <sup>nd</sup> Sealing)	5	6,15

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# LINING 74 CONCRETE

## CONSUMPTION

Layer	Product	Coverage [g/m <sup>2</sup> ]
Primer	LINING 74 BASE COAT	ca. 300
Basecoat	LINING 74 BASE COAT	ca. 1000
	FILLER F1	ca. 2400
1 <sup>st</sup> Laminate Layer	LINING 74 BASE COAT	ca. 1000
	1 x ECR-fibreglass mat 450 g/m <sup>2</sup>	ca. 500
2 <sup>nd</sup> Laminate Layer	LINING 74 RESIN	ca. 1000
	1 x ECR-fibreglass mat 450 g/m <sup>2</sup>	ca. 500
	1 x C-glass surface veil 30 g/m <sup>2</sup>	ca. 33
1 <sup>st</sup> Sealing	LINING 74 RESIN	ca. 200
2 <sup>nd</sup> Sealing	LINING 74 RESIN	ca. 200
	THIN FILM CURING AGENT	ca. 10

## POT LIFE / WORKING TIME [min]

Product	15°C	20°C	30°C
LINING 74 BASE COAT	ca. 90	ca. 60	ca. 30
LINING 74 RESIN	ca. 90	ca. 60	ca. 30

## RECOAT TIME (20°C)

Product	Min. [h]	Max. [Days]
LINING 74 BASE COAT	ca. 4	ca. 3
LINING 74 RESIN	ca. 4	ca. 3

## CLEANING

Clean all equipment with **SOLVENT T-100** immediately after use.

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
C-glass surface veil 30 g/m <sup>2</sup>	227.5 m <sup>2</sup>	590 9800
ECR-fibreglass mat 450 g/m <sup>2</sup>	20 m <sup>2</sup>	590 0260
ECR-fibreglass mat 450 g/m <sup>2</sup>	50 m <sup>2</sup>	590 0277
FILLER F1	25 kg	591 0140
HARDENER No. 1 CLEAR	0.1 kg	590 0181
HARDENER No. 1 CLEAR	0.4 kg	590 0019
LINING 74 BASE COAT	5 kg	590 0404
LINING 74 BASE COAT	20 kg	590 0105
LINING 74 RESIN	5 kg	590 0387
LINING 74 RESIN	20 kg	590 0026
SOLVENT T-100	4 kg	590 0617
SOLVENT T-100	8 kg	590 0600

Product	Size	Article No.
THIN FILM CURING AGENT	0.75 kg	590 0214

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
FILLER F1	-	24 Months
HARDENER No. 1 CLEAR	5 - 20°C	12 Months
LINING 74 BASE COAT	5 - 20°C	6 Months
LINING 74 RESIN	5 - 20°C	6 Months
SOLVENT T-100	5 - 25°C	60 Months
THIN FILM CURING AGENT	5 - 20°C	12 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

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# LINING 74 CONCRETE

Technical Data	Standard	Unit	Value
Compressive Strength (Laminate Layer)	EN ISO 604 (ASTM D695)	N/mm <sup>2</sup>	65
Modulus of Elasticity (Bend Test)	EN ISO 178 (ASTM D790)	N/mm <sup>2</sup>	6000 - 8000
Hardness Barcol	EN 59 (ASTM D2583)	-	≥ 35
Min. Adhesion Strength Concrete	EN ISO 4624 (ASTM D7234)	N/mm <sup>2</sup>	1.5*
Viscosity	EN ISO 2555 (ASTM D2196)	mPa·s	425 ± 125
Linear Coefficient of Thermal Expansion	ISO 11359-2 (ASTM C531)	1/K	27-30 x 10 <sup>-6</sup>
Tensile Strength	EN ISO 527 (ASTM D638)	N/mm <sup>2</sup>	50
Max. Operating Temperature Liquids	-	°C	+80

\* Depending on the concrete strength

**Note:** The indicated temperatures are dependent on the present load and may vary

Information given in the fact sheet above corresponds to the current knowledge available to us regarding our products at the time of its drafting and is intended as a guideline for informational purposes. However, because of the multiple possibilities regarding possible applications, processing and on site conditions, any information given in the fact sheet above is not legally binding, in particular, without being limited to, such information shall not be interpreted as a warranty of merchantability or of fitness for a particular purpose. Customer therefore is advised to conduct its own testing or make an inquiry with our technical department before ordering. We reserve the right to change the product at any time, in particular, without being limited to, minor changes because of advancements in technology. If by way of exception, the information given in the fact sheet above is incorporated by reference into any contract concluded with us under German Law, such information, shall only be interpreted as determining the specific requirements of the contractual products as set out in § 434 BGB (German Civil Code) and shall not be interpreted as constituting a guarantee of condition.

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# PRODUCT INFORMATION

## LINING 74 STEEL

### PRODUCT DESCRIPTION

**LINING 74** is a fibreglass mat reinforced laminate lining based on a chemical and thermal resistant Novolac vinyl ester resin.

### COATING LAYERS CONSUMPTION

The laminate lining consists of the two-component **COROFLAKE S PRIMER**, the three-component **LINING 74** basecoat, the two-component **LINING 74** reinforced layer with two 450 g/m<sup>2</sup> ECR-fibreglass mats as well as one 30 g/m<sup>2</sup> C-glass surface veil and the two-component **LINING 74** sealing. The quantity and the basis weight of the glass mats is variable, depending on the load. The total applied DFT depends on the present chemical and thermal load and can be up to approx. 3.0 - 4.0 mm with two 450 g/m<sup>2</sup> glass mats.

### FIELDS OF APPLICATION

The laminate system **LINING 74** is designed for the protection of steel components against organic and inorganic acids, oxidizing acids, lye and organic solvents. It is mainly used in process plants.

### FEATURES

- Resistance to continuous operating temperatures up to +85°C (liquids)
- Excellent chemical resistance
- Outstanding adhesion to steel
- Excellent mechanical properties

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are steel components. Components to be coated shall be designed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

Surfaces to be coated must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht # 28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 70 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate.

### ENVIRONMENTAL CONDITIONS

Throughout the coating process, the temperatures of the substrate and coating materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### APPLICATION

During the application of the product, the application instruction must always be observed.

Trowel applies the **LINING 74** basecoat onto the primed substrate at approx. 1.0 - 1.5mm. Upon placement of the basecoat, the first 450 ECR-fibreglass mat is pressed onto the surface and saturated by roller with **LINING 74 RESIN** mixture. Onto the uncured layer the second ECR-fibreglass mat is pressed and saturated again by roller with **LINING 74 RESIN** mixture. Then a 30 g/m<sup>2</sup> C-glass surface veil is pressed onto the surface and saturated by roller with **LINING 74 RESIN** mixture. Finally the **LINING 74** sealing is rolled twice onto the surface. 5% **THIN FILM CURING AGENT** are added additionally to the second **LINING 74** sealing.

**Note:** During application, the lined surface should be shaded from direct or indirect sunlight whenever possible.

### MIXING RATIO

The primer and coating components are supplied in pre-measured units so that weighing or measuring of the components is kept to a minimum. After the unit has been mixed it shall be used within the specified pot life.

Primer	Parts by Weight	Parts by Volume
<b>COROFLAKE S PRIMER</b>	100	100
<b>HARDENER No. 1 CLEAR</b>	2	2.11

Basecoat	Parts by Weight	Parts by Volume
<b>LINING 74 RESIN</b>	100	100
<b>HARDENER No. 1 CLEAR</b>	2	2.09
<b>FILLER F1</b>	240	238,86

Laminate Layer	Parts by Weight	Parts by Volume
<b>LINING 74 RESIN</b>	100	100
<b>HARDENER No. 1 CLEAR</b>	2	2.09

Sealing	Parts by Weight	Parts by Volume
<b>LINING 74 RESIN</b>	100	100
<b>HARDENER No. 1 CLEAR</b>	2	2.09
<b>THIN FILM CURING AGENT (2<sup>nd</sup> Sealing)</b>	5	6,15

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# LINING 74 STEEL

## CONSUMPTION

Layer	Product	Coverage [g/m <sup>2</sup> ]
Primer	<b>COROFLAKE S PRIMER</b>	ca. 150
Basecoat	<b>LINING 74 RESIN</b>	ca. 1000
	<b>FILLER F1</b>	ca. 2400
Laminate Layer	<b>LINING 74 RESIN</b>	ca. 2000
	2 x ECR-fibreglass mats 450 g/m <sup>2</sup>	ca. 1000
	1 x C-glass surface veil 30 g/m <sup>2</sup>	ca. 30
1 <sup>st</sup> Sealing	<b>LINING 74 RESIN</b>	ca. 200
2 <sup>nd</sup> Sealing	<b>LINING 74 RESIN</b>	ca. 200
	<b>THIN FILM CURING AGENT</b>	ca. 10

## POT LIFE / WORKING TIME [min]

Product	15°C	20°C	30°C
<b>COROFLAKE S PRIMER</b>	ca. 60	ca. 40	ca. 20
<b>LINING 74 RESIN</b>	ca. 90	ca. 60	ca. 30

## RECOAT TIME (20°C)

Product	Min. [h]	Max. [Days]
<b>COROFLAKE S PRIMER</b>	ca. 6	ca. 7
<b>LINING 74 RESIN</b>	ca. 4	ca. 3

## CLEANING

Clean all equipment with **SOLVENT T-100** immediately after use.

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
C-glass surface veil 30 g/m <sup>2</sup>	227.5 m <sup>2</sup>	590 9800
<b>COROFLAKE S PRIMER</b>	5 kg	590 0167
<b>COROFLAKE S PRIMER</b>	20 kg	590 0033
ECR-fibreglass mat 450 g/m <sup>2</sup>	20 m <sup>2</sup>	590 0260
ECR-fibreglass mat 450 g/m <sup>2</sup>	50 m <sup>2</sup>	590 0277
<b>FILLER F1</b>	25 kg	591 0140
<b>HARDENER No. 1 CLEAR</b>	0.1 kg	590 0181
<b>HARDENER No. 1 CLEAR</b>	0.4 kg	590 0019
<b>LINING 74 RESIN</b>	5 kg	590 0387
<b>LINING 74 RESIN</b>	20 kg	590 0026
<b>SOLVENT T-100</b>	4 kg	590 0617
<b>SOLVENT T-100</b>	8 kg	590 0600
<b>THIN FILM CURING AGENT</b>	0.75 kg	590 0214

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
<b>COROFLAKE S PRIMER</b>	5 - 20°C	6 Months
<b>FILLER F1</b>	-	24 Months
<b>HARDENER No. 1 CLEAR</b>	5 - 20°C	12 Months
<b>LINING 74 RESIN</b>	5 - 20°C	6 Months
<b>SOLVENT T-100</b>	5 - 25°C	60 Months
<b>THIN FILM CURING AGENT</b>	5 - 20°C	12 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

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## LINING 74 STEEL

Technical Data	Standard	Unit	Value
Compressive Strength (Laminate Layer)	EN ISO 604 (ASTM D695)	N/mm <sup>2</sup>	65
Modulus of Elasticity (Bend Test)	EN ISO 178 (ASTM D790)	N/mm <sup>2</sup>	6000 - 8000
Hardness Barcol	EN 59 (ASTM D2583)	-	≥ 35
Min. Adhesion Strength Steel	EN ISO 4624 (ASTM D4541)	N/mm <sup>2</sup>	7
Test Voltage (earliest after 24 hours)	EN 14879-2	kV / 100µm DFT	0.5
Viscosity	EN ISO 2555 (ASTM D2196)	mPa·s	550 ± 150
Linear Coefficient of Thermal Expansion	ISO 11359-2 (ASTM C531)	1/K	27-30 x 10 <sup>-6</sup>
Water Vapour Permeability	ASTM E-96; Method E	perm-inch	0.006
Tensile Strength	EN ISO 527 (ASTM D638)	N/mm <sup>2</sup>	50
Max. Operating Temperature Liquids	-	°C	+85

**Note:** The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## TOPLINE 665

### PRODUCT DESCRIPTION

**TOPLINE 665** is a laminate reinforced, trowel applied coating system based on a chemical and thermal resistant No-volac vinyl ester resin.

### COATING LAYERS CONSUMPTION

The laminate lining consists of the two-component **COROFLAKE N PRIMER**, the three-component **TOPLINE 665** basecoat, the two-component **TOPLINE 665** reinforced layer with one 300 g/m<sup>2</sup> ECR-fibreglass mat and the three-component **TOPLINE 665** topcoat. The total applied DFT can be up to approx. 3.0 - 4.0 mm. If a high-voltage testing of the laminate lining on concrete is required, **COROFLAKE N PRIMER AS** must be used as primer.

### FIELDS OF APPLICATION

The laminate system **TOPLINE 665** is designed for the protection of concrete and steel components against aggressive chemicals and high mechanical loads. **TOPLINE 665** is mainly used for industrial floors, collection pits, sumps and drains as well as agitator vessels.

### FEATURES

- Resistance to continuous operating temperatures up to +75°C (liquids)
- Excellent chemical resistance to inorganic acids, organic acids as well as aliphatic and aromatic solvents
- Outstanding adhesion to steel
- Excellent mechanical properties

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of steel, concrete, screed or plaster. Components to be coated shall be designed and manufactured in accordance with EN 14879-1. For components made of concrete, screed or plaster DIN 1045 must also be observed.

### SURFACE PRE-TREATMENT

#### C-STEEL

Surfaces to be coated must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht # 28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 70 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate.

#### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup> and minimum compressive strength of 25 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%.

### ENVIRONMENTAL CONDITIONS

Throughout the coating process, the temperatures of the substrate and coating materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### APPLICATION

During the application of the product, the application instruction must always be observed.

Trowel applies the **TOPLINE 665** basecoat onto the primed substrate at approx. 1.0 - 1.5mm. Upon placement of the basecoat, the 300 g/m<sup>2</sup> ECR-fibreglass mat is pressed onto the surface and saturated by roller with **TOPLINE 665** mixture. Finally the topcoat is trowel applied in a thickness of approx. 1.0 - 1.5 mm. The surface of the topcoat must be smoothed with a roller or wide brush dampened with **SMOOTHING LIQUID F12**.

**Note:** During application, the lined surface should be shaded from direct or indirect sunlight whenever possible.

### MIXING RATIO

The primer and coating components are supplied in pre-measured units so that weighing or measuring of the components is kept to a minimum. After the unit has been mixed it shall be used within the specified pot life.

Primer	Parts by Weight	Parts by Volume
<b>COROFLAKE N PRIMER</b>	100	100
<b>HARDENER No. 1 CLEAR</b>	2	2.01

Basecoat	Parts by Weight	Parts by Volume
<b>TOPLINE 665</b>	100	100
<b>HARDENER No. 1 CLEAR</b>	2	2.15
<b>FILLER F1</b>	250	248,81

Laminate Layer	Parts by Weight	Parts by Volume
<b>TOPLINE 665</b>	100	100
<b>HARDENER No. 1 CLEAR</b>	2	2.15

Topcoat	Parts by Weight	Parts by Volume
<b>TOPLINE 665</b>	100	100
<b>HARDENER No. 1 CLEAR</b>	2	2.15
<b>FILLER F1</b>	250	248,81

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# TOPLINE 665

## CONSUMPTION

Layer	Product	Coverage [g/m <sup>2</sup> ]
Primer	<b>COROFLAKE N PRIMER</b>	ca. 300 (Concrete) / ca. 150 (Steel)
Basecoat	<b>TOPLINE 665 RESIN</b>	ca. 1000
	<b>FILLER F1</b>	ca. 2500
Laminate Layer	<b>TOPLINE 665 RESIN</b>	ca. 660
	1 x ECR-fibreglass mat 300 g/m <sup>2</sup>	ca. 330
Topcoat	<b>TOPLINE 665 RESIN</b>	ca. 1000
	<b>FILLER F1</b>	ca. 2500
	<b>SMOOTHING LIQUID F12</b>	ca. 150

## POT LIFE / WORKING TIME [min]

Product	15°C	20°C	30°C
<b>COROFLAKE N PRIMER</b>	ca. 60	ca. 40	ca. 20
<b>TOPLINE 665</b>	ca. 90	ca. 60	ca. 30

## RECOAT TIME (20°C)

Product	Min. [h]	Max. [Days]
<b>COROFLAKE N PRIMER</b>	ca. 8	ca. 14
<b>TOPLINE 665</b>	ca. 4	ca. 3

## CLEANING

Clean all equipment with **SOLVENT T-100** immediately after use.

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
<b>COROFLAKE N PRIMER</b>	5 kg	590 0480
<b>COROFLAKE N PRIMER</b>	20 kg	590 0040
ECR-fibreglass mat 300 g/m <sup>2</sup>	20 m <sup>2</sup>	590 0239
ECR-fibreglass mat 300 g/m <sup>2</sup>	50 m <sup>2</sup>	590 0246
<b>FILLER F1</b>	25 kg	591 0140
<b>SMOOTHING LIQUID F12</b>	4 kg	590 0095
<b>HARDENER No. 1 CLEAR</b>	0.1 kg	590 0181
<b>HARDENER No. 1 CLEAR</b>	0.4 kg	590 0019
<b>SOLVENT T-100</b>	4 kg	590 0617
<b>SOLVENT T-100</b>	8 kg	590 0600
<b>TOPLINE 665 RESIN</b>	5 kg	590 0909
<b>TOPLINE 665 RESIN</b>	20 kg	590 0882

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
<b>COROFLAKE N PRIMER</b>	5 - 20°C	6 Months
<b>FILLER F1</b>	-	24 Months
<b>SMOOTHING LIQUID F12</b>	5 - 20°C	12 Months
<b>HARDENER No. 1 CLEAR</b>	5 - 20°C	12 Months
<b>SOLVENT T-100</b>	5 - 25°C	60 Months
<b>TOPLINE 665 RESIN</b>	5 - 20°C	6 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

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## TOPLINE 665

Technical Data	Standard	Unit	Value
Abrasion	ASTM D4060	mg	70
Compressive Strength (Laminate Layer)	EN ISO 604 (ASTM D695)	N/mm <sup>2</sup>	85
Modulus of Elasticity (Bend Test)	EN ISO 178 (ASTM D790)	N/mm <sup>2</sup>	7000 - 10000
Hardness Barcol	EN 59 (ASTM D2583)	-	35
Min. Adhesion Strength Concrete	EN ISO 4624 (ASTM D7234)	N/mm <sup>2</sup>	1.5*
Min. Adhesion Strength Steel	EN ISO 4624 (ASTM D4541)	N/mm <sup>2</sup>	7
Test Voltage (earliest after 24 hours)	EN 14879-2	kV / 100µm DFT	0.5
Viscosity	EN ISO 2555 (ASTM D2196)	mPa·s	550 ± 150
Linear Coefficient of Thermal Expansion	ISO 11359-2 (ASTM C531)	1/K	27-30 x 10 <sup>-6</sup>
Tensile Strength	EN ISO 527 (ASTM D638)	N/mm <sup>2</sup>	20
Max. Operating Temperature Liquids	-	°C	+75

\* Depending on the concrete strength

**Note:** The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## TOPLINE W

### PRODUCT DESCRIPTION

**TOPLINE W** is a laminate reinforced, trowel applied coating system based on a chemical and thermal resistant Bisphenol-A vinyl ester resin with an abrasion resistant topcoat. **TOPLINE W** was designed especially for chemical plants and vessels, where in addition to the chemical and thermal stress a high abrasion occurs through solids.

### COATING LAYERS CONSUMPTION

The laminate lining consists of the two-component **COROFLAKE N PRIMER**, the three-component **TOPLINE W** basecoat, the two-component **TOPLINE W** reinforced layer with one 300 g/m<sup>2</sup> ECR-fibreglass mat and the three-component **TOPLINE W** topcoat. The total applied DFT can be up to approx. 3.0 - 4.0 mm. If a high-voltage testing of the laminate lining on concrete is required, **COROFLAKE N PRIMER AS** must be used as primer.

### FIELDS OF APPLICATION

The laminate system **TOPLINE W** is designed for the protection of concrete and steel components against wear and corrosion. It is mainly used in plant sections where very good wear and abrasion resistance is required. The main applications are waste water treatment plants and thickeners in the salt and potash industry. Furthermore, **TOPLINE W** is also used in agitator vessels and absorbers in flue gas desulphurization plants, where gypsum and limestone suspensions will occur.

### FEATURES

- Excellent abrasion resistance
- Resistance to continuous operating temperatures up to +80°C (liquids)
- Very good chemical resistance to inorganic acids, organic acids and aliphatic solvents
- Excellent adhesion to concrete and steel
- Very good mechanical properties

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of steel, concrete, screed or plaster. Components to be coated shall be designed and manufactured in accordance with EN 14879-1. For components made of concrete, screed or plaster DIN 1045 must also be observed.

### SURFACE PRE-TREATMENT C-STEEL

Surfaces to be coated must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht # 28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 70 microns is

required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate.

### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup> and minimum compressive strength of 25 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%.

### ENVIRONMENTAL CONDITIONS

Throughout the coating process, the temperatures of the substrate and coating materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### APPLICATION

During the application of the product, the application instruction must always be observed.

Trowel applies the **TOPLINE W** basecoat onto the primed substrate at approx. 1.0 - 1.5mm. Upon placement of the basecoat, the 300 g/m<sup>2</sup> ECR-fibreglass mat is pressed onto the surface and saturated by roller with **TOPLINE W** mixture. Finally the topcoat is trowel applied in a thickness of approx. 1.0 - 1.5 mm. The surface of the topcoat must be smoothed with a roller or wide brush dampened with **SMOOTHING LIQUID F12**.

**Note:** During application, the lined surface should be shaded from direct or indirect sunlight whenever possible.

### MIXING RATIO

The primer and coating components are supplied in pre-measured units so that weighing or measuring of the components is kept to a minimum. After the unit has been mixed it shall be used within the specified pot life.

Primer	Parts by Weight	Parts by Volume
<b>COROFLAKE N PRIMER</b>	100	100
<b>HARDENER No. 1 CLEAR</b>	2	2.01

Basecoat	Parts by Weight	Parts by Volume
<b>TOPLINE W RESIN</b>	100	100
<b>HARDENER No. 1 CLEAR</b>	2	2.03
<b>FILLER F1</b>	240	240

Laminate Layer	Parts by Weight	Parts by Volume
<b>TOPLINE W RESIN</b>	100	100
<b>HARDENER No. 1 CLEAR</b>	2	2.03

Topcoat	Parts by Weight	Parts by Volume
<b>TOPLINE W RESIN</b>	100	100
<b>HARDENER No. 1 CLEAR</b>	2	2.03
<b>POWDER W1</b>	260	130

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# TOPLINE W

## CONSUMPTION

Layer	Product	Coverage [g/m <sup>2</sup> ]
Primer	<b>COROFLAKE N PRIMER</b>	ca. 300 (Concrete) / ca. 150 (Steel)
Basecoat	<b>TOPLINE W RESIN</b>	ca. 1000
	<b>FILLER F1</b>	ca. 2400
Laminate Layer	<b>TOPLINE W RESIN</b>	ca. 660
	1 x ECR-fibreglass mat 300 g/m <sup>2</sup>	ca. 330
Topcoat	<b>TOPLINE W RESIN</b>	ca. 1000
	<b>POWDER W1</b>	ca. 2600
	<b>SMOOTHING LIQUID F12</b>	ca. 150

## POT LIFE / WORKING TIME [min]

Product	15°C	20°C	30°C
<b>COROFLAKE N PRIMER</b>	ca. 60	ca. 40	ca. 20
<b>TOPLINE W</b>	ca. 90	ca. 60	ca. 30

## RECOAT TIME (20°C)

Product	Min. [h]	Max. [Days]
<b>COROFLAKE N PRIMER</b>	ca. 8	ca. 14
<b>TOPLINE W</b>	ca. 6	ca. 7

## CLEANING

Clean all equipment with **SOLVENT T-100** immediately after use.

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
<b>COROFLAKE N PRIMER</b>	5 kg	590 0480
<b>COROFLAKE N PRIMER</b>	20 kg	590 0040
ECR-fibreglass mat 300 g/m <sup>2</sup>	20 m <sup>2</sup>	590 0239
ECR-fibreglass mat 300 g/m <sup>2</sup>	50 m <sup>2</sup>	590 0246
<b>FILLER F1</b>	25 kg	591 0140
<b>SMOOTHING LIQUID F12</b>	4 kg	590 0095
<b>HARDENER No. 1 CLEAR</b>	0.1 kg	590 0181
<b>HARDENER No. 1 CLEAR</b>	0.4 kg	590 0019
<b>POWDER W1</b>	22.7 kg	590 0208
<b>SOLVENT T-100</b>	4 kg	590 0617
<b>SOLVENT T-100</b>	8 kg	590 0600
<b>TOPLINE W RESIN</b>	5 kg	590 0459
<b>TOPLINE W RESIN</b>	20 kg	590 0143

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
<b>COROFLAKE N PRIMER</b>	5 - 20°C	6 Months
<b>FILLER F1</b>	-	24 Months
<b>SMOOTHING LIQUID F12</b>	5 - 20°C	12 Months
<b>HARDENER No. 1 CLEAR</b>	5 - 20°C	12 Months
<b>POWDER W1</b>	-	24 Months
<b>SOLVENT T-100</b>	5 - 25°C	60 Months
<b>TOPLINE W RESIN</b>	5 - 20°C	6 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.



## TOPLINE W

Technical Data	Standard	Unit	Value
Abrasion	ASTM D4060	mg	30
Compressive Strength (Laminate Layer)	EN ISO 604 (ASTM D695)	N/mm <sup>2</sup>	85
Modulus of Elasticity (Bend Test)	EN ISO 178 (ASTM D790)	N/mm <sup>2</sup>	7000 - 10000
Hardness Barcol	EN 59 (ASTM D2583)	-	35
Min. Adhesion Strength Concrete	EN ISO 4624 (ASTM D7234)	N/mm <sup>2</sup>	1.5*
Min. Adhesion Strength Steel	EN ISO 4624 (ASTM D4541)	N/mm <sup>2</sup>	7
Test Voltage (earliest after 24 hours)	EN 14879-2	kV / 100µm DFT	0.5
Viscosity	EN ISO 2555 (ASTM D2196)	mPa·s	1250 ± 250
Linear Coefficient of Thermal Expansion	ISO 11359-2 (ASTM C531)	1/K	27-30 x 10 <sup>-6</sup>
Tensile Strength	EN ISO 527 (ASTM D638)	N/mm <sup>2</sup>	20
Max. Operating Temperature Liquids	-	°C	+80

\* Depending on the concrete strength

**Note:** The indicated temperatures are dependent on the present load and may vary

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# DESCRIPTION

## REMACOAT

Product	Product Description
REMACOAT PR 100	<b>REMACOAT PR 100</b> is a solvent-based one-component Polyurethane resin. It cures in thin applied layers by evaporation of solvent and subsequently cross linked by absorbing moisture from the air and the ground. Here, a wear-resistant film is formed. These primer films have a yellowish-transparent colour, which increases under the influence of UV rays.
REMACOAT PR 100 C	<b>REMACOAT PR 100 C</b> is a solvent-based one-component Polyurethane resin. It cures in thin applied layers by evaporation of solvent and subsequently cross linked by absorbing moisture from the air and the ground. The modification of the primer causes a significant increase in the conductivity, which is reflected in a reduced surface and volume resistivity of primer.
REMACOAT PR 100 SF	<b>REMACOAT PR 100 SF</b> is a two-component, solvent free and moisture compatible primer based on epoxy resin, which is applied thinly on the surface. The classical reaction of epoxy resin with amine hardener creates an impact and chemical resistant green coloured film, which increases under the influence of UV rays.
REMACOAT A-60	<b>REMACOAT A-60</b> is a cold curing two-component coating system based on polyurea. Both two highly reactive fluid components react at ambient temperature within approx. 20 seconds and form a highly elastic material.
REMACOAT A-80	<b>REMACOAT A-80</b> is a cold curing two-component coating system based on polyurea. Both two highly reactive fluid components react at ambient temperature within view seconds and form a highly elastic material.
REMACOAT A-80-HP	<b>REMACOAT A-80 HP</b> is a cold curing two-component coating system based on polyurea. Both two highly reactive fluid components react at ambient temperature within view seconds and form a highly elastic material.
REMACOAT D-40	<b>REMACOAT D-40</b> is a cold curing two-component coating system based on polyurea. Both two highly reactive fluid components react at ambient temperature within view seconds and form a highly elastic material. <b>REMACOAT D-40</b> can bridge cracks up to
REMACOAT D-40-S	<b>REMACOAT D-40-S</b> is a cold curing two-component coating system based on polyurea. Both two highly reactive fluid components react at ambient temperature within approx. 60 seconds and form a highly elastic material.

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# OVERVIEW REMACOAT

Product	Resin	Application			Primer
		Spray	Concrete	Steel	
REMACOAT PR 100	Polyurethane	X	X	X	-
REMACOAT PR 100 C	Polyurethane	X	X	X	-
REMACOAT PR 100 SF	Epoxy Resin	X	X	X	-
REMACOAT A-60	Polyurea	X	X	X	REMACOAT PR 100
REMACOAT A-80	Polyurea	X	X	X	REMACOAT PR 100
REMACOAT A-80-HP	Polyurea	X	X	X	REMACOAT PR 100
REMACOAT D-40	Polyurea	X	X	X	REMACOAT PR 100
REMACOAT D-40-S	Polyurea	X	X	X	REMACOAT PR 100

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Product	EN ISO 2811	ISO 868	ISO 868	ISO 37	ISO 37	ISO 4462	DIN 53531	DIN 53531	DIN 53531	EN ISO 2555	ISO 4649	DIN 53122
	[g/cm <sup>3</sup> ]	-	-	[%]	[%]	[%]	[N/mm]	[N/mm]	[N/mm]	[mPa·s]	[mm <sup>3</sup> ]	[g/m <sup>2</sup> ·d]
<b>REMACOAT A-60</b>	ISO: 1.09 ± 0.02 / POLY: 1.00 ± 0.02 / Mixture: 1.00 ± 0.02	60 ± 5		≥ 550	≥ 10	35	≥ 9	≥ 10	+40	ISO: 2750 ± 750 / POLY: 400 ± 50	175 ± 25	17.5 ± 1.5*
<b>REMACOAT A-80</b>	ISO: 1.125 ± 0.015 / POLY: 1.03 ± 0.01 / Mixture: 1.00 ± 0.03	90 ± 5		430 ± 45	≥ 13	≥ 38	≥ 9	≥ 10	+40	ISO: 850 ± 150 / POLY: 1475 ± 125	100 ± 15	13 ± 1*
<b>REMACOAT A-80-HP</b>	ISO: 1.11 ± 0.02 / POLY: 1.04 ± 0.02 / Mixture: 1.05 ± 0.02	80 ± 5		325 ± 25	≥ 15	≥ 38	≥ 7	≥ 8	+40	ISO: 3500 ± 300 / POLY: 1500 ± 300	80 ± 10	13 ± 1*
<b>REMACOAT D-40</b>	ISO: 1.12 ± 0.02 / POLY: 1.04 ± 0.02 / Mixture: 1.19 ± 0.02		45 ± 5	≥ 200	≥ 15	≥ 30	≥ 5	≥ 10	+50	ISO: 450 ± 100 / POLY: 1750 ± 250	< 200	6 ± 1*
<b>REMACOAT D-40-S</b>	ISO: 1.12 ± 0.02 / POLY: 1.04 ± 0.02 / Mixture: 1.21 ± 0.02		45 ± 5	≥ 320	≥ 15	≥ 33	≥ 5	≥ 10	+50	ISO: 450 ± 100 / POLY: 1850 ± 150	< 160	7 ± 1*

\* Coating thickness 4 mm at 38°C

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**REMACOAT**

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# PRODUCT INFORMATION

## REMACOAT PR 100

### PRODUCT DESCRIPTION

**REMACOAT PR 100** is a solvent-based one-component polyurethane resin. It cures in thin applied layers by evaporation of solvent and subsequently cross linked by absorbing moisture from the air and the ground. Here, a wear-resistant film is formed. These primer films have a yellowish-transparent colour, which increases under the influence of UV rays.

### FIELDS OF APPLICATION

Bonding and barrier coating for two-component polyurethane or polyurea coating systems on wood-, concrete-, cement flooring and steel surfaces.

### FEATURES

- Good spread ability
- Large Coverage
- Good curing
- High impact strength
- Good weather resistance
- Chemical resistance to dilute acids, lye, water and fuel oil

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of steel, concrete, screed or plaster. Components to be coated shall be designed and manufactured in accordance with EN 14879-1. For components made of concrete, screed or plaster DIN 1045 must also be observed.

### SURFACE PRE-TREATMENT

#### C-STEEL

Surfaces to be coated must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht # 28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 70 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate.

#### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup> and minimum compressive strength of 25 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%.

### ENVIRONMENTAL CONDITIONS

Throughout the coating process, the temperatures of the substrate and coating materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

Environmental Conditions	Value
Max. Air Humidity	≤ 98%
Application Temperature	-10°C up to +50°C
Dew Point Distance	5 K, Minimum 3K

### APPLICATION

During the application of the product, the application instruction must always be observed.

The primer **REMACOAT PR 100** is applied to the substrate using solvent resistant synthetic rollers, conventionally with compressed air or airless air spray system. **REMACOAT PR 100** must be non-sticky prior to over coating.

### CONSUMPTION

Product	Thickness [µm]	Coverage [g/m <sup>2</sup> ]
<b>REMACOAT PR 100</b>	covering	ca. 100 (steel)
<b>REMACOAT PR 100</b>	covering	ca. 250 (concrete)

The information about coverage is an average for spray applications. Actual coverage depends on the object geometry and the method of application. It can vary.

### POT LIFE [min]

Product	15°C	20°C	30°C
<b>REMACOAT PR 100</b>	-	40 - 60	-

### RECOAT TIME (20°C)

Product	Min. [h]	Max. [days]
<b>REMACOAT PR 100</b>	ca. 1 (steel) / ca. 4 (concrete)	ca. 2 (steel) / ca. 3 (concrete)

### CLEANING

Clean all equipment immediately after use. The spray gun should be cleaned with acetone, MEK (methyl ethyl ketone) or DMF (Dimethylformamide). The machine, pump and hoses should be cleaned with Mesamoll or DOP (Dioctyl phthalate).

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# REMACOAT PR 100

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
REMACOAT PR 100	0.8 kg	590 2835
REMACOAT PR 100	4 kg	590 2842
REMACOAT PR 100	20 kg	590 2859

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
REMACOAT PR 100	10 - 30°C	12 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Unit	Value
Polymer	-	Diphenylmethane diisocyanate (isomers and homologues)
Solvent	-	Ethylbenzene / Xylene / Aromatic solvents
Colour	-	brown, transparent (colored as desired)
Density (Mixture)	g/cm <sup>3</sup>	0.98 ± 0.02
Solid Content	%	ca. 50
Max. Operating Temperature	-	Depends on the subsequent coating system

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# PRODUCT INFORMATION

## REMACOAT PR 100 C

### PRODUCT DESCRIPTION

**REMACOAT PR 100 C** is a solvent-based one-component polyurethane resin. It cures in thin applied layers by evaporation of solvent and subsequently cross linked by absorbing moisture from the air and the ground. The modification of the primer causes a significant increase in the conductivity, which is reflected in a reduced surface and volume resistivity of primer.

### FIELDS OF APPLICATION

With **REMACOAT PR 100 C**, the structural strength of the mineral substrate (e.g. concrete) and the adhesive strength of the coating are improved. In addition, a conductive layer is provided which allows a spark test.

For the spark test a sensitive measuring system (resolution, max. 0.01 kV) with audible and visual signal (e.g., Elcometer 236/15) is recommended. Other test equipment must be checked prior to use for the function.

### FEATURES

- Large Coverage
- Good curing
- High impact strength
- Good weather resistance
- Chemical resistance to dilute acids, lye, water and fuel oil
- Generation of an electrically conductive layer

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of steel, concrete, screed or plaster. Components to be coated shall be designed and manufactured in accordance with EN 14879-1. For components made of concrete, screed or plaster DIN 1045 must also be observed.

### SURFACE PRE-TREATMENT

#### C-STEEL

Surfaces to be coated must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht # 28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 70 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate.

#### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup> and minimum compressive strength of 25 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%.

### ENVIRONMENTAL CONDITIONS

Throughout the coating process, the temperatures of the substrate and coating materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

Environmental Conditions	Value
Max. Air Humidity	≤ 98%
Application Temperature	-10°C up to +50°C
Dew Point Distance	5 K, Minimum 3K

### APPLICATION

During the application of the product, the application instruction must always be observed.

The primer **REMACOAT PR 100 C** is applied to the substrate using solvent resistant synthetic rollers, conventionally with compressed air or airless air spray system.

**REMACOAT PR 100** must be non-sticky prior to over coating.

### CONSUMPTION

Product	Thickness [µm]	Coverage [g/m <sup>2</sup> ]
<b>REMACOAT PR 100 C</b>	covering	ca. 150 (steel)
<b>REMACOAT PR 100 C</b>	covering	ca. 250 (concrete)

The information about coverage is an average for spray applications. Actual coverage depends on the object geometry and the method of application. It can vary.

### POT LIFE [min]

Product	15°C	20°C	30°C
<b>REMACOAT PR 100 C</b>	-	40 - 60	-

### RECOAT TIME (20°C)

Product	Min. [h]	Max. [days]
<b>REMACOAT PR 100 C</b>	ca. 2 (steel) / ca. 4 (concrete)	ca. 2 (steel) / ca. 3 (concrete)

### CLEANING

Clean all equipment immediately after use. The spray gun should be cleaned with acetone, MEK (methyl ethyl ketone) or DMF (Dimethylformamide). The machine, pump and hoses should be cleaned with Mesamoll or DOP (Diocetyl phthalate).

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# REMACOAT PR 100 C

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
REMACOAT PR 100 C	4 kg	590 2843
REMACOAT PR 100 C	20 kg	590 2860

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
REMACOAT PR 100 C	10 - 30°C	12 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Unit	Value
Polymer	-	Diphenylmethane diisocyanate (isomers and homologues)
Solvent	-	Ethylbenzene / Xylene / Aromatic solvents
Colour	-	brown, transparent (colored as desired)
Density (Mixture)	g/cm <sup>3</sup>	0.98 ± 0.02
Solid Content	%	ca. 50
Viscosity	mPa·s	100
Max. Operating Temperature	-	Depends on the subsequent coating system

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# PRODUCT INFORMATION

## REMACOAT PR 100 SF

### PRODUCT DESCRIPTION

**REMACOAT PR 100 SF** is a two-component, solvent free and moisture compatible primer based on epoxy resin, which is applied thinly on the surface. The classical reaction of epoxy resin with amine hardener creates an impact and chemical resistant green coloured film, which increases under the influence of UV rays.

### FIELDS OF APPLICATION

Bonding and barrier coating for two-component polyurethane, polyurea and epoxy coating systems on wood-, concrete-, cement flooring and steel surfaces.

### FEATURES

- Good spread ability
- Good penetration of substrates such as steel or concrete
- Excellent adhesion to wet concrete substrates
- Good curing
- Chemical resistance to dilute acids, lye, water and fuel oil

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of steel, concrete, screed or plaster. Components to be coated shall be designed and manufactured in accordance with EN 14879-1. For components made of concrete, screed or plaster DIN 1045 must also be observed.

### SURFACE PRE-TREATMENT

#### C-STEEL

Surfaces to be coated must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht # 28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 70 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate.

#### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup> and minimum compressive strength of 25 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%.

### ENVIRONMENTAL CONDITIONS

Throughout the coating process, the temperatures of the substrate and coating materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

Environmental Conditions	Value
Max. Air Humidity	≤ 98%
Application Temperature	-10°C up to +50°C
Dew Point Distance	5 K, Minimum 3K

### APPLICATION

During the application of the product, the application instruction must always be observed.

Both components must be homogeneously stirred prior to application. Subsequently, **REMACOAT PR 100 SF COMP. B** is added to **REMACOAT PR 100 SF COMP. A** in the indicated mixing ratio and thoroughly mixed.

The primer **REMACOAT PR 100 SF** is applied on the surface using solvent resistant synthetic rollers, conventionally with compressed air or airless air spray system.

**REMACOAT PR 100 SF** must be non-sticky prior to over coating.

### MIXING RATIO

The primer and coating components are supplied in pre-measured units so that weighing or measuring of the components is kept to a minimum. After the unit has been mixed it shall be used within the specified pot life.

Coating	Parts by Weight	Parts by Volume
<b>REMACOAT PR 100 SF COMP. A</b>	100	100
<b>REMACOAT PR 100 SF COMP. B</b>	58	63.07

### CONSUMPTION

Product	Thickness [µm]	Coverage [g/m <sup>2</sup> ]
<b>REMACOAT PR 100 SF</b>	covering	ca. 100 - 200 (steel)
<b>REMACOAT PR 100 SF</b>	covering	ca. 250 - 450 (concrete)

The information about coverage is an average for spray applications. Actual coverage depends on the object geometry and the method of application. It can vary.

### POT LIFE [min]

Product	15°C	20°C	30°C
<b>REMACOAT PR 100 SF</b>	-	40 - 60	-

### RECOAT TIME (20°C)

Product	Min. [h]	Max. [days]
<b>REMACOAT PR 100 SF</b>	ca. 6 - 8	ca. 2 (steel) / ca. 3 (concrete)

### CLEANING

Clean all equipment immediately after use. The spray gun should be cleaned with acetone, MEK (methyl ethyl ketone) or DMF (Dimethylformamide). The machine, pump and hoses should be cleaned with Mesamoll or DOP (Diocetyl phthalate).

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# REMACOAT PR 100 SF

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
REMACOAT PR 100 SF COMP. A	5 kg	590 2844
REMACOAT PR 100 SF COMP. A	13 kg	590 2861
REMACOAT PR 100 SF COMP. B	2.9 kg	590 2845
REMACOAT PR 100 SF COMP. B	7.54 kg	590 2862

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
REMACOAT PR 100 SF COMP. A	10 - 30°C	12 Months
REMACOAT PR 100 SF COMP. B	10 - 30°C	12 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Unit	Value
Polymer	-	REMACOAT PR 100 SF COMP. A: Epoxy resin based on bisphenol A / F; REMACOAT PR 100 SF COMP. B: Formulated polyamino amide adduct
Colour	-	green
Density (Mixture)	g/cm <sup>3</sup>	1.09 ± 0.02
Solid Content	%	100
Viscosity	mPa·s	600 - 900
Max. Operating Temperature	-	Depends on the subsequent coating system

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# PRODUCT INFORMATION

## REMACOAT A-60

### PRODUCT DESCRIPTION

**REMACOAT A-60** is a cold curing two-component coating system based on polyurea. Both two highly reactive fluid components react at ambient temperature within approx. 20 seconds and form a highly elastic material.

### COATING LAYERS CONSUMPTION

The coating system consists of the primer **REMACOAT PR 100** and the two highly reactive fluid components **REMACOAT A-60 ISO** and **REMACOAT A-60 POLY**. The total applied DFT is based on the present chemical, thermal and mechanical load.

### POLYMER TYPE

Comp.	Polymer Type	Colour
ISO	Diphenylmethane diisocyanate (isomers and homologues)	Honey, transparent
POLY	Mixture of polyoxyalkylamines	Grey, available in different colours

### FIELDS OF APPLICATION

**REMACOAT A-60** is used in almost all applications related with the wear protection as a multifunctional surface protection. Typical fields of applications are lining of:

- Production of wear protection linings on simply profiled, large area of steel plates, e.g. silos, bulk material containers, conveyor troughs and pipes
- Manufacture of elastic forms
- Reefers as well as cold storage rooms
- Jacketing of foamed chemical materials with low bulk density
- Coating of geometrically complicated plant parts
- Production of waterproof layers for the building industry

### FEATURES

- Good resistance to wet wear, friction wear and also impact wear
- Excellent wear resistance at high ozone concentrations also under dynamic load
- Fast curing
- Can be applied overhead
- Highly elastic
- Good crack bridging properties

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of steel, concrete, screed or plaster. Components to be coated shall be designed and manufactured in accordance with EN 14879-1. For components made of concrete, screed or plaster DIN 1045 must also be observed.

### SURFACE PRE-TREATMENT

#### C-STEEL

Surfaces to be coated must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht # 28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 70 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate.

#### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup> and minimum compressive strength of 25 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%.

### ENVIRONMENTAL CONDITIONS

Throughout the coating process, the temperatures of the substrate and coating materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

Environmental Conditions	Value
Max. Air Humidity	≤ 98%
Application Temperature	-10°C up to +50°C
Dew Point Distance	5 K, Minimum 3K

### APPLICATION

During the application of the product, the application instruction must always be observed.

The primer **REMACOAT PR 100** is applied to the substrate using an airless air spray system or by rolling or brushing. **REMACOAT PR 100** must be non-sticky prior to over coating. The two liquid components **REMACOAT A-60 ISO** and **REMACOAT A-60 POLY** are applied onto the primed surface using a 2K high-pressure airless air spray system. **REMACOAT A-60 POLY** must be well stirred prior to application.

### MIXING RATIO

Coating	Parts by Weight	Parts by Volume
<b>REMACOAT A-60 POLY</b>	100	100
<b>REMACOAT A-60 ISO</b>	107	100

### APPLICATION NOTES

Note	Value
Gel Time	ca. 24 - 29 sec.
Tack-free Time	ca. 10 min.
Preheat	+25°C up to +30°C
Application Temperature	+70°C up to +80°C

### CLEANING

Clean all equipment immediately after use. The spray gun should be cleaned with acetone, MEK (methyl ethyl ketone) or DMF (Dimethylformamide). The machine, pump and hoses should be cleaned with Mesamoll or DOP (Diocetyl phthalate).

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# REMACOAT A-60

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
REMACOAT PR 100	0.8 kg	590 2835
REMACOAT PR 100	4 kg	590 2842
REMACOAT PR 100	20 kg	590 2859
REMACOAT A-60 ISO	20 kg	590 2710
REMACOAT A-60 ISO	215 kg	590 2720
REMACOAT A-60 POLY	20 kg	590 2730
REMACOAT A-60 POLY	200 kg	590 2740

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
REMACOAT A-60 ISO	10 - 30°C	12 Months
REMACOAT A-60 POLY	10 - 30°C	12 Months
REMACOAT PR 100	10 - 30°C	12 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Abrasion (Volume Abrasion)	DIN ISO 4649	mm <sup>3</sup>	175 ± 25
Density	EN ISO 2811 (ASTM D1475)		ISO: 1.09 ± 0.02 / POLY: 1.00 ± 0.02 / Mixture: 1.00 ± 0.02
Hardness Shore A	ISO 868	-	60 ± 5
Surface Resistivity	IEC 60167	-	≥ 4.0 x 10 <sup>11</sup>
Elongation at Break	ISO 37	%	≥ 550
Tensile Strength	ISO 37	N/mm <sup>2</sup>	≥ 10
Resilience	ISO 4462 (DIN 53512)	%	35
Peel Strength Concrete / Steel	DIN 53531	N/mm	≥ 9 / ≥ 10
Water Vapour Permeability	DIN 53122	g/m <sup>2</sup> ·d	17.5 ± 1.5*
Max. Operating Temperature Liquids	-	°C	+40
Max. Operating Temperature Dry	-	°C	+130
Short-Term Operating Temperature Dry	-	°C	+150

\* Coating Thickness 4 mm at 38°C

**Note:** Final properties are reached after 5-7 days. The technological values were determined after 28 days of conditioning at ambient conditions. (T = 23 ± 2°C; humidity = 40 – 60%)

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# PRODUCT INFORMATION

## REMACOAT A-80

### PRODUCT DESCRIPTION

**REMACOAT A-80** is a cold curing two-component coating system based on polyurea. Both two highly reactive fluid components react at ambient temperature within view seconds and form a highly elastic material.

### COATING LAYERS CONSUMPTION

The coating system consists of the primer **REMACOAT PR 100** and the two highly reactive fluid components **REMACOAT A-80 ISO** and **REMACOAT A-80 POLY**. The total applied DFT is based on the present chemical, thermal and mechanical load.

### POLYMER TYPE

Comp.	Polymer Type	Colour
ISO	Diphenylmethane diisocyanate (isomers and homologues)	Honey, transparent
POLY	Mixture of polyoxyalkylamines	Grey, available in different colours

### FIELDS OF APPLICATION

**REMACOAT A-80** is used mainly for wear protection as a multifunctional surface protection. Typical fields of application are lining of:

- Bridges
- Reefers as well as cold storage rooms
- Washing and cleaning stations
- Tank pit coatings
- Coating of oil pipelines
- Tunnel
- Desalination plants
- Terraces
- Lining of waste water systems

### FEATURES

- Good resistance to wet wear
- Fast curing
- Can be applied overhead
- Highly elastic
- Good crack bridging properties

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of steel, concrete, screed or plaster. Components to be coated shall be designed and manufactured in accordance with EN 14879-1. For components made of concrete, screed or plaster DIN 1045 must also be observed.

### SURFACE PRE-TREATMENT

#### C-STEEL

Surfaces to be coated must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht # 28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2)

as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 70 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate.

#### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup> and minimum compressive strength of 25 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%.

### ENVIRONMENTAL CONDITIONS

Throughout the coating process, the temperatures of the substrate and coating materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

Environmental Conditions	Value
Max. Air Humidity	≤ 98%
Application Temperature	-10°C up to +50°C
Dew Point Distance	5 K, Minimum 3K

### APPLICATION

During the application of the product, the application instruction must always be observed.

The primer **REMACOAT PR 100** is applied to the substrate using an airless air spray system or by rolling or brushing. **REMACOAT PR 100** must be non-sticky prior to over coating. The two liquid components **REMACOAT A-80 ISO** and **REMACOAT A-80 POLY** are applied onto the primed surface using a 2K high-pressure airless air spray system. **REMACOAT A-80 POLY** must be well stirred prior to application.

### MIXING RATIO

Coating	Parts by Weight	Parts by Volume
<b>REMACOAT A-80 POLY</b>	100	100
<b>REMACOAT A-80 ISO</b>	109	100

### APPLICATION NOTES

Note	Value
Gel Time	ca. 10 - 12 sec.
Tack-free Time	ca. 60 sec.
Preheat	+25°C up to +30°C
Application Temperature	ISO: +75°C / POLY: +80°C
Application Pressure	140 - 180 bar

### CLEANING

Clean all equipment immediately after use. The spray gun should be cleaned with acetone, MEK (methyl ethyl ketone) or DMF (Dimethylformamide). The machine, pump and hoses should be cleaned with Mesamoll or DOP (Diocetyl phthalate).

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# REMACOAT A-80

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
REMACOAT PR 100	0.8 kg	590 2835
REMACOAT PR 100	4 kg	590 2842
REMACOAT PR 100	20 kg	590 2859
REMACOAT A-80 ISO	20 kg	590 2938
REMACOAT A-80 ISO	222 kg	590 2914
REMACOAT A-80 POLY	20 kg	590 2921
REMACOAT A-80 POLY	208 kg	590 2952

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
REMACOAT A-80 ISO	10 - 30 °C	12 Months
REMACOAT A-80 POLY	10 - 30 °C	12 Months
REMACOAT PR 100	10 - 30 °C	12 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Abrasion (Volume Abrasion)	DIN ISO 4649	mm <sup>3</sup>	100 ± 15
Density	EN ISO 2811 (ASTM D1475)		ISO: 1.125 ± 0.015 / POLY: 1.03 ± 0.01 / Mixture: 1.00 ± 0.03
Hardness Shore A	ISO 868	-	90 ± 5
Surface Resistivity	IEC 60167	-	≥ 1.0 × 10 <sup>11</sup>
Elongation at Break	ISO 37	%	430 ± 45
Tensile Strength	ISO 37	N/mm <sup>2</sup>	≥ 13
Resilience	ISO 4462 (DIN 53512)	%	≥ 38
Peel Strength Concrete / Steel	DIN 53531	N/mm	≥ 9 / ≥ 10
Water Vapour Permeability	DIN 53122	g/m <sup>2</sup> ·d	13 ± 1*
Max. Operating Temperature Liquids	-	°C	+40
Max. Operating Temperature Dry	-	°C	+130
Short-Term Operating Temperature Dry	-	°C	+150

\* Coating Thickness 4 mm at 38 °C

**Note:** Final properties are reached after 5-7 days. The technological values were determined after 28 days of conditioning at ambient conditions. (T = 23 ± 2 °C; humidity = 40 – 60%)

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# PRODUCT INFORMATION

## REMACOAT A-80-HP

### PRODUCT DESCRIPTION

**REMACOAT A-80 HP** is a cold curing two-component coating system based on polyurea. Both two highly reactive fluid components react at ambient temperature within view seconds and form a highly elastic material.

### COATING LAYERS CONSUMPTION

The coating system consists of the primer **REMACOAT PR 100** and the two highly reactive fluid components **REMACOAT A-80-HP ISO** and **REMACOAT A-80-HP POLY**. The total applied DFT is based on the present chemical, thermal and mechanical load.

### POLYMER TYPE

Comp.	Polymer Type	Colour
ISO	Diphenylmethane diisocyanate (isomers and homologues)	Honey, transparent
POLY	Mixture of polyoxyalkylamines	Grey, available in different colours

### FIELDS OF APPLICATION

**REMACOAT A-80-HP** is used mainly for wear protection as a multifunctional surface protection. Typical fields of application are lining of:

- Truck body lining
- Buckets
- Vibration channels
- Pulleys
- Material transfer points

### FEATURES

- Excellent resistance to sliding wear
- Fast curing
- Can be applied overhead
- Highly elastic
- Good crack bridging properties

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of steel, concrete, screed or plaster. Components to be coated shall be designed and manufactured in accordance with EN 14879-1. For components made of concrete, screed or plaster DIN 1045 must also be observed.

### SURFACE PRE-TREATMENT C-STEEL

Surfaces to be coated must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht # 28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 70 microns is

required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate.

### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup> and minimum compressive strength of 25 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%.

### ENVIRONMENTAL CONDITIONS

Throughout the coating process, the temperatures of the substrate and coating materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

Environmental Conditions	Value
Max. Air Humidity	≤ 98%
Application Temperature	-10°C up to +50°C
Dew Point Distance	5 K, Minimum 3K

### APPLICATION

During the application of the product, the application instruction must always be observed.

The primer **REMACOAT PR 100** is applied to the substrate using an airless air spray system or by rolling or brushing. **REMACOAT PR 100** must be non-sticky prior to over coating. The two liquid components **REMACOAT A-80-HP ISO** and **REMACOAT A-80-HP POLY** are applied onto the primed surface using a 2K high-pressure airless air spray system. **REMACOAT A-80-HP POLY** must be well stirred prior to application.

### MIXING RATIO

Coating	Parts by Weight	Parts by Volume
REMACOAT A-80-HP POLY	100	100
REMACOAT A-80-HP ISO	109	100

### APPLICATION NOTES

Note	Value
Gel Time	ca. 13 - 15 sec.
Tack-free Time	ca. 120 sec.
Preheat	+40°C
Application Temperature	+75°C up to +80°C
Over Coating Time	- up to 4h directly possible / - 4h up to 48h refresh with <b>REMACOAT PR 100</b> / - after 48h roughen surface + <b>REMACOAT PR 100</b>

### CLEANING

Clean all equipment immediately after use. The spray gun should be cleaned with acetone, MEK (methyl ethyl ketone) or DMF (Dimethylformamide). The machine, pump and hoses should be cleaned with Mesamoll or DOP (Dioctyl phthalate).

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# REMACOAT A-80-HP

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
REMACOAT PR 100	0.8 kg	590 2835
REMACOAT PR 100	4 kg	590 2842
REMACOAT PR 100	20 kg	590 2859
REMACOAT A-80-HP ISO	20 kg	590 3370
REMACOAT A-80-HP ISO	222 kg	590 3360
REMACOAT A-80-HP POLY	20 kg	590 3380
REMACOAT A-80-HP POLY	206 kg	590 3350

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
REMACOAT A-80-HP ISO	10 - 30°C	12 Months
REMACOAT A-80-HP POLY	10 - 30°C	12 Months
REMACOAT PR 100	10 - 30°C	12 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Abrasion (Volume Abrasion)	DIN ISO 4649	mm <sup>3</sup>	80 ± 10
Density	EN ISO 2811 (ASTM D1475)		ISO: 1.11 ± 0.02 / POLY: 1.04 ± 0.02 / Mixture: 1.05 ± 0.02
Hardness Shore A	ISO 868	-	80 ± 5
Surface Resistivity	IEC 60167	-	≥ 1.0 x 10 <sup>11</sup>
Elongation at Break	ISO 37	%	325 ± 25
Tensile Strength	ISO 37	N/mm <sup>2</sup>	≥ 15
Resilience	ISO 4462 (DIN 53512)	%	≥ 38
Peel Strength Concrete / Steel	DIN 53531	N/mm	≥ 7 / ≥ 8
Water Vapour Permeability	DIN 53122	g/m <sup>2</sup> -d	13 ± 1*
Max. Operating Temperature Liquids	-	°C	+40
Max. Operating Temperature Dry	-	°C	+130
Short-Term Operating Temperature Dry	-	°C	+150

\* Coating Thickness 4 mm at 38°C

**Note:** Final properties are reached after 5-7 days. The technological values were determined after 28 days of conditioning at ambient conditions. (T = 23 ± 2°C; humidity = 40 – 60%)

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# PRODUCT INFORMATION

## REMACOAT D-40

### PRODUCT DESCRIPTION

**REMACOAT D-40** is a cold curing two-component coating system based on polyurea. Both two highly reactive fluid components react at ambient temperature within view seconds and form a highly elastic material. **REMACOAT D-40** can bridge cracks up to

### COATING LAYERS CONSUMPTION

The coating system consists of the primer **REMACOAT PR 100** and the two highly reactive fluid components **REMACOAT D-40 ISO** and **REMACOAT D-40 POLY**. The total applied DFT is based on the present chemical, thermal and mechanical load.

### POLYMER TYPE

Comp.	Polymer Type	Colour
ISO	Diphenylmethane diisocyanate (isomers and homologues)	Honey, transparent
POLY	Mixture of polyoxyalkylamines	Grey, available in different colours

### FIELDS OF APPLICATION

Due its special characteristics, **REMACOAT D-40** is used nearly in almost all industrial and trade sectors as a multi-functional surface protection. Typical fields of applications are lining of:

- Sewage lagoons and ponds coatings
- Reefers as well as cold storage rooms
- Washing and cleaning stations
- Tank pit coatings
- Coating of oil pipelines
- Marine offshore platforms
- Desalination plants
- Neutralization basin
- Lining of wastewater systems
- Storage ponds in waste incineration plants

### FEATURES

#### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

#### SUBSTRATE

Substrates are components made of steel, concrete, screed or plaster. Components to be coated shall be designed and manufactured in accordance with EN 14879-1. For components made of concrete, screed or plaster DIN 1045 must also be observed.

#### SURFACE PRE-TREATMENT

##### C-STEEL

Surfaces to be coated must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht # 28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be

achieved. A minimum surface profile of  $R_z \geq 70$  microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate.

#### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup> and minimum compressive strength of 25 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%.

### ENVIRONMENTAL CONDITIONS

Throughout the coating process, the temperatures of the substrate and coating materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

Environmental Conditions	Value
Max. Air Humidity	≤ 98%
Application Temperature	-10°C up to +50°C
Dew Point Distance	5 K, Minimum 3K

### APPLICATION

During the application of the product, the application instruction must always be observed.

The primer **REMACOAT PR 100** is applied to the substrate using an airless air spray system or by rolling or brushing. **REMACOAT PR 100** must be non-sticky prior to over coating. The two liquid components **REMACOAT D-40 ISO** and **REMACOAT D-40 POLY** are applied onto the primed surface using a 2K high-pressure airless air spray system.

**REMACOAT D-40 POLY** must be well stirred prior to application.

### MIXING RATIO

Coating	Parts by Weight	Parts by Volume
REMACOAT D-40 POLY	100	100
REMACOAT D-40 ISO	94	100

### APPLICATION NOTES

Note	Value
Gel Time	ca. 2 - 4 sec.
Tack-free Time	ca. 6 - 8 sec.
Preheat	+25°C up to +30°C
Application Temperature	ISO: +75°C / POLY: +80°C
Over Coating Time	- up to 10h directly possible/ - 10h up to 48h refresh with <b>REMACOAT PR 100</b> / - after 48h roughen surface + <b>REMACOAT PR 100</b>

### CLEANING

Clean all equipment immediately after use. The spray gun should be cleaned with acetone, MEK (methyl ethyl ketone) or DMF (Dimethylformamide). The machine, pump and hoses should be cleaned with Mesamoll or DOP (Diocetyl phthalate).

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# REMACOAT D-40

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
REMACOAT PR 100	0.8 kg	590 2835
REMACOAT PR 100	4 kg	590 2842
REMACOAT PR 100	20 kg	590 2859
REMACOAT D-40 ISO	20 kg	590 2866
REMACOAT D-40 ISO	224 kg	590 2897
REMACOAT D-40 POLY	20 kg	590 2873
REMACOAT D-40 POLY	230 kg	590 2907

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
REMACOAT D-40 ISO	10 - 30°C	12 Months
REMACOAT D-40 POLY	10 - 30°C	12 Months
REMACOAT PR 100	10 - 30°C	12 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Abrasion (Volume Abrasion)	DIN ISO 4649	mm <sup>3</sup>	< 200
Density	EN ISO 2811 (ASTM D1475)		ISO: 1.12 ± 0.02 / POLY: 1.04 ± 0.02 / Mixture: 1.19 ± 0.02
Hardness Shore D	ISO 868	-	45 ± 5
Surface Resistivity	IEC 60167	-	≥ 1.0 x 10 <sup>11</sup>
Elongation at Break	ISO 37	%	≥ 200
Tensile Strength	ISO 37	N/mm <sup>2</sup>	≥ 15
Resilience	ISO 4462 (DIN 53512)	%	≥ 30
Peel Strength Concrete / Steel	DIN 53531	N/mm	≥ 5 / ≥ 10
Water Vapour Permeability	DIN 53122	g/m <sup>2</sup> ·d	6 ± 1*
Max. Operating Temperature Liquids	-	°C	+50
Max. Operating Temperature Dry	-	°C	+130
Short-Term Operating Temperature Dry	-	°C	+150

\* Coating Thickness 4 mm at 38°C

**Note:** Final properties are reached after 5-7 days. The technological values were determined after 28 days of conditioning at ambient conditions. (T = 23 ± 2°C; humidity = 40 – 60%)

Information given in the fact sheet above corresponds to the current knowledge available to us regarding our products at the time of its drafting and is intended as a guideline for informational purposes. However, because of the multiple possibilities regarding possible applications, processing and on site conditions, any information given in the fact sheet above is not legally binding, in particular, without being limited to, such information shall not be interpreted as a warranty of merchantability or of fitness for a particular purpose. Customer therefore is advised to conduct its own testing or make an inquiry with our technical department before ordering. We reserve the right to change the product at any time, in particular, without being limited to, minor changes because of advancements in technology. If by way of exception, the information given in the fact sheet above is incorporated by reference into any contract concluded with us under German Law, such information, shall only be interpreted as determining the specific requirements of the contractual products as set out in § 434 BGB (German Civil Code) and shall not be interpreted as constituting a guarantee of condition.

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# PRODUCT INFORMATION

## REMACOAT D-40-S

### PRODUCT DESCRIPTION

**REMACOAT D-40-S** is a cold curing two-component coating system based on polyurea. Both two highly reactive fluid components react at ambient temperature within approx. 60 seconds and form a highly elastic material.

### COATING LAYERS CONSUMPTION

The coating system consists of the primer **REMACOAT PR 100** and the two highly reactive fluid components **REMACOAT D-40 ISO** and **REMACOAT D-40-S POLY**. The total applied DFT is based on the present chemical, thermal and mechanical load.

### POLYMER TYPE

Comp.	Polymer Type	Colour
ISO	Diphenylmethane diisocyanate (isomers and homologues)	Honey, transparent
POLY	Mixture of polyoxyalkylamines	Grey, available in different colours

### FIELDS OF APPLICATION

Due its special characteristics, **REMACOAT D-40-S** is used nearly in almost all industrial and trade sectors as a multi-functional surface protection. Due to the long gel or curing time of **REMACOAT D-40-S** this coating system is ideal for the application of heavy duty industrial flooring.

### FEATURES

- Significantly extended gelification, and tack free time / cur-ing time
- Self-levelling characteristics
- Optimized levelling layer thickness for large application areas
- Smooth surface
- Excellent for external coating of pipes and pipelines
- Significantly improved tear growth resistance
- Increased tensile elongation at the same hardness

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of steel, concrete, screed or plaster. Components to be coated shall be designed and manufactured in accordance with EN 14879-1. For components made of concrete, screed or plaster DIN 1045 must also be observed.

### SURFACE PRE-TREATMENT C-STEEL

Surfaces to be coated must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht # 28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 70 microns is

required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate.

### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup> and minimum compressive strength of 25 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%.

### ENVIRONMENTAL CONDITIONS

Throughout the coating process, the temperatures of the substrate and coating materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

Environmental Conditions	Value
Max. Air Humidity	≤ 98%
Application Temperature	-10°C up to +50°C
Dew Point Distance	5 K, Minimum 3K

### APPLICATION

During the application of the product, the application instruction must always be observed.

The primer **REMACOAT PR 100** is applied to the substrate using an airless air spray system or by rolling or brushing. **REMACOAT PR 100** must be non-sticky prior to over coating. The two liquid components **REMACOAT D-40 ISO** and **REMACOAT D-40-S POLY** are applied onto the primed surface using a 2K high-pressure airless air spray system. **REMACOAT D-40-S POLY** must be well stirred prior to application.

### MIXING RATIO

Coating	Parts by Weight	Parts by Volume
REMACOAT D-40-S POLY	100	100
REMACOAT D-40 ISO	94	100

### APPLICATION NOTES

Note	Value
Gel Time	ca. 50 - 70 sec.
Tack-free Time	ca. 3 - 5 min.
Preheat	+25°C up to +30°C
Application Temperature	+70°C up to +80°C

### CLEANING

Clean all equipment immediately after use. The spray gun should be cleaned with acetone, MEK (methyl ethyl ketone) or DMF (Dimethylformamide). The machine, pump and hoses should be cleaned with Mesamoll or DOP (Diocetyl phthalate).

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# REMACOAT D-40-S

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
REMACOAT PR 100	0.8 kg	590 2835
REMACOAT PR 100	4 kg	590 2842
REMACOAT PR 100	20 kg	590 2859
REMACOAT D-40 ISO	20 kg	590 2866
REMACOAT D-40 ISO	224 kg	590 2897
REMACOAT D-40-S POLY	20 kg	590 3092
REMACOAT D-40-S POLY	240 kg	590 3102

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
REMACOAT D-40 ISO	10 - 30°C	12 Months
REMACOAT D-40-S POLY	10 - 30°C	12 Months
REMACOAT PR 100	10 - 30°C	12 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Abrasion (Volume Abrasion)	DIN ISO 4649	mm <sup>3</sup>	< 160
Density	EN ISO 2811 (ASTM D1475)		ISO: 1.12 ± 0.02 / POLY: 1.04 ± 0.02 / Mixture: 1.21 ± 0.02
Hardness Shore D	ISO 868	-	45 ± 5
Surface Resistivity	IEC 60167	-	≥ 1.0 x 10 <sup>11</sup>
Elongation at Break	ISO 37	%	≥ 320
Tensile Strength	ISO 37	N/mm <sup>2</sup>	≥ 15
Resilience	ISO 4462 (DIN 53512)	%	≥ 33
Peel Strength Concrete / Steel	DIN 53531	N/mm	≥ 5 / ≥ 10
Water Vapour Permeability	DIN 53122	g/m <sup>2</sup> ·d	7 ± 1*
Max. Operating Temperature Liquids	-	°C	+50
Max. Operating Temperature Dry	-	°C	+130
Short-Term Operating Temperature Dry	-	°C	+150

\* Coating Thickness 4 mm at 38°C

**Note:** Final properties are reached after 5-7 days. The technological values were determined after 28 days of conditioning at ambient conditions. (T = 23 ± 2°C; humidity = 40 – 60%)

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# DESCRIPTION

## COROPUR

Product	Product Description
<b>COROPUR FIX</b>	<b>COROPUR FIX</b> is a one-component, moisture curing deep ground based on polyurethane.
<b>COROPUR ADHESION AND INSULATING PRIMER</b>	<b>COROPUR ADHESION AND INSULATING PRIMER</b> is a one-component, moisture curing primer in combination with aluminium pigments.
<b>COROPUR PI</b>	<b>COROPUR PI</b> is a one-component, moisture curing and versatile primer based on polyurethane, with excellent corrosion protection properties.
<b>COROPUR ZINC M</b>	<b>COROPUR ZINC M</b> is a one-component, moisture curing primer based on polyurethane in combination with a high zinc dust content of min. 90% for heavy corrosion protection.
<b>COROPUR COVER RAL</b>	<b>COROPUR COVER RAL</b> is a one-component, UV, weather and chemical resistant, moisture curing primer based on polyurethane.
<b>COROPUR FERRO</b>	<b>COROPUR FERRO</b> is a one-component, moisture curing intermediate coat based on polyurethane in combination with iron mica. The special lamellar structure of the iron mica pigmentation in combination with the polyurethane binder results coatings with excellent water and corrosion resistance.
<b>COROPUR FERRO LS</b>	<b>COROPUR FERRO LS</b> is a one-component, moisture curing, UV resistant top coat based on polyurethane in combination with iron mica. The special lamellar structure of the iron mica pigmentation in combination with the polyurethane binder results coatings with excellent water and corrosion resistance.
<b>COROPUR NON ABRASIV</b>	<b>COROPUR NON ABRASIV</b> is a tough elastic, highly abrasion resistant coating based on polyurethane.
<b>COROPUR NON ABRASIV LS</b>	<b>COROPUR NON ABRASIV LS</b> is a tough elastic, highly abrasion-resistant coating based on polyurethane. <b>COROPUR NON ABRASIV LS</b> is comparable with the usual two-component epoxy or polyurethane-tar coating systems.
<b>COROPUR TAR</b>	<b>COROPUR TAR</b> is a combination of a moisture curing polyisocyanate and tar. This product is particularly suitable for long-term corrosion protection of all steel surfaces. <b>COROPUR TAR</b> is comparable with the conventional two-component epoxy or polyurethane-tar coating systems.
<b>COROPUR TAR 21</b>	<b>COROPUR TAR 21</b> is an extremely fast curing polyurethane coating in combination with coal tar and iron mica.
<b>COROPUR TF 21</b>	<b>COROPUR TF 21</b> is an extremely fast curing polyurethane coating in combination with iron mica.

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# OVERVIEW COROPUR

Product	Polymer	Filler	Solvent	DFT	Application				
					Roll	Brush	Spray	Atmospheric Corrosion Protection	Steel Water Construction
<b>COROPUR FIX</b>	Aromatic Polyisocyanate	-	Aromatic Hydrocarbons & Ester	40 - 60	X	X	-	-	-
<b>COROPUR ADHESION AND INSULATING PRIMER</b>	Aromatic Polyisocyanate	Aluminium, Talc	Aromatics	40 -70	X	X	-	-	-
<b>COROPUR PI</b>	Moisture-curing Polyisocyanate	Organic & inorganic colour pigments, phosphates, fillers	Aromatic Hydrocarbons & Acetate	50 - 120	X	X	X	-	-
<b>COROPUR ZINC M</b>	Moisture-curing Polyisocyanate	Metallic zinc dust powder, at least 90% in the dry film	Aromatic Hydrocarbons	60 - 150	X	X	X	-	-
<b>COROPUR COVER RAL</b>	Aliphatic, Moisture-curing Polyisocyanate	Inorganic and organic pigments	Ester & Aromatics	40 - 60	X	X	X	X	-
<b>COROPUR FERRO</b>	Aromatic, Moisture-curing Polyisocyanate	Micaceous iron oxide & pigments	Ester & Aromatics	60 - 150	X	X	X	X	-
<b>COROPUR FERRO LS</b>	Aliphatic, Moisture-curing Polyisocyanate	Micaceous iron oxide & pigments	Ester & Aromatics	60 - 150	X	X	X	X	-
<b>COROPUR NON ABRASIV</b>	Moisture-curing Polyisocyanate	Inorganic and organic pigments	Aromatic Hydrocarbons	150 - 400	X	X	X	-	X
<b>COROPUR NON ABRASIV LS</b>	Moisture-curing Polyisocyanate	Iron oxide pigments & fillers	Aromatic Hydrocarbons	150 - 200	X	X	X	-	X
<b>COROPUR TAR</b>	Moisture-curing Polyisocyanate & Tar	Iron oxide pigments & fillers	Aromatic Hydrocarbons	120 - 200	X	X	X	-	X
<b>COROPUR TAR 21</b>	Moisture-curing Polyisocyanate	Fillers & micaceous iron oxide	Aromatic Hydrocarbons	120 -200	X	X	X	-	X
<b>COROPUR TF 21</b>	Moisture-curing Polyisocyanate	Micaceous iron oxide & fillers	Aromatic Hydrocarbons	120 - 200	X	X	X	-	X

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# PRODUCT INFORMATION

## COROPUR FIX

### PRODUCT DESCRIPTION

**COROPUR FIX** is a one-component, moisture curing deep ground based on polyurethane.

### FIELDS OF APPLICATION

**COROPUR FIX** is primer for mineral substrates such as concrete, plaster or eternit.

### FEATURES

- Hardened mineral substrates
- Good adhesion to mineral substrates

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of concrete, plaster or eternit. Components to be coated shall be designed and manufactured in accordance with EN 14879-1. In addition, DIN 1045 must also be observed.

### SURFACE PRE-TREATMENT

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup> and minimum compressive strength of 25 N/mm<sup>2</sup>. The residual moisture content must not exceed 5%.

### ENVIRONMENTAL CONDITIONS

Environmental Conditions	Value
Relative Humidity	30% - 98%
Surface Temperature	-5°C (ice free) up to +30°C

### APPLICATION

**COROPUR FIX** is applied to the substrate using an airless air spray system or by rolling or brushing. The primer must be applied to cover.

### CONSUMPTION

Product	Thickness [µm]	Coverage [g/m <sup>2</sup> ]
<b>COROPUR FIX</b>	ca. 60	ca. 100 - 150

The information about coverage is an average for spray applications. Actual coverage depends on the object geometry and the method of application. It can vary.

### CURING TIME (20°C)

Load Capacity	Time
Dust dry	ca. 20 - 30 min
Tack free	ca. 1 h
Recoat	ca. 6 h

### CLEANING

Clean all equipment with **COROPUR ROLLTHINNER A-851** immediately after use.

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# COROPUR FIX

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
COROPUR FIX	10 kg	580 0171
COROPUR ROLLTHINNER A-851	0.80 kg	580 0315
COROPUR ROLLTHINNER A-851	4 kg	580 0322
COROPUR ROLLTHINNER A-851	9 kg	580 0339

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
COROPUR FIX	≤ +20°C	6 Months
COROPUR ROLLTHINNER A-851	≤ +20°C	18 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Unit	Value
Density	g/cm <sup>3</sup>	1.00
Solids by Weight / Volume	%	52 ± 2 / 46 ± 2
Flash Point	°C	+22
Viscosity	mPa·s	40 ± 10

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# PRODUCT INFORMATION

## COROPUR ADHESION AND INSULATING PRIMER

### PRODUCT DESCRIPTION

**COROPUR ADHESION AND INSULATING PRIMER** is a one-component, moisture curing primer in combination with aluminium pigments.

### FIELDS OF APPLICATION

**COROPUR ADHESION AND INSULATING PRIMER** is used as a bonding and insulating primer for old anti-corrosion coatings, where sandblasting is not possible for environmental and/or cost reasons.

### FEATURES

- Sealing and compacting of old weathered paintings
- Applicable to hand prepared steel surfaces with residual rust
- A St 3 manual rust removal is sufficient

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are steel components. Components to be coated shall be designed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

Loose flakes of old coatings, thick layers of rust, rust patterns etc. must be mechanically removed (by sanding, scraping, or using claw hammer, etc.). The exposed metal on the cleaned areas (including repaired areas) must be left for rusting for at least 3 days, in other words a build up of a uniform iron oxide layer is necessary! If this condition is not met, there is risk of blistering on the surfaces where the rusting occurred insufficiently.

### ENVIRONMENTAL CONDITIONS

Environmental Conditions	Value
Relative Humidity	30% - 98%
Surface Temperature	-5°C (ice free) up to +30°C

### APPLICATION

**COROPUR ADHESION AND INSULATING PRIMER** is applied to the substrate using an airless air spray system or by rolling or brushing. The primer must be applied to cover.

### CONSUMPTION

Product	Thickness [µm]	Coverage [g/m²]
<b>COROPUR ADHESION AND INSULATING PRIMER</b>	ca. 40 - 70	ca. 55 (40 µm)

The information about coverage is an average for spray applications. Actual coverage depends on the object geometry and the method of application. It can vary.

### CURING TIME (20°C)

Load Capacity	Time
Tack free	ca. 90 min
Recoat	ca. 6 h

### CLEANING

Clean all equipment with **COROPUR ROLLTHINNER A-851** immediately after use.

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# COROPUR ADHESION AND INSULATING PRIMER

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
COROPUR ADHESION AND INSULATING PRIMER	1 kg	580 1352
COROPUR ADHESION AND INSULATING PRIMER	5,5 kg	580 0047
COROPUR ADHESION AND INSULATING PRIMER	11 kg	580 0054
COROPUR ROLLTHINNER A-851	0.80 kg	580 0315
COROPUR ROLLTHINNER A-851	4 kg	580 0322
COROPUR ROLLTHINNER A-851	9 kg	580 0339

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
COROPUR ADHESION AND INSULATING PRIMER	≤ +20°C	6 Months
COROPUR ROLLTHINNER A-851	≤ +20°C	18 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Unit	Value
Density	g/cm <sup>3</sup>	1.10
Solids by Weight / Volume	%	83 ± 2 / 79 ± 2
Flash Point	°C	+45
Viscosity	mPa·s	550 ± 50

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# PRODUCT INFORMATION

## COROPUR PI

### PRODUCT DESCRIPTION

**COROPUR PI** is a one-component, moisture curing and versatile primer based on polyurethane, with excellent corrosion protection properties.

### FIELDS OF APPLICATION

**COROPUR PI** is used mainly as a basic or intermediate coat in combination with moisture-curing polyurethane systems for the corrosion protection of steel construction, vehicle or apparatus.

**COROPUR PI** is particularly suitable for use in difficult climatic conditions such as low temperatures or high humidity. Used as filler primer, **COROPUR PI** serves as temporary corrosion protection for even being welded steel components. This produces no toxic vapours, the burning zone is narrow, and the quality of the weld bead is not impaired.

### FEATURES

- Excellent adhesion
- Strong resistance to solvents and many chemicals
- Can be used under difficult climate conditions

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are steel components. Components to be coated shall be designed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

Surfaces to be coated must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht # 28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 70 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate.

### ENVIRONMENTAL CONDITIONS

Environmental Conditions	Value
Relative Humidity	30% - 98%
Surface Temperature	-5°C (ice free) up to +30°C

### APPLICATION

**COROPUR PI** is applied to the substrate using an airless air spray system or by rolling or brushing. The primer must be applied to cover.

### SETTINGS AIRLESS SPRAYING

Pressure [bar]	Nozzle [mm]	Thinning [%]
120 - 150	0.40 - 0.50	0 - 5

### CONSUMPTION

Product	Thickness [µm]	Coverage [g/m²]
<b>COROPUR PI</b>	ca. 60 - 120	ca. 143 (60 µm)

The information about coverage is an average for spray applications. Actual coverage depends on the object geometry and the method of application. It can vary.

### CURING TIME (20°C)

Load Capacity	Time
Dust dry	ca. 15 min
Tack free	ca. 25 min
Recoat	ca. 3 h

### CLEANING

Clean all equipment with **COROPUR ROLLTHINNER A-851** or **COROPUR SPRAYTHINNER T-1900** immediately after use. Frequency of cleaning will depend upon amount applied, temperature and elapsed time, including any delays.

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# COROPUR PI

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
COROPUR PI - GREY	1.2 kg	580 0401
COROPUR PI - GREY	6 kg	580 0418
COROPUR PI - GREY	12 kg	580 0425
COROPUR PI - RED BROWN	1.2 kg	580 1376
COROPUR PI - RED BROWN	6 kg	580 1390
COROPUR PI - RED BROWN	12 kg	580 1330
COROPUR ROLLTHINNER A-851	0.80 kg	580 0315
COROPUR ROLLTHINNER A-851	4 kg	580 0322
COROPUR ROLLTHINNER A-851	9 kg	580 0339
COROPUR SPRAYTHINNER T-1900	0.80 kg	580 0353
COROPUR SPRAYTHINNER T-1900	4 kg	580 0360
COROPUR SPRAYTHINNER T-1900	9 kg	580 0377

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
COROPUR PI - GREY	≤ +20°C	6 Months
COROPUR PI - RED BROWN	≤ +20°C	6 Months
COROPUR ROLLTHINNER A-851	≤ +20°C	18 Months
COROPUR SPRAYTHINNER T-1900	≤ +20°C	18 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Unit	Value
Density	g/cm <sup>3</sup>	1.34
Solids by Weight / Volume	%	72 ± 2 / 56 ± 2
Flash Point	°C	+30
Viscosity	mPa·s	900 ± 100
Max. Operating Temperature Dry	°C	+140

**Note:** The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## COROPUR ZINC M

### PRODUCT DESCRIPTION

**COROPUR ZINC M** is a one-component, moisture curing primer based on polyurethane in combination with a high zinc dust content of min. 90% for heavy corrosion protection.

### FIELDS OF APPLICATION

Typical fields of applications are lining of: Bridges, Walls, Steel structures, masts, Container, Cranes, Tanks, Can be used as a shop primer

### FEATURES

- Can be over coated with every **COROPUR** top coat or with all saponifying resistant 1K or 2K top coats
- Excellent adhesion on steel
- Excellent chemical resistance
- Highly elastic and therefore more mechanically resistant as other conventional 1K or 2K zinc dust primer

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are steel components. Components to be coated shall be designed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

Surfaces to be coated must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht # 28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 70 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate.

### ENVIRONMENTAL CONDITIONS

Environmental Conditions	Value
Relative Humidity	30% - 98%
Surface Temperature	-5°C (ice free) up to +30°C

### APPLICATION

**COROPUR ZINC M** is applied to the substrate using an airless air spray system or by rolling or brushing. The primer must be applied to cover. **COROPUR ZINC M** should not be applied over 150 µm DFT.

### SETTINGS AIRLESS SPRAYING

Pressure [bar]	Nozzle [mm]	Thinning [%]
120 -150	0.40 - 0.50	0 - 5

### CONSUMPTION

Product	Thickness [µm]	Coverage [g/m²]
<b>COROPUR ZINC M</b>	ca. 60 - 150	ca. 270 (60 µm)

The information about coverage is an average for spray applications. Actual coverage depends on the object geometry and the method of application. It can vary.

### CURING TIME (20°C)

Load Capacity	Time
Dust dry	ca. 15 min
Tack free	ca. 30 min
Recoat	ca. 60 min

### CLEANING

Clean all equipment with **COROPUR ROLLTHINNER A-851** or **COROPUR SPRAYTHINNER T-1900** immediately after use. Frequency of cleaning will depend upon amount applied, temperature and elapsed time, including any delays.

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# COROPUR ZINC M

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
COROPUR ZINC M	2.5 kg	580 0016
COROPUR ZINC M	12 kg	580 0023
COROPUR ZINC M	20 kg	580 0030
COROPUR ROLLTHINNER A-851	0.80 kg	580 0315
COROPUR ROLLTHINNER A-851	4 kg	580 0322
COROPUR ROLLTHINNER A-851	9 kg	580 0339
COROPUR SPRAYTHINNER T-1900	0.80 kg	580 0353
COROPUR SPRAYTHINNER T-1900	4 kg	580 0360
COROPUR SPRAYTHINNER T-1900	9 kg	580 0377

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
COROPUR ROLLTHINNER A-851	≤ +20°C	18 Months
COROPUR SPRAYTHINNER T-1900	≤ +20°C	18 Months
COROPUR ZINC M	≤ +20°C	12 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Unit	Value
Density	g/cm <sup>3</sup>	2.8
Solids by Weight / Volume	%	87 ± 2 / 59 ± 2
Flash Point	°C	+39
Viscosity	mPa·s	700 ± 100
Max. Operating Temperature Dry	°C	+125

**Note:** The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## COROPUR COVER RAL

### PRODUCT DESCRIPTION

**COROPUR COVER RAL** is a one-component, UV, weather and chemical resistant, moisture curing primer based on polyurethane.

### COATING LAYERS CONSUMPTION

The coating system consists of the primer **COROPUR ZINC M** and several **COROPUR COVER RAL** top coats. **COROPUR FERRO** is usually used as intermediate coat. The recommended DFT is about 40 - 60 µm.

### FIELDS OF APPLICATION

**COROPUR COVER RAL** is used mainly for the corrosion protection of steel components for drinking water as well as for atmospheric corrosion protection. Typical applications are the linings of bridges, towers, port and crane systems, steel construction, pipelines, off-shore facilities, ships and tanks.

### APPROVALS & CERTIFICATES

- Certificate according DVGW - worksheet W 270 to use for drinking water
- Certificate of compliance by the Federal Office of Public Health BAG

### FEATURES

- Good chemical resistance
- Low water and water vapour diffusion
- Fast curing
- UV and weather resistant

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are steel components. Components to be coated shall be designed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

Surfaces to be coated must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht # 28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 70 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate.

### ENVIRONMENTAL CONDITIONS

Environmental Conditions	Value
Relative Humidity	30% - 98%
Surface Temperature	-5°C (ice free) up to +30°C

### APPLICATION

The primer **COROPUR ZINC M** and each **COROPUR COVER RAL** topcoat are applied to the substrate using an airless air spray system or by rolling or brushing. **COROPUR COVER RAL** must be stirred well but softly prior to use. It is essential to avoid entrapped air bubbles. If necessary, ventilate well before use. DFT of more than 100µm per coat must be avoided, since above this layer thickness reaction bubbles may arise. Surfaces coated with **COROPUR COVER RAL** can be re-coated within a maximum of 2 days intermediate drying without mechanical pre-treatment. For longer intervals, the surface should be roughened.

### SETTINGS AIRLESS SPRAYING

Pressure [bar]	Nozzle [mm]	Thinning [%]
180	0.16 - 0.22	0 - 3

### CONSUMPTION

Product	Thickness [µm]	Coverage [g/m²]
<b>COROPUR ZINC M</b>	ca. 60	ca. 270
<b>COROPUR FERRO</b>	ca. 60	ca. 141
<b>COROPUR COVER RAL</b>	ca. 40	ca. 92

The information about coverage is an average for spray applications. Actual coverage depends on the object geometry and the method of application. It can vary.

### CURING TIME (20°C)

Load Capacity	Time
Dust dry	ca. 50 min
Tack free	ca. 3 h
Recoat	ca. 3 h
Loadable	ca. 24 - 30 h

### CLEANING

Clean all equipment with **COROPUR ROLLTHINNER A-851** or **COROPUR SPRAYTHINNER T-1900** immediately after use. Frequency of cleaning will depend upon amount applied, temperature and elapsed time, including any delays.

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# COROPUR COVER RAL

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
COROPUR COVER RAL - A	1.2 kg	580 0195
COROPUR COVER RAL - A	6 kg	580 0205
COROPUR COVER RAL - A	12 kg	580 0212
COROPUR COVER RAL - B	1.2 kg	580 0229
COROPUR COVER RAL - B	6 kg	580 0236
COROPUR COVER RAL - B	12 kg	580 0243
COROPUR COVER RAL - C	1.2 kg	580 0250
COROPUR COVER RAL - C	6 kg	580 0267
COROPUR COVER RAL - C	12 kg	580 0274
COROPUR FERRO	1.2 kg	580 0119
COROPUR FERRO	6 kg	580 0126
COROPUR FERRO	12 kg	580 0133
COROPUR ROLLTHINNER A-851	0.80 kg	580 0315
COROPUR ROLLTHINNER A-851	4 kg	580 0322
COROPUR ROLLTHINNER A-851	9 kg	580 0339
COROPUR SPRAYTHINNER T-1900	0.80 kg	580 0353
COROPUR SPRAYTHINNER T-1900	4 kg	580 0360
COROPUR SPRAYTHINNER T-1900	9 kg	580 0377
COROPUR ZINC M	2.50 kg	580 0016
COROPUR ZINC M	12 kg	580 0023
COROPUR ZINC M	20 kg	580 0030

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
COROPUR COVER RAL	≤ +20°C	6 Months
COROPUR FERRO	≤ +20°C	6 Months
COROPUR ROLLTHINNER A-851	≤ +20°C	18 Months
COROPUR SPRAYTHINNER T-1900	≤ +20°C	18 Months
COROPUR ZINC M	≤ +20°C	12 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Unit	Value
Density	g/cm <sup>3</sup>	1.29
Solids by Weight / Volume	%	71 ± 2 / 60 ± 2
Flash Point	°C	+39
Viscosity	mPa·s	750 ± 150
Max. Operating Temperature Dry	°C	+120

**Note:** The indicated temperatures are dependent on the present load and may vary

Information given in the fact sheet above corresponds to the current knowledge available to us regarding our products at the time of its drafting and is intended as a guideline for informational purposes. However, because of the multiple possibilities regarding possible applications, processing and on site conditions, any information given in the fact sheet above is not legally binding, in particular, without being limited to, such information shall not be interpreted as a warranty of merchantability or of fitness for a particular purpose. Customer therefore is advised to conduct its own testing or make an inquiry with our technical department before ordering. We reserve the right to change the product at any time, in particular, without being limited to, minor changes because of advancements in technology. If by way of exception, the information given in the fact sheet above is incorporated by reference into any contract concluded with us under German Law, such information, shall only be interpreted as determining the specific requirements of the contractual products as set out in § 434 BGB (German Civil Code) and shall not be interpreted as constituting a guarantee of condition.

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# PRODUCT INFORMATION

## COROPUR FERRO

### PRODUCT DESCRIPTION

**COROPUR FERRO** is a one-component, moisture curing intermediate coat based on polyurethane in combination with iron mica. The special lamellar structure of the iron mica pigmentation in combination with the polyurethane binder results coatings with excellent water and corrosion resistance.

### COATING LAYERS CONSUMPTION

The coating system consists of the primer **COROPUR ZINC M** and several **COROPUR FERRO** top coats. The recommended DFT is about 60 - 150 µm per coat.

### FIELDS OF APPLICATION

**COROPUR FERRO** is used primarily as an intermediate or top coat for indoor applications. Typical applications are the atmospheric corrosion protection of steel structures, chemical plants, bridges or masts. For outdoor applications **COROPUR FERRO** shall be over coated with an appropriate top coat. **COROPUR FERRO** can be over coated with **COROPUR FERRO LS**, **COROPUR COVER RAL** or **COROPUR TAR**.

### FEATURES

- Excellent water and corrosion resistance
- Can be applied to vertical surfaces with up to 150 microns DFT by airless spray application

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are steel components. Components to be coated shall be designed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

Surfaces to be coated must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht # 28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 70 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate.

### ENVIRONMENTAL CONDITIONS

Environmental Conditions	Value
Relative Humidity	30% - 98%
Surface Temperature	-5°C (ice free) up to +30°C

### APPLICATION

The primer **COROPUR ZINC M** and each **COROPUR FERRO** topcoat are applied to the substrate using an airless air spray system or by rolling or brushing. When brushing, a paint grid must be used in order to achieve a uniform wet film thickness.

### SETTINGS AIRLESS SPRAYING

Pressure [bar]	Nozzle [mm]	Thinning [%]
150 - 200	0.40 - 0.50	0 - 2

### CONSUMPTION

Product	Thickness [µm]	Coverage [g/m²]
<b>COROPUR ZINC M</b>	ca. 60	ca. 270
<b>COROPUR FERRO</b>	ca. 60	ca. 141

The information about coverage is an average for spray applications. Actual coverage depends on the object geometry and the method of application. It can vary.

### CURING TIME (20°C)

Load Capacity	Time
Dust dry	ca. 60 min
Tack free	ca. 2.5 h
Recoat	ca. 4 h
Touch dry	ca. 6 h

### CLEANING

Clean all equipment with **COROPUR ROLLTHINNER A-851** or **COROPUR SPRAYTHINNER T-1900** immediately after use. Frequency of cleaning will depend upon amount applied, temperature and elapsed time, including any delays.

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# COROPUR FERRO

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
COROPUR FERRO	1.2 kg	580 0119
COROPUR FERRO	6 kg	580 0126
COROPUR FERRO	12 kg	580 0133
COROPUR ROLLTHINNER A-851	0.80 kg	580 0315
COROPUR ROLLTHINNER A-851	4 kg	580 0322
COROPUR ROLLTHINNER A-851	9 kg	580 0339
COROPUR SPRAYTHINNER T-1900	0.80 kg	580 0353
COROPUR SPRAYTHINNER T-1900	4 kg	580 0360
COROPUR SPRAYTHINNER T-1900	9 kg	580 0377
COROPUR ZINC M	2.50 kg	580 0016
COROPUR ZINC M	12 kg	580 0023
COROPUR ZINC M	20 kg	580 0030

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
COROPUR FERRO	≤ +20°C	6 Months
COROPUR ROLLTHINNER A-851	≤ +20°C	18 Months
COROPUR SPRAYTHINNER T-1900	≤ +20°C	18 Months
COROPUR ZINC M	≤ +20°C	12 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Unit	Value
Density	g/cm <sup>3</sup>	1.50
Solids by Weight / Volume	%	76 ± 2 / 64 ± 2
Flash Point	°C	+24
Viscosity	mPa·s	1100 ± 100
Max. Operating Temperature Dry	°C	+120

**Note:** The indicated temperatures are dependent on the present load and may vary

Information given in the fact sheet above corresponds to the current knowledge available to us regarding our products at the time of its drafting and is intended as a guideline for informational purposes. However, because of the multiple possibilities regarding possible applications, processing and on site conditions, any information given in the fact sheet above is not legally binding, in particular, without being limited to, such information shall not be interpreted as a warranty of merchantability or of fitness for a particular purpose. Customer therefore is advised to conduct its own testing or make an inquiry with our technical department before ordering. We reserve the right to change the product at any time, in particular, without being limited to, minor changes because of advancements in technology. If by way of exception, the information given in the fact sheet above is incorporated by reference into any contract concluded with us under German Law, such information, shall only be interpreted as determining the specific requirements of the contractual products as set out in § 434 BGB (German Civil Code) and shall not be interpreted as constituting a guarantee of condition.

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# PRODUCT INFORMATION

## COROPUR FERRO LS

### PRODUCT DESCRIPTION

**COROPUR FERRO LS** is a one-component, moisture curing, UV resistant top coat based on polyurethane in combination with iron mica. The special lamellar structure of the iron mica pigmentation in combination with the polyurethane binder results coatings with excellent water and corrosion resistance.

### COATING LAYERS CONSUMPTION

The coating system consists of the primer **COROPUR ZINC M** and several **COROPUR FERRO LS** top coats.

**COROPUR FERRO** is usually used as intermediate coat. The recommended DFT is about 40 - 60 µm per coat

### FIELDS OF APPLICATION

**COROPUR FERRO LS** is used primarily as top coat for outdoor applications. Typical applications are the atmospheric corrosion protection of steel structures, water and pressure pipes (outside), containers, cranes, tanks (outside), bridges or masts.

### FEATURES

- Excellent water and corrosion resistance
- Can be applied to vertical surfaces with up to 150 microns DFT by airless spray application UV and weather resistant

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are steel components. Components to be coated shall be designed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

Surfaces to be coated must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht # 28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 70 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate.

### ENVIRONMENTAL CONDITIONS

Environmental Conditions	Value
Relative Humidity	30% - 98%
Surface Temperature	-5°C (ice free) up to +30°C

### APPLICATION

The primer **COROPUR ZINC M** and each **COROPUR FERRO LS** topcoat are applied to the substrate using an airless air spray system or by rolling or brushing. When brushing, a paint grid must be used in order to achieve a uniform wet film thickness.

### SETTINGS AIRLESS SPRAYING

Pressure [bar]	Nozzle [mm]	Thinning [%]
150 - 200	0.40 - 0.50	0 - 2

### CONSUMPTION

Product	Thickness [µm]	Coverage [g/m²]
<b>COROPUR ZINC M</b>	ca. 60	ca. 270
<b>COROPUR FERRO</b>	ca. 60	ca. 141
<b>COROPUR FERRO LS</b>	ca. 60	ca. 141

The information about coverage is an average for spray applications. Actual coverage depends on the object geometry and the method of application. It can vary.

### CURING TIME (20°C)

Load Capacity	Time
Dust dry	ca. 60 min
Tack free	ca. 2.5 h
Recoat	ca. 6 h
Touch dry	ca. 6 h

### CLEANING

Clean all equipment with **COROPUR ROLLTHINNER A-851** or **COROPUR SPRAYTHINNER T-1900** immediately after use. Frequency of cleaning will depend upon amount applied, temperature and elapsed time, including any delays.

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# COROPUR FERRO LS

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
COROPUR FERRO	1.2 kg	580 0119
COROPUR FERRO	6 kg	580 0126
COROPUR FERRO	12 kg	580 0133
COROPUR FERRO LS	6 kg	580 0157
COROPUR FERRO LS	12 kg	580 0164
COROPUR ROLLTHINNER A-851	0.80 kg	580 0315
COROPUR ROLLTHINNER A-851	4 kg	580 0322
COROPUR ROLLTHINNER A-851	9 kg	580 0339
COROPUR SPRAYTHINNER T-1900	0.80 kg	580 0353
COROPUR SPRAYTHINNER T-1900	4 kg	580 0360
COROPUR SPRAYTHINNER T-1900	9 kg	580 0377
COROPUR ZINC M	2.50 kg	580 0016
COROPUR ZINC M	12 kg	580 0023
COROPUR ZINC M	20 kg	580 0030

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
COROPUR FERRO	≤ +20°C	6 Months
COROPUR FERRO LS	≤ +20°C	6 Months
COROPUR ROLLTHINNER A-851	≤ +20°C	18 Months
COROPUR SPRAYTHINNER T-1900	≤ +20°C	18 Months
COROPUR ZINC M	≤ +20°C	12 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Unit	Value
Density	g/cm <sup>3</sup>	1.50
Solids by Weight / Volume	%	76 ± 2 / 64 ± 2
Flash Point	°C	+24
Viscosity	mPa·s	1200 ± 300
Max. Operating Temperature Dry	°C	+120

**Note:** The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## COROPUR NON ABRASIV

### PRODUCT DESCRIPTION

**COROPUR NON ABRASIV** is a tough elastic, highly abrasion resistant coating based on polyurethane.

### COATING LAYERS CONSUMPTION

The coating system consists of the primer **COROPUR ZINC M** and several **COROPUR NON ABRASIV** top coats. The total applied DFT is based on the present chemical, thermal and mechanical load and can be 250 - 1000 µm (1 -3 work steps).

### FIELDS OF APPLICATION

**COROPUR NON ABRASIV** is used mainly for the corrosion protection of chemicals and abrasion loaded steel components for steel water structures. **COROPUR NON ABRASIV** can be used in industrial and maritime climates, as well as for underground and underwater objects. Typical applications are the linings of pressure pipelines, sewage treatment plants, power plants, locks, as well as in shipbuilding. **COROPUR NON ABRASIV** is also suitable for thick layer application on vertical surfaces up to 400 µm. Gloss and UV-resistant coatings can be achieved with the **COROPUR NON ABRASIV LS** topcoat. **COROPUR NON ABRASIV** is in according to DIN EN ISO 15711 compatible for the cathodic protection (CP).

### APPROVALS

Approval of the Federal Institute for Waterways (BAW) for use in strong mechanical stresses.

### FEATURES

- Good chemical resistance
- Low water and water vapour diffusion
- Can be used in industrial and marine climate
- Suitable for underwater and under earth objects
- High abrasion resistance

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are steel components. Components to be coated shall be designed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

Surfaces to be coated must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht # 28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 70 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate.

### ENVIRONMENTAL CONDITIONS

Environmental Conditions	Value
Relative Humidity	30% - 98%
Surface Temperature	-5°C (ice free) up to +30°C

### APPLICATION

The primer **COROPUR ZINC M** and each **COROPUR NON ABRASIV** topcoat are applied to the substrate using an airless air spray system or by rolling or brushing. When brushing, a paint grid must be used in order to achieve a uniform wet film thickness.

### SETTINGS AIRLESS SPRAYING

Pressure [bar]	Nozzle [mm]	Thinning [%]
150 - 200	0.43 - 0.58	0 - 5

### MIXING RATIO

Coating	Parts by Weight
<b>COROPUR NON ABRASIV</b>	10
<b>ACTIVATOR A-1949</b>	1

### CONSUMPTION

Product	Thickness [µm]	Coverage [g/m²]
<b>COROPUR ZINC M</b>	ca. 60	ca. 270
<b>COROPUR NON ABRASIV</b>	ca. 200	ca. 345

The information about coverage is an average for spray applications. Actual coverage depends on the object geometry and the method of application. It can vary.

### CURING TIME (20°C)

Load Capacity	Time
Dust dry	ca. 60 min
Tack free	ca. 5 h
Recoat	ca. 5 h
Loadable	ca. 5 Days

### CLEANING

Clean all equipment with **COROPUR ROLLTHINNER A-851** or **COROPUR SPRAYTHINNER T-1900** immediately after use. Frequency of cleaning will depend upon amount applied, temperature and elapsed time, including any delays.

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# COROPUR NON ABRASIV

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
COROPUR NON ABRASIV + ACTIVATOR A-1949 - RAL 7035*	10 + 1 kg	580 0676
COROPUR NON ABRASIV + ACTIVATOR A-1949 - RAL 9005*	10 + 1 kg	580 0717
COROPUR ZINC M	2.50 kg	580 0016
COROPUR ZINC M	12 kg	580 0023
COROPUR ZINC M	20 kg	580 0030
COROPUR ROLLTHINNER A-851	0.80 kg	580 0315
COROPUR ROLLTHINNER A-851	4 kg	580 0322
COROPUR ROLLTHINNER A-851	9 kg	580 0339
COROPUR SPRAYTHINNER T-1900	0.80 kg	580 0353
COROPUR SPRAYTHINNER T-1900	4 kg	580 0360
COROPUR SPRAYTHINNER T-1900	9 kg	580 0377

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
COROPUR NON ABRASIV	≤ +20°C	6 Months
COROPUR ROLLTHINNER A-851	≤ +20°C	18 Months
COROPUR SPRAYTHINNER T-1900	≤ +20°C	18 Months
COROPUR ZINC M	≤ +20°C	12 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Unit	Value
Density	g/cm <sup>3</sup>	1.30
Solids by Weight / Volume	%	84 ± 2 / 75 ± 2
Flash Point	°C	+37
Viscosity	mPa·s	3000 ± 500
Max. Operating Temperature Dry	°C	+140

\* Other RAL colours available

**Note:** The indicated temperatures are dependent on the present load and may vary

Information given in the fact sheet above corresponds to the current knowledge available to us regarding our products at the time of its drafting and is intended as a guideline for informational purposes. However, because of the multiple possibilities regarding possible applications, processing and on site conditions, any information given in the fact sheet above is not legally binding, in particular, without being limited to, such information shall not be interpreted as a warranty of merchantability or of fitness for a particular purpose. Customer therefore is advised to conduct its own testing or make an inquiry with our technical department before ordering. We reserve the right to change the product at any time, in particular, without being limited to, minor changes because of advancements in technology. If by way of exception, the information given in the fact sheet above is incorporated by reference into any contract concluded with us under German Law, such information, shall only be interpreted as determining the specific requirements of the contractual products as set out in § 434 BGB (German Civil Code) and shall not be interpreted as constituting a guarantee of condition.

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# PRODUCT INFORMATION

## COROPUR NON ABRASIV LS

### PRODUCT DESCRIPTION

**COROPUR NON ABRASIV LS** is a tough elastic, highly abrasion-resistant coating based on polyurethane.

**COROPUR NON ABRASIV LS** is comparable with the usual two-component epoxy or polyurethane-tar coating systems.

### COATING LAYERS CONSUMPTION

The coating system consists of the primer **COROPUR ZINC M** and several **COROPUR NON ABRASIV LS** top coats.

**COROPUR NON ABRASIV** is usually used as intermediate coat. The recommended DFT is about 150 - 200 µm per coat.

### FIELDS OF APPLICATION

**COROPUR NON ABRASIV LS** is used mainly as top coat in combination with the intermediate layer **COROPUR NON ABRASIV** for the corrosion protection of chemicals and abrasion loaded steel components for steel water structures. **COROPUR NON ABRASIV LS** can be used in industrial and maritime climates, as well as for underground and underwater objects. Typical applications are the linings of water treatment plants, bridges, water turbines, lock gates, power plants as well as in wet areas.

### FEATURES

- Good chemical resistance
- Low water and water vapour diffusion
- Can be used in industrial and marine climate
- Suitable for over and under water objects
- Good UV resistance
- High abrasion resistance

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are steel components. Components to be coated shall be designed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

Surfaces to be coated must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht # 28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 70 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate.

### ENVIRONMENTAL CONDITIONS

Environmental Conditions	Value
Relative Humidity	30% - 98%
Surface Temperature	-5°C (ice free) up to +30°C

### APPLICATION

The primer **COROPUR ZINC M** and each **COROPUR NON ABRASIV LS** topcoat are applied to the substrate using an airless air spray system or by rolling or brushing. When brushing, a paint grid must be used in order to achieve a uniform wet film thickness.

### SETTINGS AIRLESS SPRAYING

Pressure [bar]	Nozzle [mm]	Thinning [%]
150 - 200	0.43 - 0.58	0 - 5

### MIXING RATIO

Coating	Parts by Weight
<b>COROPUR NON ABRASIV LS</b>	10
<b>ACTIVATOR A-1949</b>	1

### CONSUMPTION

Product	Thickness [µm]	Coverage [g/m²]
<b>COROPUR ZINC M</b>	ca. 60	ca. 270
<b>COROPUR NON ABRASIV</b>	ca. 200	ca. 345
<b>COROPUR NON ABRASIV LS</b>	ca. 200	ca. 391

The information about coverage is an average for spray applications. Actual coverage depends on the object geometry and the method of application. It can vary.

### CURING TIME (20°C)

Load Capacity	Time
Dust dry	ca. 60 min
Tack free	ca. 5 h
Loadable	ca. 6 h

### CLEANING

Clean all equipment with **COROPUR ROLLTHINNER A-851** or **COROPUR SPRAYTHINNER T-1900** immediately after use. Frequency of cleaning will depend upon amount applied, temperature and elapsed time, including any delays.

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# COROPUR NON ABRASIV LS

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
COROPUR NON ABRASIV + ACTIVATOR A-1949 - RAL 7035*	10 + 1 kg	580 0676
COROPUR NON ABRASIV + ACTIVATOR A-1949 - RAL 9005*	10 + 1 kg	580 0717
COROPUR NON ABRASIV LS + ACTIVATOR A-1949 - RAL 7035*	10 + 1 kg	580 0690
COROPUR NON ABRASIV LS + ACTIVATOR A-1949 - RAL 9005*	10 + 1 kg	580 0724
COROPUR ROLLTHINNER A-851	0.80 kg	580 0315
COROPUR ROLLTHINNER A-851	4 kg	580 0322
COROPUR ROLLTHINNER A-851	9 kg	580 0339
COROPUR SPRAYTHINNER T-1900	0.80 kg	580 0353
COROPUR SPRAYTHINNER T-1900	4 kg	580 0360
COROPUR SPRAYTHINNER T-1900	9 kg	580 0377
COROPUR ZINC M	2.50 kg	580 0016
COROPUR ZINC M	12 kg	580 0023
COROPUR ZINC M	20 kg	580 0030

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
COROPUR NON ABRASIV	≤ +20°C	6 Months
COROPUR NON ABRASIV LS	≤ +20°C	3 Months
COROPUR ROLLTHINNER A-851	≤ +20°C	18 Months
COROPUR SPRAYTHINNER T-1900	≤ +20°C	18 Months
COROPUR ZINC M	≤ +20°C	12 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Unit	Value
Density	g/cm <sup>3</sup>	1.40
Solids by Weight / Volume	%	78 ± 2 / 66 ± 2
Flash Point	°C	+37
Viscosity	mPa·s	3000 ± 500
Max. Operating Temperature Dry	°C	+140

\* Other RAL colours available

**Note:** The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## COROPUR TAR

### PRODUCT DESCRIPTION

**COROPUR TAR** is a combination of a moisture curing polyisocyanate and tar. This product is particularly suitable for long-term corrosion protection of all steel surfaces.

**COROPUR TAR** is comparable with the conventional two-component epoxy or polyurethane-tar coating systems.

### COATING LAYERS CONSUMPTION

The coating system consists of the primer **COROPUR ZINC M** and several **COROPUR TAR** top coats. The recommended DFT is about 120 - 200 µm per coat.

### FIELDS OF APPLICATION

**COROPUR TAR** is used in industrial and marine environment as well as for under earth or under water objects. Typical applications are under water, locks, canals, sewage treatment plants, gutters, drains.

### FEATURES

- Good chemical resistance
- Low water and water vapour diffusion
- Can be used in industrial and marine climate
- Suitable for over and under water objects
- High abrasion resistance

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are steel components. Components to be coated shall be designed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

Surfaces to be coated must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht # 28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 70 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate.

### ENVIRONMENTAL CONDITIONS

Environmental Conditions	Value
Relative Humidity	30% - 98%
Surface Temperature	-5°C (ice free) up to +30°C

### APPLICATION

The primer **COROPUR ZINC M** and each **COROPUR TAR** are applied to the substrate using an airless air spray system or by rolling or brushing. When brushing, a paint grid must be used in order to achieve a uniform wet film thickness.

### SETTINGS AIRLESS SPRAYING

Pressure [bar]	Nozzle [mm]	Thinning [%]
150 - 200	0.42 - 0.53	0 - 5

### CONSUMPTION

Product	Thickness [µm]	Coverage [g/m²]
<b>COROPUR ZINC M</b>	ca. 60	ca. 270
<b>COROPUR TAR</b>	ca. 80 - 500	ca. 230 (100 µm)

The information about coverage is an average for spray applications. Actual coverage depends on the object geometry and the method of application. It can vary.

### CURING TIME (20°C)

Load Capacity	Time
Dust dry	ca. 60 min
Tack free	ca. 5 h
Recoat	ca. 5 h

### CLEANING

Clean all equipment with **COROPUR ROLLTHINNER A-851** or **COROPUR SPRAYTHINNER T-1900** immediately after use. Frequency of cleaning will depend upon amount applied, temperature and elapsed time, including any delays.

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# COROPUR TAR

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
COROPUR TAR - BROWN	6 kg	580 0092
COROPUR TAR - BROWN	12 kg	580 0102
COROPUR TAR - BLACK	6 kg	580 1417
COROPUR TAR - BLACK	12 kg	580 1424
COROPUR ROLLTHINNER A-851	0.80 kg	580 0315
COROPUR ROLLTHINNER A-851	4 kg	580 0322
COROPUR ROLLTHINNER A-851	9 kg	580 0339
COROPUR SPRAYTHINNER T-1900	0.80 kg	580 0353
COROPUR SPRAYTHINNER T-1900	4 kg	580 0360
COROPUR SPRAYTHINNER T-1900	9 kg	580 0377
COROPUR ZINC M	2.50 kg	580 0016
COROPUR ZINC M	12 kg	580 0023
COROPUR ZINC M	20 kg	580 0030

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
COROPUR ROLLTHINNER A-851	≤ +20°C	18 Months
COROPUR SPRAYTHINNER T-1900	≤ +20°C	18 Months
COROPUR TAR - BROWN	≤ +20°C	6 Months
COROPUR TAR - BLACK	≤ +20°C	6 Months
COROPUR ZINC M	≤ +20°C	12 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Unit	Value
Density	g/cm <sup>3</sup>	1.70
Solids by Weight / Volume	%	87 ± 2 / 75 ± 2
Flash Point	°C	+33
Viscosity	mPa·s	1750 ± 250
Max. Operating Temperature Dry	°C	+60

**Note:** The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## COROPUR TAR 21

### PRODUCT DESCRIPTION

**COROPUR TAR 21** is an extremely fast curing polyurethane coating in combination with coal tar and iron mica.

### COATING LAYERS CONSUMPTION

The coating system consists of the primer **COROPUR ZINC M** and several **COROPUR TAR 21** top coats. The recommended DFT is about 120 - 200 µm per coat. For medium heavy corrosion protection, **COROPUR TAR 21** can be applied without primer.

### FIELDS OF APPLICATION

**COROPUR TAR 21** is used mainly as topcoat on primed surfaces or as a single coating without primer for moderate corrosion protection. Typical applications are coatings of pressure pipelines, biogas plants, flood gates, sewage treatment plants, hydraulic steel structures and objects under water.

### FEATURES

- Good chemical resistance
- Fast curing
- Can be used in industrial and marine climate
- Suitable for over and under water objects
- High abrasion resistance

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are steel components. Components to be coated shall be designed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

Surfaces to be coated must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht # 28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 70 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate.

### ENVIRONMENTAL CONDITIONS

Environmental Conditions	Value
Relative Humidity	30% - 98%
Surface Temperature	-5°C (ice free) up to +30°C

### APPLICATION

The primer **COROPUR ZINC M** and each **COROPUR TAR 21** are applied to the substrate using an airless air spray system or by rolling or brushing. When brushing, a paint grid must be used in order to achieve a uniform wet film thickness.

### SETTINGS AIRLESS SPRAYING

Pressure [bar]	Nozzle [mm]	Thinning [%]
150 - 200	0.42 - 0.53	0 - 5

### MIXING RATIO

Coating	Parts by Weight
<b>COROPUR TAR 21</b>	15
<b>ACTIVATOR A-873</b>	1

### CONSUMPTION

Product	Thickness [µm]	Coverage [g/m²]
<b>COROPUR ZINC M</b>	ca. 60	ca. 270
<b>COROPUR TAR 21</b>	ca. 80 - 500	ca. 233 (100 µm)

The information about coverage is an average for spray applications. Actual coverage depends on the object geometry and the method of application. It can vary.

### CURING TIME (20°C)

Load Capacity	Time
Dust dry	ca. 15 min
Touch dry	ca. 35 min
Loadable	ca. 2.5 h

### CLEANING

Clean all equipment with **COROPUR ROLLTHINNER A-851** or **COROPUR SPRAYTHINNER T-1900** immediately after use. Frequency of cleaning will depend upon amount applied, temperature and elapsed time, including any delays.

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# COROPUR TAR 21

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
COROPUR TAR - BROWN + ACTIVATOR A-873	12.8 kg	580 0432
COROPUR TAR - BLACK + ACTIVATOR A-873	12.8 kg	580 1431
COROPUR ROLLTHINNER A-851	0.80 kg	580 0315
COROPUR ROLLTHINNER A-851	4 kg	580 0322
COROPUR ROLLTHINNER A-851	9 kg	580 0339
COROPUR SPRAYTHINNER T-1900	0.80 kg	580 0353
COROPUR SPRAYTHINNER T-1900	4 kg	580 0360
COROPUR SPRAYTHINNER T-1900	9 kg	580 0377
COROPUR ZINC M	2.50 kg	580 0016
COROPUR ZINC M	12 kg	580 0023
COROPUR ZINC M	20 kg	580 0030

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
COROPUR ROLLTHINNER A-851	≤ +20°C	18 Months
COROPUR SPRAYTHINNER T-1900	≤ +20°C	18 Months
COROPUR TAR 21	≤ +20°C	6 Months
COROPUR ZINC M	≤ +20°C	12 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Unit	Value
Density	g/cm <sup>3</sup>	1.87
Solids by Weight / Volume	%	90 ± 2 / 82 ± 2
Flash Point	°C	> +32
Viscosity	mPa·s	2750 ± 250
Max. Operating Temperature Dry	°C	+80

**Note:** The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## COROPUR TF 21

### PRODUCT DESCRIPTION

**COROPUR TF 21** is an extremely fast curing polyurethane coating in combination with iron mica.

### COATING LAYERS CONSUMPTION

The coating system consists of the primer **COROPUR ZINC M** and several **COROPUR TF 21** top coats. The recommended DFT is about 120 - 200 µm per coat. For medium heavy corrosion protection, **COROPUR TF 21** can be applied without primer.

### FIELDS OF APPLICATION

**COROPUR TF 21** is used mainly as topcoat on primed surfaces or as a single coating without primer for moderate corrosion protection. Typical applications are coatings of pressure pipelines, biogas plants, flood gates, sewage treatment plants, hydraulic steel structures and objects under water.

### FEATURES

- Good chemical resistance
- Fast curing
- Can be used in industrial and marine climate
- Suitable for over and under water objects
- High abrasion resistance

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are steel components. Components to be coated shall be designed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

Surfaces to be coated must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht # 28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 70 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate.

### ENVIRONMENTAL CONDITIONS

Environmental Conditions	Value
Relative Humidity	30% - 98%
Surface Temperature	-5°C (ice free) up to +30°C

### APPLICATION

The primer **COROPUR ZINC M** and each **COROPUR TF 21** are applied to the substrate using an airless air spray system or by rolling or brushing. When brushing, a paint grid must be used in order to achieve a uniform wet film thickness. Once activated, **COROPUR TF 21** has the tendency to a very quick skin formation. This can be avoided by applying a thin layer of thinner onto the surface or to cover the container with a solvent soaked cloth.

### SETTINGS AIRLESS SPRAYING

Pressure [bar]	Nozzle [mm]	Thinning [%]
150 - 200	0.42 - 0.53	0 - 5

### MIXING RATIO

Coating	Parts by Weight
<b>COROPUR TF 21</b>	10
<b>ACTIVATOR A-1786</b>	1

### CONSUMPTION

Product	Thickness [µm]	Coverage [g/m²]
<b>COROPUR ZINC M</b>	ca. 60	ca. 270
<b>COROPUR TF 21</b>	ca. 80 - 500	ca. 287 (100 µm)

The information about coverage is an average for spray applications. Actual coverage depends on the object geometry and the method of application. It can vary.

### CURING TIME (20°C)

Load Capacity	Time
Dust dry	ca. 15 min
Touch dry	ca. 35 min
Loadable	ca. 2.5 h

### CLEANING

Clean all equipment with **COROPUR ROLLTHINNER A-851** or **COROPUR SPRAYTHINNER T-1900** immediately after use. Frequency of cleaning will depend upon amount applied, temperature and elapsed time, including any delays.

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# COROPUR TF 21

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
COROPUR TF 21 - RAL 7035 + ACTIVATOR A-1786	9,9 kg	580 0880
COROPUR TF 21 - RAL 8012 + ACTIVATOR A-1786	9,9 kg	580 0870
COROPUR ROLLTHINNER A-851	0.80 kg	580 0315
COROPUR ROLLTHINNER A-851	4 kg	580 0322
COROPUR ROLLTHINNER A-851	9 kg	580 0339
COROPUR SPRAYTHINNER T-1900	0.80 kg	580 0353
COROPUR SPRAYTHINNER T-1900	4 kg	580 0360
COROPUR SPRAYTHINNER T-1900	9 kg	580 0377
COROPUR ZINC M	2.50 kg	580 0016
COROPUR ZINC M	12 kg	580 0023
COROPUR ZINC M	20 kg	580 0030

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
COROPUR ROLLTHINNER A-851	≤ +20°C	18 Months
COROPUR SPRAYTHINNER T-1900	≤ +20°C	18 Months
COROPUR TF 21	≤ +20°C	6 Months
COROPUR ZINC M	≤ +20°C	12 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Unit	Value
Density	g/cm <sup>3</sup>	2.10
Solids by Weight / Volume	%	89 ± 2 / 73 ± 2
Flash Point	°C	+32
Viscosity	mPa·s	2750 ± 250
Max. Operating Temperature Dry	°C	+50

**Note:** The indicated temperatures are dependent on the present load and may vary

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# DESCRIPTION

## CHEMOKITT

Product	Product Description
<b>CHEMOKITT FU 1310</b>	<b>CHEMOKITT FU 1310</b> is a two-component, cold curing synthetic resin mortar, based on a furan resin with mineral fillers.
<b>CHEMOKITT FU 1320</b>	<b>CHEMOKITT FU 1320</b> is two-component, cold curing synthetic resin mortar, based on a furan resin with carbon fillers. The cured, silicate-free resin mortar is electrically dissipating.
<b>CHEMOKITT UP 1320</b>	<b>CHEMOKITT UP 1320</b> is a three-component, cold curing synthetic resin mortar, based on a combination of unsaturated polyester and vinyl ester resin, with carbon filler. The cured resin mortar is electrically dissipating.
<b>CHEMOKITT VE 1310</b>	<b>CHEMOKITT VE 1310</b> is a two-component, cold curing synthetic resin mortar based on vinyl ester resin with mineral fillers.
<b>CHEMOKITT VE 1311</b>	<b>CHEMOKITT VE 1311</b> is a two-component, cold curing synthetic resin mortar, based on a Novolac vinyl ester resin with mineral fillers.
<b>CHEMOKITT WG 1310</b>	<b>CHEMOKITT WG 1310</b> is a two-component, halogen-free bedding and jointing mortar, based on potassium silicate with mineral fillers.

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# PHYSICAL DATA CHEMOKITT

Product	Resistance to Ground	Density	Compressive Strength	Adhesion Strength on Ceramic	Max. Temperature Wet	Coefficient of Thermal Expansion
	DIN 14879-6 [Ω]	EN ISO 1183-1 [g/cm <sup>3</sup> ]	EN ISO 604 [N/mm <sup>2</sup> ]	DIN EN ISO 4624 [N/mm]	- [°C]	ISO 11359-2 [1/K]
CHEMOKITT FU 1310	≥ 10 <sup>9</sup>	2,2	80	≥ 4	+180	21 x 10 <sup>-6</sup>
CHEMOKITT FU 1320	≤ 10 <sup>6</sup>	2,3	70	≥ 4	+180	29 x 10 <sup>-6</sup>
CHEMOKITT UP 1320	≤ 10 <sup>6</sup>	1,8	90	≥ 3	+100	32 x 10 <sup>-6</sup>
CHEMOKITT VE 1310	≥ 10 <sup>9</sup>	1,8	80	≥ 3	+120	35 x 10 <sup>-6</sup>
CHEMOKITT VE 1311	≥ 10 <sup>9</sup>	1,8	80	≥ 3	+120	35 x 10 <sup>-6</sup>
CHEMOKITT WG 1310	≥ 10 <sup>9</sup>	2,0	35	≥ 1	+900	10 x 10 <sup>-6</sup>

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**TIP TOP Oberflächenenschutz Elbe GmbH**

**CHEMOKITT**

PHYSICAL DATA

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# PRODUCT INFORMATION

## CHEMOKITT FU 1310

### PRODUCT DESCRIPTION

**CHEMOKITT FU 1310** is a two-component, cold curing synthetic resin mortar, based on a furan resin with mineral fillers.

### SYNTHETIC RESIN CONSUMPTION

The synthetic resin mortar **CHEMOKITT FU 1310** consists of the **CHEMOKITT FU FILLER 1310** and the **CHEMOKITT FU SOLUTION 1**.

### FIELDS OF APPLICATION

**CHEMOKITT FU 1310** is suited as bedding and jointing mortar for acid-resistant ceramic tiles, bricks and fittings, especially at high chemical exposure to acids, alkalis or organic solvents and high temperature and mechanical stresses.

Main applications are tiling and brick linings of components in the chemical industry, waste water and process water treatment, in channels, pits and sumps, power plants, warehouses and workshops, neutralization- and pickling lines.

### FEATURES

- Very high mechanical load capacity
- Outstanding chemical resistance, especially against solvents and other organic compounds.
- High temperature resistance

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Components shall be designed and manufactured in accordance with EN 14879-1. Before start of brick lining work, the suitability of the surface preparation measures according EN 14879-1 must be checked and recorded.

### SURFACE PRE-TREATMENT

Steel and concrete surfaces must be primed with a suitable primer before application. The primer must be sanded in a fresh state after the final coat. Usually a sealing layer made of rubber or synthetic resin coating is foreseen, where it is possible to work directly with **CHEMOKITT FU 1310** on the sealing layer. Unevenness should be compensated in the ground.

### C-STEEL

All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 must be achieved. The primer must be applied immediately after the blasting.

### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%.

### ENVIRONMENTAL CONDITIONS

The specified environmental conditions must be observed during surface preparation and brick lining and be tested and recorded according EN 14879-6.

Environmental Conditions	Value
Relative Humidity	≤ 85%
Surface Temperature	≥ +10°C up to +35°C
Application Temperature	+10°C up to +30°C
Dew Point Distance	min. 3K

### APPLICATION

The execution of the brick lining work is only permitted, if the requirements of „Surface Pre-treatment“ and „Environmental Conditions“ are met.

**CHEMOKITT FU 1310** is applied with a trowel onto the substrate or onto the existing lining. The bricks or tiles have to be bedded as far as possible without cavities, either filled-joint or hollow-joint. For the protection of rubber linings usually a thin layer of mortar is trowelled in advance to prevent mechanical damages. In case of an application of hollow-joint tiling into cement or potassium silicate bedding, acid washing with 10% hydrochloric acid or 20% alcoholic sulphuric acid of the open joints is necessary.

### WORK TOOLS

The following tools are essential for the application:

- Stirrer (max. 300 r/min.)
- Measuring cup & Mixing vessels
- Flat / wide brush
- Mortar trowel
- Grouting tool
- Miscellaneous (safety glasses, rubber gloves etc.)

### MIXING RATIO

Pour **CHEMOKITT FU SOLUTION 1** in a mixing vessel and add certain amount of **CHEMOKITT FU FILLER 1310** with the specified mixing ratios, then mix. The components must be mixed thoroughly and intensively. The walls and the bottom of the mixing vessel have to be mixed as well considering that mortar may deposit at those areas. Mix for at least three minutes and until a uniform mixture is achieved. The filler content of the mixing ratio can be reduced by maximum 10% filler content.

Product	Parts by Weight	Parts by Volume
<b>CHEMOKITT FU SOLUTION 1</b>	100	2.00
<b>CHEMOKITT FU FILLER 1310</b>	550	8.40

### CONSUMPTION

Bedding and jointing (Bed Joint 5 mm / Cross Joint 5-7 mm)

Material	Sizes [mm]	Coverage [kg/m <sup>2</sup> ]
Tiles	240 x 115 x 20	ca. 18
Tiles	240 x 115 x 40	ca. 21
Bricks	240 x 115 x 65	ca. 25
Bricks	240 x 115 x 80	ca. 27

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# CHEMOKITT FU 1310

## POT LIFE (20°C)

Product	15°C	20°C	30°C
CHEMOKITT FU 1310	ca. 50	ca. 30	ca. 15

## CURING (20°C)

Load Capacity	Time
Accessible	ca. 24 h
Chemical load	ca. 7 Days

## CLEANING

Clean all equipment with **SOLVENT CF-CE** immediately after use.

## TESTING

The brick lining work shall be assessed according EN 14879-6 by visual inspection without magnifying lens. There shall be no imperfections (e.g. gaps, voids, unevenness, cracks or mechanical damages), which could impair the protective effect of the tile / brick lining.

## REPAIR

The defective areas have to be removed with suitable tools and have to be renewed again. Care has to be taken that no damages to the primer and / or sealing layers will occur. Optionally they also have to be renewed. Where post jointing is required, the min. joint depth must be 5 mm. When replacing multi-layered brick linings a stair-like outbreak has to be ensured.

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
CHEMOKITT FU SOLUTION 1	20 kg	591 0070
CHEMOKITT FU SOLUTION 1	200 kg	591 0071
CHEMOKITT FU FILLER 1310	25 kg	591 0010
SOLVENT CF-CE	10 l	595 9163

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
CHEMOKITT FU FILLER 1310	-	24 Months
CHEMOKITT FU SOLUTION 1	≤ +25°C	12 Months
SOLVENT CF-CE	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technische Daten	Prüfnorm	Einheit	Kennwert
Resistance to Ground	DIN 14879-6	Ω	≥ 10 <sup>9</sup>
Density	DIN EN ISO 2811 (ASTM D1475)	g/cm <sup>3</sup>	2.2
Compressive Strength	DIN EN ISO 604 (ASTM D695)	N/mm <sup>2</sup>	80
Adhesion Strength		N/mm <sup>2</sup>	≥ 4
Coefficient of Thermal Expansion	DIN 53752 (ASTM C531)	1/K	21 x 10 <sup>-6</sup>
Max. Operating Temperature Liquids	-	°C	+180

**Note:** The indicated temperatures are dependent on the present load and may vary

Information given in the fact sheet above corresponds to the current knowledge available to us regarding our products at the time of its drafting and is intended as a guideline for informational purposes. However, because of the multiple possibilities regarding possible applications, processing and on site conditions, any information given in the fact sheet above is not legally binding, in particular, without being limited to, such information shall not be interpreted as a warranty of merchantability or of fitness for a particular purpose. Customer therefore is advised to conduct its own testing or make an inquiry with our technical department before ordering. We reserve the right to change the product at any time, in particular, without being limited to, minor changes because of advancements in technology. If by way of exception, the information given in the fact sheet above is incorporated by reference into any contract concluded with us under German Law, such information, shall only be interpreted as determining the specific requirements of the contractual products as set out in § 434 BGB (German Civil Code) and shall not be interpreted as constituting a guarantee of condition.

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# PRODUCT INFORMATION

## CHEMOKITT FU 1320

### PRODUCT DESCRIPTION

**CHEMOKITT FU 1320** is two-component, cold curing synthetic resin mortar, based on a furan resin with carbon fillers. The cured, silicate-free resin mortar is electrically dissipating.

### SYNTHETIC RESIN CONSUMPTION

The synthetic resin mortar **CHEMOKITT FU 1320** consists of the **CHEMOKITT FU FILLER 1320** and the **CHEMOKITT FU SOLUTION 1**.

### FIELDS OF APPLICATION

**CHEMOKITT FU 1320** is suitable as bedding and jointing mortar for tiles, bricks and fittings made of acid-resistant ceramic, carbon or graphite. **CHEMOKITT FU 1320** is particularly suitable for high chemical loads of acids, including hydrofluoric acid, strong lye and organic solvents at high temperature loads. Main applications are tiling and brick linings of components in the chemical industry, waste water and process water treatment, in the phosphoric acid and sulphuric acid industry, in flue gas desulphurisation plants, neutralization- and pickling lines. Due to its good electrical dissipation, **CHEMOKITT FU 1320** is recommended for areas, where sparking shall be avoided due to the possible risk of explosion.

### FEATURES

- Very high mechanical load capacity
- Outstanding chemical resistance, especially against hydrofluoric acid, strong lye, solvents and other organic compounds
- High temperature resistance

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Components shall be designed and manufactured in accordance with EN 14879-1. Before start of brick lining work, the suitability of the surface preparation measures according EN 14879-1 must be checked and recorded.

### SURFACE PRE-TREATMENT

Steel and concrete surfaces must be primed with a suitable primer before application. The primer must be sanded in a fresh state after the final coat. Usually a sealing layer made of rubber or synthetic resin coating is foreseen, where it is possible to work directly with **CHEMOKITT FU 1320** on the sealing layer. Unevenness should be compensated in the ground.

### C-STEEL

All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502. Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 must be achieved. The primer must be applied immediately after the blasting.

### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such

as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%.

### ENVIRONMENTAL CONDITIONS

The specified environmental conditions must be observed during surface preparation and brick lining and be tested and recorded according EN 14879-6.

Environmental Conditions	Value
Relative Humidity	≤ 85%
Surface Temperature	≥ +10°C up to +35°C
Application Temperature	+10°C up to +30°C
Dew Point Distance	min. 3K

### APPLICATION

The execution of the brick lining work is only permitted, if the requirements of „Surface Pre-treatment“ and „Environmental Conditions“ are met. **CHEMOKITT FU 1320** is applied with a trowel onto the substrate or onto the existing lining. The bricks or tiles have to be bedded as far as possible without cavities, either filled-joint or hollow-joint. For the protection of rubber linings usually a thin layer of mortar is trowelled in advance to prevent mechanical damages. In case of an application of hollow-joint tiling into cement or potassium silicate bedding, acid washing with 10% hydrochloric acid or 20% alcoholic sulphuric acid of the open joints is necessary.

### WORK TOOLS

The following tools are essential for the application:

- Stirrer (max. 300 r/min.)
- Measuring cup & Mixing vessels
- Flat / wide brush
- Mortar trowel
- Grouting tool
- Miscellaneous (safety glasses, rubber gloves etc.)

### MIXING RATIO

Pour **CHEMOKITT FU SOLUTION 1** in a mixing vessel and add certain amount of **CHEMOKITT FU FILLER 1320** with the specified mixing ratios, then mix. The components must be mixed thoroughly and intensively. The walls and the bottom of the mixing vessel have to be mixed as well considering that mortar may deposit at those areas. Mix for at least three minutes and until a uniform mixture is achieved. The filler content of the mixing ratio can be reduced by maximum 10% filler content.

Product	Parts by Weight	Parts by Volume
<b>CHEMOKITT FU SOLUTION 1</b>	100	2.00
<b>CHEMOKITT FU FILLER 1320</b>	400	7.00

### CONSUMPTION

Bedding and jointing (Bed Joint 5 mm / Cross Joint 5-7 mm)

Material	Sizes [mm]	Coverage [kg/m <sup>2</sup> ]
Tiles	240 x 115 x 20	ca. 19
Tiles	240 x 115 x 40	ca. 22
Bricks	240 x 115 x 65	ca. 26
Bricks	240 x 115 x 80	ca. 28

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# CHEMOKITT FU 1320

## POT LIFE (20°C)

Product	15°C	20°C	30°C
CHEMOKITT FU 1320	ca. 70	ca. 40	ca. 20

## CURING (20°C)

Load Capacity	Time
Accessible	ca. 24 h
Chemical load	ca. 7 Days

## CLEANING

Clean all equipment with **SOLVENT CF-CE** immediately after use.

## TESTING

The brick lining work shall be assessed according EN 14879-6 by visual inspection without magnifying lens. There shall be no imperfections (e.g. gaps, voids, unevenness, cracks or mechanical damages), which could impair the protective effect of the tile / brick lining.

## REPAIR

The defective areas have to be removed with suitable tools and have to be renewed again. Care has to be taken that no damages to the primer and / or sealing layers will occur. Optionally they also have to be renewed. Where post jointing is required, the min. joint depth must be 5 mm. When replacing multi-layered brick linings a stair-like outbreak has to be ensured.

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
CHEMOKITT FU SOLUTION 1	20 kg	591 0070
CHEMOKITT FU SOLUTION 1	200 kg	591 0071
CHEMOKITT FU FILLER 1320	25 kg	591 0020
SOLVENT CF-CE	10 l	595 9163

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
CHEMOKITT FU FILLER 1320	-	24 Months
CHEMOKITT FU SOLUTION 1	≤ +25°C	12 Months
SOLVENT CF-CE	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technische Daten	Prüfnorm	Einheit	Kennwert
Resistance to Ground	DIN 14879-6	Ω	≤ 10 <sup>6</sup>
Density	DIN EN ISO 2811 (ASTM D1475)	g/cm <sup>3</sup>	2.3
Compressive Strength	DIN EN ISO 604 (ASTM D695)	N/mm <sup>2</sup>	70
Adhesion Strength		N/mm <sup>2</sup>	≥ 4
Coefficient of Thermal Expansion	DIN 53752 (ASTM C531)	1/K	29 x 10 <sup>-6</sup>
Max. Operating Temperature Liquids	-	°C	+180

**Note:** The indicated temperatures are dependent on the present load and may vary

Information given in the fact sheet above corresponds to the current knowledge available to us regarding our products at the time of its drafting and is intended as a guideline for informational purposes. However, because of the multiple possibilities regarding possible applications, processing and on site conditions, any information given in the fact sheet above is not legally binding, in particular, without being limited to, such information shall not be interpreted as a warranty of merchantability or of fitness for a particular purpose. Customer therefore is advised to conduct its own testing or make an inquiry with our technical department before ordering. We reserve the right to change the product at any time, in particular, without being limited to, minor changes because of advancements in technology. If by way of exception, the information given in the fact sheet above is incorporated by reference into any contract concluded with us under German Law, such information, shall only be interpreted as determining the specific requirements of the contractual products as set out in § 434 BGB (German Civil Code) and shall not be interpreted as constituting a guarantee of condition.

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# PRODUCT INFORMATION

## CHEMOKITT UP 1320

### PRODUCT DESCRIPTION

**CHEMOKITT UP 1320** is a three-component, cold curing synthetic resin mortar, based on a combination of unsaturated polyester and vinyl ester resin, with carbon filler. The cured resin mortar is electrically dissipating.

### SYNTHETIC RESIN CONSUMPTION

The synthetic resin mortar **CHEMOKITT UP 1320** consists of the **CHEMOKITT UP FILLER 1320** and the **CHEMOKITT UP SOLUTION 1**.

The **CHEMOKITT UP PRIMER 1** consists of **CHEMOKITT UP SOLUTION 2**, **CHEMOKITT UP SOLUTION 3**, and **CHEMOKITT UP HARDENER 1**.

### FIELDS OF APPLICATION

**CHEMOKITT UP 1320** is suitable as bedding and jointing mortar for tiles, bricks and fittings, especially for chemical loads of strong acids and organic solvents at high temperatures.

Main applications are tiling and brick linings of components in the chemical industry, metal processing industry, in channels, in pits, in sumps, in storage and work rooms, in neutralization and pickling lines and in areas with required electrical conductivity.

### FEATURES

- Very high mechanical load capacity
- Outstanding chemical resistance, especially against oxidizing acids, acid mixtures, hydrofluoric acid and solvents
- High temperature resistance

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Components shall be designed and manufactured in accordance with EN 14879-1. Before start of brick lining work, the suitability of the surface preparation measures according EN 14879-1 must be checked and recorded.

### SURFACE PRE-TREATMENT

Steel and concrete surfaces, rubber sheets and other sealing layers (except on VE and UP based layers) must be primed with a suitable primer before application. The primer must be sanded in a fresh state after the final coat. Unevenness should be compensated in the ground.

#### C-STEEL

All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 must be achieved. The primer must be applied immediately after the blasting.

#### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%.

### ENVIRONMENTAL CONDITIONS

The specified environmental conditions must be observed during surface preparation and brick lining and be tested and recorded according EN 14879-6.

Environmental Conditions	Value
Relative Humidity	≤ 85%
Surface Temperature	≥ +10°C up to +35°C
Application Temperature	+10°C up to +30°C
Dew Point Distance	min. 3K

### APPLICATION

The execution of the brick lining work is only permitted, if the requirements of „Surface Pre-treatment“ and „Environmental Conditions“ are met.

**CHEMOKITT UP 1320** is applied with a trowel onto the substrate or onto the existing lining. The bricks or tiles have to be bedded as far as possible without cavities, either filled-joint or hollow-joint. The carbon bricks need to be primed with sprinkled/sanded **CHEMOKITT UP PRIMER 1** prior to mortar application. The required sprinkling application is carried out with corundum. If a conductive layer has to be formed over the mortar, suitable conductive tapes (each 50 m<sup>2</sup>) have to be placed onto the the coated surface, and earthed.

### WORK TOOLS

The following tools are essential for the application:

- Stirrer (max. 300 r/min.)
- Measuring cup & Mixing vessels
- Flat / wide brush
- Mortar trowel
- Grouting tool
- Miscellaneous (safety glasses, rubber gloves etc.)

### MIXING RATIO

#### CHEMOKITT UP PRIMER 1

Pour **CHEMOKITT UP SOLUTION 2**, **CHEMOKITT UP SOLUTION 3** and the **CHEMOKITT UP HARDENER 1** in a mixing vessel within the specified mixing ratios, and then mix thoroughly.

#### CHEMOKITT UP 1320

Pour **CHEMOKITT UP SOLUTION 1** in a mixing vessel and add certain amount of **CHEMOKITT UP FILLER 1320** with the specified mixing ratios, then mix. The components must be mixed thoroughly and intensively. The walls and the bottom of the mixing vessel have to be mixed as well considering that mortar may deposit at those areas. Mix for at least three minutes until a uniform mixture is achieved.

Product	Parts by Weight	Parts by Volume
<b>CHEMOKITT UP SOLUTION 2 (CHEMOKITT UP PRIMER 1)</b>	100	2.00
<b>CHEMOKITT UP SOLUTION 3 (CHEMOKITT UP PRIMER 1)</b>	10	0.17
<b>CHEMOKITT UP HARDENER 1 (CHEMOKITT UP PRIMER 1)</b>	2.8	0.08
<b>CHEMOKITT UP SOLUTION 1</b>	100	2.00
<b>CHEMOKITT UP HARDENER 1</b>	5.6	0.16
<b>CHEMOKITT UP FILLER 1320</b>	300	6.00

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# CHEMOKITT UP 1320

## CONSUMPTION

Bedding and jointing (Bed Joint 5 mm / Cross Joint 5-7 mm)

Material	Sizes [mm]	Coverage [kg/m <sup>2</sup> ]
Tiles	240 x 115 x 20	ca. 19
Tiles	240 x 115 x 40	ca. 22
Bricks	240 x 115 x 65	ca. 26
Bricks	240 x 115 x 80	ca. 28

## POT LIFE (20°C)

Product	20°C
CHEMOKITT UP 1320	ca. 35 - 40
CHEMOKITT UP PRIMER 1	ca. 25

The pot life of CHEMOKITT UP 1320 is adjusted by the addition of CHEMOKITT UP INHIBITOR 1:

Temperature	Quantity CHEMOKITT UP INHIBITOR 1
20°C	ca. 20 ml to 2 L solution
25°C	ca. 30 ml to 2 L solution
30°C	ca. 40 ml to 2 L solution
35°C	ca. 50 ml to 2 L solution

## CLEANING

Clean all equipment with SOLVENT CF-CE immediately after use.

## TESTING

The brick lining work shall be assessed according EN 14879-6 by visual inspection without magnifying lens. There shall be no imperfections (e.g. gaps, voids, unevenness, cracks or mechanical damages), which could impair the protective effect of the tile / brick lining.

## REPAIR

The defective areas have to be removed with suitable tools and have to be renewed again. Care has to be taken that no damages to the primer and / or sealing layers will occur. Optionally they also have to be renewed. Where post jointing is required, the min. joint depth must be 5 mm. When replacing multi-layered brick linings a stair-like outbreak has to be ensured.

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
CHEMOKITT UP HARDENER 1	0.5 kg	591 0105
CHEMOKITT UP SOLUTION 1	20 kg	591 0100
CHEMOKITT UP SOLUTION 1	200 kg	591 0101
CHEMOKITT UP SOLUTION 2	10 kg	591 0102
CHEMOKITT UP SOLUTION 3	1 kg	591 0103
CHEMOKITT UP FILLER 1320	25 kg	591 0040
CHEMOKITT UP INHIBITOR 1	1 kg	591 0107
SOLVENT CF-CE	10 l	595 9163

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
CHEMOKITT UP FILLER 1320	-	12 Months
CHEMOKITT UP HARDENER 1	≤ +20°C	6 Months
CHEMOKITT UP INHIBITOR 1	≤ +20°C	12 Months
CHEMOKITT UP SOLUTION 1	≤ +20°C	6 Months
CHEMOKITT UP SOLUTION 2	≤ +20°C	6 Months
CHEMOKITT UP SOLUTION 3	≤ +20°C	6 Months
SOLVENT CF-CE	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

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# CHEMOKITT UP 1320

Technical Data	Standard	Unit	Value
Resistance to Ground	DIN 14879-6	$\Omega$	$\leq 10^6$
Density	EN ISO 2811 (ASTM D1475)	g/cm <sup>3</sup>	1,8
Compressive Strength	EN ISO 604 (ASTM D695)	N/mm <sup>2</sup>	90
Adhesion Strength		N/mm <sup>2</sup>	$\geq 3$
Coefficient of Thermal Expansion	DIN 53752 (ASTM C531)	1/K	$32 \times 10^{-6}$
Max. Operating Temperature Liquids	-	°C	+100

**Note:** The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## CHEMOKITT VE 1310

### PRODUCT DESCRIPTION

**CHEMOKITT VE 1310** is a two-component, cold curing synthetic resin mortar based on vinyl ester resin with mineral fillers.

### SYNTHETIC RESIN CONSUMPTION

The synthetic resin mortar **CHEMOKITT VE 1310** consists of the **CHEMOKITT VE FILLER 1310** and the **CHEMOKITT VE SOLUTION 1**.

### FIELDS OF APPLICATION

**CHEMOKITT VE 1310** is suitable as bedding and jointing mortar for tiles, bricks and fittings, especially for chemical loads of acids, solvents and oxidizing chemicals. Furthermore, **CHEMOKITT VE 1310** has a high temperature and a high mechanical stress resistance.

Main applications are tiling and brick linings of components in the chemical industry, waste water and process water treatment, pulp and paper industry and in pickling lines.

### FEATURES

- Very high mechanical load capacity
- Very good chemical resistance, especially against oxidizing acids and organic compounds
- Short curing time

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Components shall be designed and manufactured in accordance with EN 14879-1. Before start of brick lining work, the suitability of the surface preparation measures according EN 14879-1 must be checked and recorded.

### SURFACE PRE-TREATMENT

Steel and concrete surfaces, rubber sheets and other sealing layers (except on VE and UP based layers) must be primed with a suitable primer before application. The primer must be sanded in a fresh state after the final coat. Unevenness should be compensated in the ground.

#### C-STEEL

All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 must be achieved. The primer must be applied immediately after the blasting.

#### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%.

### ENVIRONMENTAL CONDITIONS

The specified environmental conditions must be observed during surface preparation and brick lining and be tested and recorded according EN 14879-6.

Environmental Conditions	Value
Relative Humidity	≤ 85%
Surface Temperature	≥ +10°C up to +35°C
Application Temperature	+10°C up to +30°C
Dew Point Distance	min. 3K

### APPLICATION

The execution of the brick lining work is only permitted, if the requirements of „Surface Pre-treatment“ and „Environmental Conditions“ are met.

Sealing layers, except UP or VE based surfaces, shall be primed with UP primer before mortar application. **CHEMOKITT VE 1310** is applied with a trowel onto the substrate or onto the existing lining. The bricks or tiles have to be bedded as far as possible without cavities, either filled-joint or hollow-joint. For the protection of rubber linings usually a thin layer of mortar is trowelled in advance to prevent mechanical damages.

### WORK TOOLS

The following tools are essential for the application:

- Stirrer (max. 300 r/min.)
- Measuring cup & Mixing vessels
- Flat / wide brush
- Mortar trowel
- Grouting tool
- Miscellaneous (safety glasses, rubber gloves etc.)

### MIXING RATIO

Pour **CHEMOKITT VE SOLUTION 1** in a mixing vessel and add certain amount of **CHEMOKITT VE FILLER 1310** with the specified mixing ratios, then mix. The components must be mixed thoroughly and intensively. The walls and the bottom of the mixing vessel have to be mixed as well considering that mortar may deposit at those areas. Mix for at least three minutes and until a uniform mixture is achieved. The filler content of the mixing ratio can be reduced by maximum 10% filler content.

Product	Parts by Weight	Parts by Volume
<b>CHEMOKITT EP SOLUTION 1</b>	100	2.00
<b>CHEMOKITT EP FILLER 1310</b>	400	6.10

### CONSUMPTION

Bedding and jointing (Bed Joint 5 mm / Cross Joint 5-7 mm)

Material	Sizes [mm]	Coverage [kg/m <sup>2</sup> ]
Tiles	240 x 115 x 20	ca. 15
Tiles	240 x 115 x 40	ca. 17
Bricks	240 x 115 x 65	ca. 20
Bricks	240 x 115 x 80	ca. 22

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# CHEMOKITT VE 1310

## POT LIFE (20°C)

Product	15°C	20°C	30°C
CHEMOKITT VE 1310	ca. 45	ca. 35	ca. 20

## CURING (20°C)

Load Capacity	Time
Accessible	ca. 4 h
Chemical load	ca. 3 Days

## CLEANING

Clean all equipment with **SOLVENT CF-CE** immediately after use.

## TESTING

The brick lining work shall be assessed according EN 14879-6 by visual inspection without magnifying lens. There shall be no imperfections (e.g. gaps, voids, unevenness, cracks or mechanical damages), which could impair the protective effect of the tile / brick lining.

## REPAIR

The defective areas have to be removed with suitable tools and have to be renewed again. Care has to be taken that no damages to the primer and / or sealing layers will occur. Optionally they also have to be renewed. Where post jointing is required, the min. joint depth must be 5 mm. When replacing multi-layered brick linings a stair-like outbreak has to be ensured.

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
CHEMOKITT VE SOLUTION 1	20 kg	591 0120
CHEMOKITT VE SOLUTION 1	200 kg	591 0121
CHEMOKITT VE FILLER 1310	25 kg	591 0030
SOLVENT CF-CE	10 l	595 9163

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
CHEMOKITT VE FILLER 1310	-	24 Months
CHEMOKITT VE SOLUTION 1	≤ +20°C	6 Months
SOLVENT CF-CE	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technische Daten	Prüfnorm	Einheit	Kennwert
Resistance to Ground	DIN 14879-6	Ω	≥ 10 <sup>9</sup>
Density	DIN EN ISO 2811 (ASTM D1475)	g/cm <sup>3</sup>	1.8
Compressive Strength	DIN EN ISO 604 (ASTM D695)	N/mm <sup>2</sup>	80
Adhesion Strength		N/mm <sup>2</sup>	≥ 3
Coefficient of Thermal Expansion	DIN 53752 (ASTM C531)	1/K	35 x 10 <sup>-6</sup>
Max. Operating Temperature Liquids	-	°C	+120

**Note:** The indicated temperatures are dependent on the present load and may vary

Information given in the fact sheet above corresponds to the current knowledge available to us regarding our products at the time of its drafting and is intended as a guideline for informational purposes. However, because of the multiple possibilities regarding possible applications, processing and on site conditions, any information given in the fact sheet above is not legally binding, in particular, without being limited to, such information shall not be interpreted as a warranty of merchantability or of fitness for a particular purpose. Customer therefore is advised to conduct its own testing or make an inquiry with our technical department before ordering. We reserve the right to change the product at any time, in particular, without being limited to, minor changes because of advancements in technology. If by way of exception, the information given in the fact sheet above is incorporated by reference into any contract concluded with us under German Law, such information, shall only be interpreted as determining the specific requirements of the contractual products as set out in § 434 BGB (German Civil Code) and shall not be interpreted as constituting a guarantee of condition.

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# PRODUCT INFORMATION

## CHEMOKITT VE 1311

### PRODUCT DESCRIPTION

**CHEMOKITT VE 1311** is a two-component, cold curing synthetic resin mortar, based on a Novolac vinyl ester resin with mineral fillers.

### SYNTHETIC RESIN CONSUMPTION

The synthetic resin mortar **CHEMOKITT VE 1311** consists of the **CHEMOKITT VE FILLER 1310** and the **CHEMOKITT VE SOLUTION 2**.

### FIELDS OF APPLICATION

**CHEMOKITT VE 1311** is suitable as bedding and jointing mortar for tiles, bricks and fittings, especially for chemical loads of acids, solvents and oxidizing chemicals. Furthermore, **CHEMOKITT VE 1311** has a high temperature and a high mechanical stress resistance.

Main applications are tiling and brick linings of components in the chemical industry, waste water and process water treatment, pulp and paper industry and in pickling lines.

### FEATURES

- Very high mechanical load capacity
- Very good chemical resistance, especially against oxidizing acids and organic compounds
- Short curing time

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Components shall be designed and manufactured in accordance with EN 14879-1. Before start of brick lining work, the suitability of the surface preparation measures according EN 14879-1 must be checked and recorded.

### SURFACE PRE-TREATMENT

Steel and concrete surfaces, rubber sheets and other sealing layers (except on VE and UP based layers) must be primed with a suitable primer before application. The primer must be sanded in a fresh state after the final coat. Unevenness should be compensated in the ground.

#### C-STEEL

All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 must be achieved. The primer must be applied immediately after the blasting.

#### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%.

### ENVIRONMENTAL CONDITIONS

The specified environmental conditions must be observed during surface preparation and brick lining and be tested and recorded according EN 14879-6.

Environmental Conditions	Value
Relative Humidity	≤ 85%
Surface Temperature	≥ +10°C up to +35°C
Application Temperature	+10°C up to +30°C
Dew Point Distance	min. 3K

### APPLICATION

The execution of the brick lining work is only permitted, if the requirements of „Surface Pre-treatment“ and „Environmental Conditions“ are met.

Sealing layers, except UP or VE based surfaces, shall be primed with UP primer before mortar application. **CHEMOKITT VE 1311** is applied with a trowel onto the substrate or onto the existing lining. The bricks or tiles have to be bedded as far as possible without cavities, either filled-joint or hollow-joint. For the protection of rubber linings usually a thin layer of mortar is trowelled in advance to prevent mechanical damages.

### WORK TOOLS

The following tools are essential for the application:

- Stirrer (max. 300 r/min.)
- Measuring cup & Mixing vessels
- Flat / wide brush
- Mortar trowel
- Grouting tool
- Miscellaneous (safety glasses, rubber gloves etc.)

### MIXING RATIO

Pour **CHEMOKITT VE SOLUTION 2** in a mixing vessel and add certain amount of **CHEMOKITT VE FILLER 1310** with the specified mixing ratios, then mix. The components must be mixed thoroughly and intensively. The walls and the bottom of the mixing vessel have to be mixed as well considering that mortar may deposit at those areas. Mix for at least three minutes and until a uniform mixture is achieved. The filler content of the mixing ratio can be reduced by maximum 10% filler content.

Product	Parts by Weight	Parts by Volume
<b>CHEMOKITT VE SOLUTION 2</b>	100	2.00
<b>CHEMOKITT VE FILLER 1310</b>	320	4.50

### CONSUMPTION

Bedding and jointing (Bed Joint 5 mm / Cross Joint 5-7 mm)

Material	Sizes [mm]	Coverage [kg/m <sup>2</sup> ]
Tiles	240 x 115 x 20	ca. 15
Tiles	240 x 115 x 40	ca. 17
Bricks	240 x 115 x 65	ca. 20
Bricks	240 x 115 x 80	ca. 22

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# CHEMOKITT VE 1311

## POT LIFE (20°C)

Product	15°C	20°C	30°C
CHEMOKITT VE 1311	ca. 50	ca. 40	ca. 20

## CURING (20°C)

Load Capacity	Time
Accessible	ca. 4 h
Chemical load	ca. 3 Days

## CLEANING

Clean all equipment with **SOLVENT CF-CE** immediately after use.

## TESTING

The brick lining work shall be assessed according EN 14879-6 by visual inspection without magnifying lens. There shall be no imperfections (e.g. gaps, voids, unevenness, cracks or mechanical damages), which could impair the protective effect of the tile / brick lining.

## REPAIR

The defective areas have to be removed with suitable tools and have to be renewed again. Care has to be taken that no damages to the primer and / or sealing layers will occur. Optionally they also have to be renewed. Where post jointing is required, the min. joint depth must be 5 mm. When replacing multi-layered brick linings a stair-like outbreak has to be ensured.

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
CHEMOKITT VE SOLUTION 2	20 kg	591 0130
CHEMOKITT VE SOLUTION 2	200 kg	591 0131
CHEMOKITT VE FILLER 1310	25 kg	591 0030
SOLVENT CF-CE	10 l	595 9163

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
CHEMOKITT VE FILLER 1310	-	24 Months
CHEMOKITT VE SOLUTION 2	≤ +20°C	3 Months
SOLVENT CF-CE	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technische Daten	Prüfnorm	Einheit	Kennwert
Resistance to Ground	DIN 14879-6	Ω	≥ 10 <sup>9</sup>
Density	DIN EN ISO 2811 (ASTM D1475)	g/cm <sup>3</sup>	1.8
Compressive Strength	DIN EN ISO 604 (ASTM D695)	N/mm <sup>2</sup>	80
Adhesion Strength		N/mm <sup>2</sup>	≥ 3
Coefficient of Thermal Expansion	DIN 53752 (ASTM C531)	1/K	35 x 10 <sup>-6</sup>
Max. Operating Temperature Liquids	-	°C	+120

**Note:** The indicated temperatures are dependent on the present load and may vary

Information given in the fact sheet above corresponds to the current knowledge available to us regarding our products at the time of its drafting and is intended as a guideline for informational purposes. However, because of the multiple possibilities regarding possible applications, processing and on site conditions, any information given in the fact sheet above is not legally binding, in particular, without being limited to, such information shall not be interpreted as a warranty of merchantability or of fitness for a particular purpose. Customer therefore is advised to conduct its own testing or make an inquiry with our technical department before ordering. We reserve the right to change the product at any time, in particular, without being limited to, minor changes because of advancements in technology. If by way of exception, the information given in the fact sheet above is incorporated by reference into any contract concluded with us under German Law, such information, shall only be interpreted as determining the specific requirements of the contractual products as set out in § 434 BGB (German Civil Code) and shall not be interpreted as constituting a guarantee of condition.

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# PRODUCT INFORMATION

## CHEMOKITT WG 1310

### PRODUCT DESCRIPTION

**CHEMOKITT WG 1310** is a two-component, halogen-free bedding and jointing mortar, based on potassium silicate with mineral fillers.

### SYNTHETIC RESIN CONSUMPTION

The synthetic resin mortar **CHEMOKITT WG 1310** consists of the **CHEMOKITT WG FILLER 1310** and the **CHEMOKITT WG SOLUTION 1**.

### FIELDS OF APPLICATION

**CHEMOKITT WG 1310** is suitable for bedding and jointing of ceramic tiles, bricks and fittings, especially for chemical loads of concentrated sulphuric acid and oxidizing materials with very high temperature stresses.

Main applications are tiling and brick linings of components in the sulphuric acid industry and in flue gas desulphurisation plants as well as drying towers, quench towers or venturi scrubbers.

### FEATURES

- Outstanding chemical resistance, especially against concentrated sulphuric acid, nitric acid and flue gas stresses
- Very high temperature resistance
- Easy to apply

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Components shall be designed and manufactured in accordance with EN 14879-1. Before start of brick lining work, the suitability of the surface preparation measures according EN 14879-1 must be checked and recorded.

### SURFACE PRE-TREATMENT

#### C-STEEL

All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 must be achieved. The primer must be applied immediately after the blasting.

#### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm². The residual moisture content must not exceed 4%.

### ENVIRONMENTAL CONDITIONS

The specified environmental conditions must be observed during surface preparation and brick lining and be tested and recorded according EN 14879-6.

Environmental Conditions	Value
Relative Humidity	≤ 85%
Surface Temperature	≥ +10 °C up to +35 °C
Application Temperature	+10 °C up to +30 °C
Dew Point Distance	min. 3K

### APPLICATION

The execution of the brick lining work is only permitted, if the requirements of „Surface Pre-treatment“ and „Environmental Conditions“ are met.

**CHEMOKITT WG 1310** is applied with a trowel onto the substrate or onto the existing lining. The bricks or tiles have to be bedded as far as possible without cavities, either filled-joint or hollow-joint. For the protection of rubber linings usually a thin layer of mortar is trowelled in advance to prevent mechanical damages. Mortar application cannot be carried out at temperatures below 10°C. Do not use any mortar in case of partial reaction! A premature contact with water must be avoided. To improve the water permeation resistance of the mortar, acid washing can be performed with 10% HCl or 20% alcoholic sulphuric acid. Vertical faces always need to be acid washed more than once. The mortar cannot be used for compensation.

### WORK TOOLS

The following tools are essential for the application:

- Stirrer (max. 300 r/min.)
- Measuring cup & Mixing vessels
- Flat / wide brush
- Mortar trowel
- Grouting tool
- Miscellaneous (safety glasses, rubber gloves etc.)

### MIXING RATIO

Pour **CHEMOKITT WG SOLUTION 1** in a mixing vessel and add certain amount of **CHEMOKITT WG FILLER 1310** with the specified mixing ratios, then mix. The components must be mixed thoroughly and intensively. The walls and the bottom of the mixing vessel have to be mixed as well considering that mortar may deposit at those areas. Mix for at least three minutes and until a uniform mixture is achieved. The filler content of the mixing ratio can be reduced by maximum 10% filler content.

Product	Parts by Weight	Parts by Volume
<b>CHEMOKITT WG SOLUTION 1</b>	100	2.00
<b>CHEMOKITT WG FILLER 1310</b>	300	5.80

### CONSUMPTION

Bedding and jointing (Bed Joint 5 mm / Cross Joint 5-7 mm)

Material	Sizes [mm]	Coverage [kg/m²]
Tiles	240 x 115 x 20	ca. 17
Tiles	240 x 115 x 40	ca. 19
Bricks	240 x 115 x 65	ca. 22
Bricks	240 x 115 x 80	ca. 24

### POT LIFE (20°C)

Product	15°C	20°C	30°C
<b>CHEMOKITT WG 1310</b>	ca. 65	ca. 50	ca. 25

### CURING (20°C)

Load Capacity	Time
Accessible	ca. 24 h
Chemical load	ca. 7 Days

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# CHEMOKITT WG 1310

## CLEANING

Clean all equipment with **SOLVENT CF-CE** immediately after use.

## TESTING

The brick lining work shall be assessed according EN 14879-6 by visual inspection without magnifying lens. There shall be no imperfections (e.g. gaps, voids, unevenness, cracks or mechanical damages), which could impair the protective effect of the tile / brick lining.

## REPAIR

The defective areas have to be removed with suitable tools and have to be renewed again. Care has to be taken that no damages to the primer and / or sealing layers will occur. Optionally they also have to be renewed. Where post jointing is required, the min. joint depth must be 5 mm. When replacing multi-layered brick linings a stair-like outbreak has to be ensured.

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
<b>CHEMOKITT WG SOLUTION 1</b>	20 kg	591 0110
<b>CHEMOKITT WG SOLUTION 1</b>	290 kg	591 0115
<b>CHEMOKITT WG FILLER 1310</b>	25 kg	591 0060
<b>SOLVENT CF-CE</b>	10 l	595 9163

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
<b>CHEMOKITT WG FILLER 1310</b>	-	24 Months
<b>CHEMOKITT WG SOLUTION 1</b>	≤ +25 °C	12 Months
<b>SOLVENT CF-CE</b>	5 - 25 °C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technische Daten	Prüfnorm	Einheit	Kennwert
Resistance to Ground	DIN 14879-6	Ω	≥ 10 <sup>9</sup>
Density	DIN EN ISO 2811 (ASTM D1475)	g/cm <sup>3</sup>	2.0
Compressive Strength	DIN EN ISO 604 (ASTM D695)	N/mm <sup>2</sup>	35
Adhesion Strength		N/mm <sup>2</sup>	≥ 1
Coefficient of Thermal Expansion	DIN 53752 (ASTM C531)	1/K	10 x 10 <sup>-6</sup>
Max. Operating Temperature Liquids	-	°C	+900

**Note:** The indicated temperatures are dependent on the present load and may vary

Information given in the fact sheet above corresponds to the current knowledge available to us regarding our products at the time of its drafting and is intended as a guideline for informational purposes. However, because of the multiple possibilities regarding possible applications, processing and on site conditions, any information given in the fact sheet above is not legally binding, in particular, without being limited to, such information shall not be interpreted as a warranty of merchantability or of fitness for a particular purpose. Customer therefore is advised to conduct its own testing or make an inquiry with our technical department before ordering. We reserve the right to change the product at any time, in particular, without being limited to, minor changes because of advancements in technology. If by way of exception, the information given in the fact sheet above is incorporated by reference into any contract concluded with us under German Law, such information, shall only be interpreted as determining the specific requirements of the contractual products as set out in § 434 BGB (German Civil Code) and shall not be interpreted as constituting a guarantee of condition.

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# DESCRIPTION

## Asplit

Product	Product Description
<b>Asplit 876 PRIMER</b>	<b>Asplit 876 PRIMER</b> is a colourless, two-component primer and laminating resin based on an epoxy resin.
<b>Asplit CN</b>	<b>Asplit CN</b> is a black, two-component, cold curing synthetic mortar based on a modified phenol resin with carbon fillers
<b>Asplit CN 916</b>	<b>Asplit CN 916</b> is a black, two-component, cold curing synthetic mortar based on a modified phenol resin with carbon fillers.
<b>Asplit ET BEDDING MORTAR</b>	<b>Asplit ET BEDDING MORTAR</b> is a grey, three-component, cold curing synthetic mortar based on a epoxy resin and depending on the application with different fillers.
<b>Asplit ET TROWELLING</b>	<b>Asplit ET TROWELLING</b> is a three-component, cold curing synthetic mortar based on a epoxy resin and depending on the application with different fillers.
<b>Asplit ET PROTECTIVE COATING</b>	<b>Asplit ET PROTECTIVE COATING</b> is a three-component, cold curing synthetic mortar based on a epoxy resin and depending on the application with different fillers.
<b>Asplit ETS</b>	<b>Asplit ETS</b> is a black, three-component, cold curing synthetic mortar based on a epoxy resin with very good resistance against abrasive loads.
<b>Asplit FLAKE M</b>	<b>Asplit FLAKE M</b> is a two-component; vapour diffusion resistant, C-glass flake filled polymer coating based on a chemical and thermal resistant Novolac vinyl ester resin. The C-glass flake fillers are oriented parallel to the substrate surface to form a high level of protection against permeation and ensure a long service life.
<b>Asplit FN</b>	<b>Asplit FN</b> is a black, two-component, cold curing synthetic mortar based on a modified furan resin with carbon fillers.
<b>Asplit FQ</b>	<b>Asplit FQ</b> is a black, two-component, cold curing synthetic mortar based on a furan resin with mineral fillers.
<b>Asplit HB</b>	<b>Asplit HB</b> is a two-component, halogen-free, bedding and jointing mortar based on potassium silicate
<b>Asplit HES</b>	<b>Asplit HES</b> is a grey, halogen free sodium silicate mortar, which by mixing with water, chemically reacts to harden. The hardener and binder are included in the powder.
<b>Asplit HSP</b>	<b>Asplit HSP</b> is a halogen free potassium silicate mortar, which has been specially designed to be used by spraying (similar to sprayed concrete). <b>Asplit HSP</b> is a compact system which includes a specially formulated hardener, which by mixing with water, chemically reacts to harden.
<b>Asplit K 14</b>	<b>Asplit K 14</b> is a potassium silicate mortar with corresponding chemical but higher thermal resistance compared to conventional potassium silicate mortars.
<b>Asplit 876 LAMINATE</b>	<b>Asplit 876 LAMINATE</b> is a yellow-brown, approx. 3 mm thick glass mat reinforced lining system based on an epoxy resin.
<b>Asplit LC LAMINATE</b>	<b>Asplit LC LAMINATE</b> is a black, approx. 3 mm thick; glass mat reinforced lining system based on a phenol resin. <b>Asplit LC LAMINATE</b> is electrically conductive by using a hybrid mat.
<b>Asplit LC 916 LAMINATE</b>	<b>Asplit LC 916 LAMINATE</b> is a black, approx. 3 mm thick; glass mat reinforced lining system based on a phenol resin. <b>Asplit LC 916 LAMINATE</b> is electrically conductive by using a hybrid mat.
<b>Asplit LF LAMINATE</b>	<b>Asplit LF LAMINATE</b> is a black, approx. 3 mm thick; glass mat reinforced lining system based on a furan resin. <b>Asplit LF LAMINATE</b> is electrically conductive by using a hybrid mat.
<b>Asplit VE 145 LAMINATE</b>	<b>Asplit VE 145 LAMINATE</b> is an approx. 3 mm thick glass mat reinforced lining system based on a epoxy resin. The coating system consists of a trowel applied primer, a laminate layer and optionally a top coat. The topcoat is used optionally, if an electrical conductive or a grey surface is required.
<b>Asplit OC</b>	<b>Asplit OC</b> is a black, three-component, cold curing synthetic resin mortar, based on a unsaturated polyester and vinyl ester resin with carbon fillers. The cured mortar is electrically conductive.
<b>Asplit VEC</b>	<b>Asplit VEC</b> is a black, three-component, cold curing synthetic resin mortar, based on a Novolac vinyl ester resin with carbon fillers.
<b>Asplit VEL</b>	<b>Asplit VEL</b> is an approx. 3 mm thick; glass mat reinforced lining system based on a Novolac vinyl ester resin. The coating system consists of a trowel applied primer, a laminate layer and optionally a top coat. The top coat is used optionally, if an electrical conductive or a grey surface is required.

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## DESCRIPTION

### Asplit

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Product	Product Description
Asplit VEQ	<b>Asplit VEQ</b> is a two-component, cold curing synthetic resin mortar, based on a Novolac vinyl ester resin with mineral fillers.
Asplit VP 788	<b>Asplit VP 788</b> is a black, two-component, cold curing synthetic resin mortar, based on a modified furan resin with carbon fillers.

Information given in the fact sheet above corresponds to the current knowledge available to us regarding our products at the time of its drafting and is intended as a guideline for informational purposes. However, because of the multiple possibilities regarding possible applications, processing and on site conditions, any information given in the fact sheet above is not legally binding, in particular, without being limited to, such information shall not be interpreted as a warranty of merchantability or of fitness for a particular purpose. Customer therefore is advised to conduct its own testing or make an inquiry with our technical department before ordering. We reserve the right to change the product at any time, in particular, without being limited to, minor changes because of advancements in technology. If by way of exception, the information given in the fact sheet above is incorporated by reference into any contract concluded with us under German Law, such information, shall only be interpreted as determining the specific requirements of the contractual products as set out in § 434 BGB (German Civil Code) and shall not be interpreted as constituting a guarantee of condition.

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# PHYSICAL DATA

## Asplit

Product	Resistance to Ground	Flexural Strength	Density	Compressive Strength	E-Modulus	Hardness Shore D	Max. Temperature Dry	Max. Temperature Wet	Coefficient of Thermal Expansion	Thermal Conductivity	Tensile Strength
	DIN 14879-6 [Ω]	EN ISO 178 [N/mm <sup>2</sup> ]	EN ISO 2811 [g/cm <sup>3</sup> ]	EN ISO 604 [N/mm <sup>2</sup> ]	- [N/mm <sup>2</sup> ]	- [°C]	[°C]	[°C]	[1/K]	[W/(m · K)]	EN ISO 527 [N/mm <sup>2</sup> ]
Asplit 876 PRIMER	---	---	1,14	---	---	> 70	---	+160	---	---	---
Asplit CN	≤ 1 x 10 <sup>8</sup>	22	1,40	60	---	ca. 60 - 70	---	+180	---	1,6	8
Asplit CN 916	≤ 1 x 10 <sup>8</sup>	---	1,45	60	---	> 50	---	+180	---	1,6	---
Asplit ET BEDDING MORTAR	≤ 1 x 10 <sup>6*</sup>	40	2,05	100	1,1 x 10 <sup>4</sup>	---	+60 / +120**	---	45 x 10 <sup>-6</sup>	1,7	40
Asplit ET TROWELLING	≤ 1 x 10 <sup>6***</sup> / ≤ 1 x 10 <sup>4****</sup>	40	2,05	100	1,1 x 10 <sup>4</sup>	---	+60 / +120** / +80*****	---	45 x 10 <sup>-6</sup>	1,7	40
Asplit ET PROTECTIVE COATING	---	40	2,05	100	1,4 x 10 <sup>4</sup>	---	+60 / +120**	---	45 x 10 <sup>-6</sup>	1,7	40
Asplit ETS	---	---	---	---	---	---	---	---	---	---	---
Asplit FLAKE M	---	---	1,20	---	---	---	+180	+70	27-30 x 10 <sup>-6</sup>	---	40
Asplit FN	≤ 1 x 10 <sup>8</sup>	30	1,6	70	0,8 x 10 <sup>4</sup>	---	---	+220	24 x 10 <sup>-6</sup>	2,0	8
Asplit FQ	> 10 <sup>9</sup>	---	2,2	80	---	---	---	+180	21 x 10 <sup>-6</sup>	---	---
Asplit HB	---	10	2,0	30	1,1 x 10 <sup>4</sup>	> 20	+900	---	12 x 10 <sup>-6</sup>	1,2	---
Asplit HES	---	10	2,0	25	1,1 x 10 <sup>4</sup>	---	+900	---	12 x 10 <sup>-6</sup>	1,2	---
Asplit HSP	---	10	---	30	---	---	+900	---	12 x 10 <sup>-6</sup>	---	---
Asplit K 14	---	6	2,0	20	---	---	+1400	---	---	---	---
Asplit 876 LAMINATE	---	---	1,2	---	---	> 60	+160	---	---	---	---

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# PHYSICAL DATA

## Asplit

Product	Resistance to Ground	Flexural Strength	Density	Compressive Strength	E-Modulus	Hardness Shore D	Max. Temperature Dry	Max. Temperature Wet	Coefficient of Thermal Expansion	Thermal Conductivity	Tensile Strength
	DIN 14879-6 [Ω]	EN ISO 178 [N/mm <sup>2</sup> ]	EN ISO 2811 [g/cm <sup>3</sup> ]	EN ISO 604 [N/mm <sup>2</sup> ]	-	-	-	-	-	-	EN ISO 527 [N/mm <sup>2</sup> ]
Asplit LC LAMINATE	≤ 1 x 10 <sup>6</sup>	---	1,16	---	---	> 60	+100	---	---	---	---
Asplit LC 916 LAMINATE	≤ 1 x 10 <sup>6</sup>	---	1,20	---	---	> 60	+90	---	---	---	---
Asplit LF LAMINATE	≤ 1 x 10 <sup>6</sup>	---	1,154	---	---	> 60	+100	---	---	---	---
Asplit VE 145 LAMINATE	≤ 1 x 10 <sup>6</sup>	---	1,10	60	---	> 60	+80	---	---	---	---
Asplit OC	≤ 10 <sup>6</sup>	---	1,8	70	---	---	---	+100	32 x 10 <sup>-6</sup>	---	---
Asplit VEC	≤ 1 x 10 <sup>8</sup>	25	1,4	140	0,6 x 10 <sup>4</sup>	---	+120	---	40 x 10 <sup>-6</sup>	1,0	10
Asplit VEL	≤ 1 x 10 <sup>6</sup>	---	1,4	60	---	> 60	+100	---	---	---	---
Asplit VEQ	> 10 <sup>9</sup>	---	1,8	80	---	---	---	+150	35 x 10 <sup>-6</sup>	---	---
Asplit VP 788	≤ 1 x 10 <sup>8</sup>	16	1,6	52	---	---	+230	---	---	---	5

\* ET tiling black \*\* In combination with ceramic tiles or bricks \*\*\* Conductive grey \*\*\*\* conductive black \*\*\*\*\* as trowel layer

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Asplit GmbH

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# PRODUCT INFORMATION

## Asplit 876 PRIMER

### PRODUCT DESCRIPTION

**Asplit 876 PRIMER** is a colourless, two-component primer and laminating resin based on an epoxy resin.

### FIELDS OF APPLICATION

**Asplit 876 PRIMER** serves as a primer for Asplit mortars based on phenol and furan resins. An acidification is not necessary. On concrete surfaces **Asplit 876 PRIMER** has the additional function of a sealing.

The chemical resistance of **Asplit 876 PRIMER** is generally similar to **Asplit ET**, but it has a better resistance against organic acids and solvents.

### FEATURES

- Direct adhering primer on steel and concrete surfaces
- Excellent chemical resistance
- High temperature resistance up to +160°C (dry)

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Components to be brick lined or laminated shall be designed and manufactured in accordance with EN 14879-1.

Before start of coating work or brick lining work, the suitability of the surface preparation measures according EN 14879-1 must be checked and recorded.

### SURFACE PRE-TREATMENT

#### C-STEEL

All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 must be achieved. The primer must be applied immediately after the blasting.

#### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%.

### ENVIRONMENTAL CONDITIONS

The specified environmental conditions must be observed during surface preparation and brick lining and be tested and recorded according EN 14879-6.

Environmental Conditions	Value
Relative Humidity	≤ 80%
Surface Temperature	≥ +10°C up to +30°C
Application Temperature	+20°C ± 5°C recommended
Dew Point Distance	min. 3K

### APPLICATION

The execution of the coating and brick lining work is only permitted, if the requirements of „Surface Pre-treatment“ and „Environmental Conditions“ are met.

**Asplit 876 PRIMER** is applied twice (undiluted) by using brushes, wide brushes or rollers. If the overworking time is > 24 hours, the last coat must be sanded in fresh state with dry quartz sand (0.3 – 0.7 mm) – if no sanding is carried out – it must be grinded.

### WORK TOOLS

The following tools are essential for the application:

- Stirrer (max. 300 r/min.)
- Measuring cup & Mixing vessels
- Flat / wide brush
- Lambs wool roller
- Miscellaneous (safety glasses, rubber gloves etc.)

### MIXING RATIO

**Asplit 876 PRIMER** must be well stirred before adding the **Asplit 876 HARDENER** in the recommended ratio. The stirring of the merged components should be at least 3 minutes and must result in a homogeneous mixture. Then pour the mixture into a clean pail and mix again briefly.

Asplit 876 PRIMER	KG per Litre	Parts by Weight	Parts by Volume
<b>Asplit 876 SOLUTION</b>	0.815	100	0.87
<b>Asplit 876 HARDENER</b>	0.325	40	0.36

### CONSUMPTION

Substrate	Coverage [g/m <sup>2</sup> ]
Steel	ca. 250
Concrete	ca. 300 - 350

### POT LIFE (20°C)

Product	Time [min]
<b>Asplit 876 PRIMER</b>	ca. 60

### CURING (20°C)

Load Capacity	Time
Over workable	ca. 18 h
Accessible	ca. 18 h

### CLEANING

Clean all equipment with **Asplit UNIVERSAL CLEANER** or **Asplit CLEANER N** immediately after use. The cleaning is done while the material is still not hardened.

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# Asplit 876 PRIMER

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
<b>Asplit 876 SOLUTION</b>	20 kg	592 0605
<b>Asplit 876 HARDENER</b>	8 kg	592 0615
<b>Asplit CLEANER N</b>	25 kg	592 0920
<b>Asplit CLEANER N DEFOAMER</b>	0.25 kg	592 0921
<b>Asplit UNIVERSAL CLEANER</b>	8.4 kg	592 0900

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
<b>Asplit 876 HARDENER</b>	≤ +25°C	24 Months
<b>Asplit 876 SOLUTION</b>	≤ +25°C	24 Months
<b>Asplit CLEANER N</b>	-	24 Months
<b>Asplit CLEANER N DEFOAMER</b>	≤ +20°C	24 Months
<b>Asplit UNIVERSAL CLEANER</b>	≤ +20°C	24 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Density (Mixture)	EN ISO 2811 (ASTM D1475)	g/cm <sup>3</sup>	1.14
Density <b>Asplit 876 SOLUTION</b>			1.15
Adhesion Strength Concrete	EN ISO 4624 (ASTM D7234)	N/mm <sup>2</sup>	> 1.5
Adhesion Strength Steel	EN ISO 4624 (ASTM D4541)	N/mm <sup>2</sup>	> 7
Hardness Shore D	-	-	> 70
Max. Operating Temperature Liquids	-	°C	+160

**Note:** The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## Asplit CN

### PRODUCT DESCRIPTION

**Asplit CN** is a black, two-component, cold curing synthetic mortar based on a modified phenol resin with carbon fillers

### FIELDS OF APPLICATION

**Asplit CN** is suitable for bedding and jointing of tiles, bricks and fittings made of ceramic or carbon for the production of chemical, thermal and mechanic resistant coatings and protective linings.

### FEATURES

- Excellent adhesion to ceramic and carbon bricks
- Extremely high chemical resistance, especially to acids, solvents and weak oxidizing chemicals
- The hardened mortar conducts electricity
- Suitable for linings, where a pre-stressing must be achieved

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Components shall be designed and manufactured in accordance with EN 14879-1. Before start of brick lining work, the suitability of the surface preparation measures according to EN 14879-1 must be checked and recorded.

### SURFACE PRE-TREATMENT

Steel and concrete surfaces must be primed with **Asplit 876 PRIMER** before application. The primer must be sanded in a fresh state after the final coat. If a sealing layer of rubber or coating is present, **Asplit CN** can be directly applied on the sealing layer. Unevenness should be compensated in the ground.

#### C-STEEL

All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 must be achieved. The primer must be applied immediately after the blasting.

#### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm². The residual moisture content must not exceed 4%.

### ENVIRONMENTAL CONDITIONS

The specified environmental conditions must be observed during surface preparation and brick lining and be tested and recorded according to EN 14879-6.

Environmental Conditions	Value
Relative Humidity	≤ 80%
Surface Temperature	≥ +10°C up to +30°C
Application Temperature	+20°C ± 5°C recommended
Dew Point Distance	min. 3K

### APPLICATION

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The execution of the brick lining work is only permitted, if the requirements of „Surface Pre-treatment“ and „Environmental Conditions“ are met.

**Asplit CN** is applied on the substrate or sealing layer by using a mortar trowel. Tiles and bricks must be free of voids, fully bedded and hollow jointed. If tiles have to be laid in alkaline mortar with open joints, make sure that the mortar is hardened, acidified and dried before applying **Asplit CN**.

The joints have to be square with a depth of minimum 15 mm and a width of 5 - 8 mm. The edges of the tiles have to be free from mortar and the joints must be cleaned.

### WORK TOOLS

The following tools are essential for the application:

- Stirrer (max. 300 r/min.)
- Measuring cup & Mixing vessels
- Flat / wide brush
- Mortar trowel
- Grouting tool
- Miscellaneous (safety glasses, rubber gloves etc.)

### MIXING RATIO

Pour **Asplit CN SOLUTION** in a mixing vessel and add **Asplit CN POWDER** at the specified mixing ratio. The stirring of the merged components should be at least 3 minutes and must result in a homogeneous mixture.

**Asplit CN SOLUTION** tends to separate water during storage. If there is a water film on top, it is necessary to skim it first before use. Do not mix the water into the solution.

Primer	KG per Litre	Parts by Weight	Parts by Volume
<b>Asplit 876 SOLUTION</b>	0.815	100	0.87
<b>Asplit 876 HARDENER</b>	0.325	40	0.36

Asplit CN	KG per Litre	Parts by Weight	Parts by Volume
<b>Asplit CN SOLUTION</b>	0.600	100	1.00
<b>Asplit CN POWDER</b>	0.800	133	2.66

### CONSUMPTION

Bedding and jointing (Bed Joint 5 mm / Cross Joint 5-7 mm)

Material	Sizes [mm]	Coverage [kg/m²]
Tiles	240 x 115 x 20	ca. 10
Tiles	240 x 115 x 40	ca. 13
Bricks	240 x 115 x 65	ca. 16
Bricks	240 x 115 x 80	ca. 18

### POT LIFE (20°C)

Product	Time [min]
<b>Asplit CN</b>	ca. 60

### CURING (20°C)

Load Capacity	Time
Accessible	ca. 24 h
Chemical load	ca. 8 Days

# Asplit CN

## POST TREATMENT

Brick linings with **Asplit CN** should be taken in operation at earliest 8 days after finishing. The optimum resistance to solvents and alkalis will be achieved after several weeks at room temperature. This process can be accelerated by a thermal treatment of the finished floor or brick lining.

## CLEANING

Clean all equipment with **Asplit UNIVERSAL CLEANER** or **Asplit CLEANER N** immediately after use. The cleaning is done while the material is still not hardened.

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
<b>Asplit 876 HARDENER</b>	8 kg	592 0615
<b>Asplit 876 SOLUTION</b>	20 kg	592 0605
<b>Asplit CN SOLUTION</b>	20 kg	592 0020
<b>Asplit CN SOLUTION</b>	50 kg	592 0021
<b>Asplit CN POWDER</b>	25 kg	592 0010
<b>Asplit CLEANER N</b>	25 kg	592 0920
<b>Asplit CLEANER N DEFOAMER</b>	0.25 kg	592 0921
<b>Asplit UNIVERSAL CLEANER</b>	8.4 kg	592 0900

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
<b>Asplit 876 HARDENER</b>	≤ +25°C	24 Months
<b>Asplit 876 SOLUTION</b>	≤ +25°C	24 Months
<b>Asplit CN SOLUTION</b>	≤ +20°C	9 Months
<b>Asplit CN POWDER</b>	-	24 Months
<b>Asplit CLEANER N</b>	-	24 Months
<b>Asplit CLEANER N DEFOAMER</b>	≤ +20°C	24 Months
<b>Asplit UNIVERSAL CLEANER</b>	≤ +20°C	24 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Resistance to Ground	DIN 14879-6	Ω	≤ 1 x 10 <sup>8</sup>
Flexural Strength	EN ISO 178	N/mm <sup>2</sup>	22
Density (Mixture)	EN ISO 2811 (ASTM D1475)	g/cm <sup>3</sup>	1.40
Compressive Strength	EN ISO 604	N/mm <sup>2</sup>	60
Hardness Shore D	-	-	ca. 60 - 70
Thermal Conductivity	-	W/(m • K)	1.6
Tensile Strength	EN ISO 527	N/mm <sup>2</sup>	8
Max. Operating Temperature Liquids	-	°C	+180

**Note:** The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## Asplit CN 916

### PRODUCT DESCRIPTION

**Asplit CN 916** is a black, two-component, cold curing synthetic mortar based on a modified phenol resin with carbon fillers.

### FIELDS OF APPLICATION

**Asplit CN 916** is suitable for bedding and jointing of tiles, bricks and fittings made of ceramic or carbon for the production of chemical, thermal and mechanic resistant coatings and protective linings.

### FEATURES

- Excellent adhesion to ceramic and carbon bricks
- Extremely high chemical resistance, especially to acids and solvents
- The hardened mortar is electrical conductive
- **Asplit CN 916 SOLUTION** does not separate water during storage
- Very good application because of dust free fillers

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Components shall be designed and manufactured in accordance with EN 14879-1. Before start of brick lining work, the suitability of the surface preparation measures according to EN 14879-1 must be checked and recorded.

### SURFACE PRE-TREATMENT

Steel and concrete surfaces must be primed with **Asplit 876 PRIMER** before application. The primer must be sanded in a fresh state after the final coat. If a sealing layer of rubber or coating is present, **Asplit CN 916** can be directly applied on the sealing layer. Unevenness should be compensated in the ground.

#### C-STEEL

All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 must be achieved. The primer must be applied immediately after the blasting.

#### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm². The residual moisture content must not exceed 4%.

### ENVIRONMENTAL CONDITIONS

The specified environmental conditions must be observed during surface preparation and brick lining and be tested and recorded according to EN 14879-6.

Environmental Conditions	Value
Relative Humidity	≤ 80%
Surface Temperature	≥ +10°C up to +30°C
Application Temperature	+20°C ± 5°C recommended
Dew Point Distance	min. 3K

### APPLICATION

The execution of the brick lining work is only permitted, if the requirements of „Surface Pre-treatment“ and „Environmental Conditions“ are met.

**Asplit CN 916** is applied on the substrate or sealing layer by using a mortar trowel. Tiles and bricks must be free of voids, fully bedded and hollow jointed. If tiles have to be laid in alkaline mortar with open joints, make sure that the mortar is hardened, acidified and dried before applying **Asplit CN 916**. The joints have to be square with a depth of minimum 15 mm and a width of 5 - 8 mm. The edges of the tiles have to be free from mortar and the joints must be cleaned.

### WORK TOOLS

The following tools are essential for the application:

- Stirrer (max. 300 r/min.)
- Measuring cup & Mixing vessels
- Flat / wide brush
- Mortar trowel
- Grouting tool
- Miscellaneous (safety glasses, rubber gloves etc.)

### MIXING RATIO

Pour **Asplit CN 916 SOLUTION** in a mixing vessel and add **Asplit CN 916 POWDER** at the specified mixing ratio. The stirring of the merged components should be at least 3 minutes and must result in a homogeneous mixture.

Primer	KG per Litre	Parts by Weight	Parts by Volume
<b>Asplit 876 SOLUTION</b>	0.815	100	0.87
<b>Asplit 876 HARDENER</b>	0.325	40	0.36

Asplit CN 916	KG per Litre	Parts by Weight	Parts by Volume
<b>Asplit CN 916 SOLUTION</b>	0.550	100	1.00
<b>Asplit CN 916 POWDER</b>	0.900	163	3.26

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# Asplit CN 916

## CONSUMPTION

Bedding and jointing (Bed Joint 5 mm / Cross Joint 5-7 mm)

Material	Sizes [mm]	Coverage [kg/m <sup>2</sup> ]
Tiles	240 x 115 x 20	ca. 11
Tiles	240 x 115 x 40	ca. 13
Bricks	240 x 115 x 65	ca. 17
Bricks	240 x 115 x 80	ca. 19

## POT LIFE (20°C)

Product	Time [min]
Asplit CN 916	ca. 45

## CURING (20°C)

Load Capacity	Time
Accessible	ca. 24 h
Chemical load	ca. 8 Days

## POST TREATMENT

Brick linings with **Asplit CN 916** should be taken in operation at earliest 8 days after finishing. The optimum resistance to solvents and alkalis will be achieved after several weeks at room temperature. This process can be accelerated by a thermal treatment of the finished floor or brick lining.

## CLEANING

Clean all equipment with **Asplit UNIVERSAL CLEANER** or **Asplit CLEANER N** immediately after use. The cleaning is done while the material is still not hardened.

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
Asplit 876 HARDENER	8 kg	592 0615
Asplit 876 SOLUTION	20 kg	592 0605
Asplit CN 916 SOLUTION	20 kg	592 0040
Asplit CN 916 SOLUTION	50 kg	592 0041
Asplit CN 916 POWDER	25 kg	592 0030
Asplit CLEANER N	25 kg	592 0920
Asplit CLEANER N DEFOAMER	0.25 kg	592 0921
Asplit UNIVERSAL CLEANER	8.4 kg	592 0900

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
Asplit 876 HARDENER	≤ +25°C	24 Months
Asplit 876 SOLUTION	≤ +25°C	24 Months
Asplit CN 916 SOLUTION	≤ +20°C	6 Months
Asplit CN 916 POWDER	-	24 Months
Asplit CLEANER N	-	24 Months
Asplit CLEANER N DEFOAMER	≤ +20°C	24 Months
Asplit UNIVERSAL CLEANER	≤ +20°C	24 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Resistance to Ground	DIN 14879-6	Ω	≤ 1 x 10 <sup>8</sup>
Density (Mixture)	EN ISO 2811 (ASTM D1475)	g/cm <sup>3</sup>	1.45
Compressive Strength	EN ISO 604	N/mm <sup>2</sup>	60
Hardness Shore D	-	-	> 50
Thermal Conductivity	-	W/(m • K)	1.6
Max. Operating Temperature Liquids	-	°C	+180

**Note:** The indicated temperatures are dependent on the present load and may vary

Information given in the fact sheet above corresponds to the current knowledge available to us regarding our products at the time of its drafting and is intended as a guideline for informational purposes. However, because of the multiple possibilities regarding possible applications, processing and on site conditions, any information given in the fact sheet above is not legally binding, in particular, without being limited to, such information shall not be interpreted as a warranty of merchantability or of fitness for a particular purpose. Customer therefore is advised to conduct its own testing or make an inquiry with our technical department before ordering. We reserve the right to change the product at any time, in particular, without being limited to, minor changes because of advancements in technology. If by way of exception, the information given in the fact sheet above is incorporated by reference into any contract concluded with us under German Law, such information, shall only be interpreted as determining the specific requirements of the contractual products as set out in § 434 BGB (German Civil Code) and shall not be interpreted as constituting a guarantee of condition.

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# PRODUCT INFORMATION

## Asplit ET BEDDING MORTAR

### PRODUCT DESCRIPTION

**Asplit ET BEDDING MORTAR** is a grey, three-component, cold curing synthetic mortar based on a epoxy resin and depending on the application with different fillers.

### FIELDS OF APPLICATION

**Asplit ET BEDDING MORTAR** is suitable as bedding and jointing mortar for tiles, bricks and fittings made of ceramic to construct a chemically, thermally and mechanically resistant layer or lining.

Due to its dense state and good compatibility with the concrete, a special sealing layer may often be spared. The ceramic tiles can be bedded directly on the concrete substrate (on top of the applied primer) with **Asplit ET** using the two-bed jointing method. In addition, **Asplit ET** can be used on cement based substrates as filling and levelling mortar with the thicknesses of 2 to 5 mm as well as a thin **Asplit ET** protective coating (coating thickness of about 0.3 - 0.7 mm).

### FEATURES

- Excellent adhesion to concrete and ceramic
- Good chemical resistance
- Nearly shrinkage-free curing
- Universal "all round" material

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Components shall be designed and manufactured in accordance with EN 14879-1. Before start of brick lining work, the suitability of the surface preparation measures according EN 14879-1 must be checked and recorded.

### SURFACE PRE-TREATMENT

Unevenness or surface defects such as rock pockets, casting failures, laitance and other failures which degrade the rigidity of the surface shall be removed and repaired.

The repairs can be performed with **Asplit ET BEDDING MORTAR** or **Asplit ET TROWELLING**, on top of the primer application. Larger defects need to be remedied with **Asplit ET** notched trowel, **Asplit ET** screed or concrete to flatten. The steel structures connected to the component or mounted in the concrete have to be cleaned down to white metal (SA 2½).

### Concrete and cement-base areas:

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup>. The residual moisture in the concrete shall not exceed 4%. New casted concrete surfaces should be kept for at least 28 days to dry. All surfaces on the substrate shall be free of cracks.

### ENVIRONMENTAL CONDITIONS

The specified environmental conditions must be observed during surface preparation and brick lining and be tested and recorded according EN 14879-6.

Environmental Conditions	Value
Relative Humidity	≤ 80%
Surface Temperature	≥ +10°C up to +30°C
Application Temperature	+20°C ± 5°C recommended
Dew Point Distance	min. 3K

### APPLICATION

The execution of the brick lining work is only permitted, if the requirements of „Surface Pre-treatment“ and „Environmental Conditions“ are met.

### Asplit ET PRIMER

**Asplit ET PRIMER** is applied onto the substrate or onto the lined membrane firmly and uniformly by means of a masonry brush, paste brush, paint brush, roller or paint pad. The consumption is about 300 to 400 g/m<sup>2</sup>.

### Asplit ET BEDDING MORTAR

**Asplit ET BEDDING MORTAR** is applied with a trowel onto the substrate or onto the membrane. The installation of the tiles or bricks has to be performed as cavity-free as possible, as well as with full coverage and with hollow joint method. If the tiles are going to be installed with hollow joint method in alkaline joint mortars and are going to be grouted with **Asplit ET BEDDING MORTAR**, it should be noted that the basement layer must be cured, acidified and dried upon acidifying. The open joints should have a perpendicular cross-section, at least 15 mm deep and 5 to 8 mm wide. The lateral faces of the tiles must be free of residue and the joints must be clean.

With **Asplit ET CONDUCTIVE POWDER BLACK**, a dissipative layer of tiles can be achieved. In the two-bed method, first a 3 mm thick **Asplit ET** bed joint is applied onto the fresh or sanded primer layer. Within 60 minutes the acid-resistant bricks/tiles are covered underneath with 2 - 3 mm jointing mortar and then laid onto the fresh mortar bed. The surfaces of the mortar bed or joints need to be compacted to avoid any remaining air pockets. The entire thickness of the bedding should not exceed 10 mm.

### WORK TOOLS

The following tools are essential for the application:

- Stirrer (max. 300 r/min.)
- Measuring cup & Mixing vessels
- Flat / wide brush / floor brush / paint pad
- Mortar trowel
- Grouting tool
- Miscellaneous (safety glasses, rubber gloves etc.)

### MIXING RATIO

Pour **Asplit ET SOLUTION** in a mixing vessel and add **Asplit ET HARDENER** at the specified mixing ratio. The stirring of the merged components should be at least 3 minutes and must result in a homogeneous mixture. Then add **ASPLIT ET** powders in the recommended mixing ratio to this mixture and stirrer again. The stirring of the merged components should be at least 3 minutes and must result in a homogeneous mixture. Then pour the mixture into a clean pail and mix again briefly. When mixing larger quantities, a forced mixer should be used.

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# Asplit ET BEDDING MORTAR

Asplit ET PRIMER	KG per Litre	Parts by Weight	Parts by Volume
Asplit ET SOLUTION	0.300	100	-
Asplit ET HARDENER	0.060	20	-

Asplit ET BEDDING MORTAR	KG per Litre	Parts by Weight	Parts by Volume
Asplit ET SOLUTION	0.250	100	-
Asplit ET HARDENER	0.050	20	-
Asplit ET POWDER	1.750	700	-

Asplit ET JOINTING MORTAR	KG per Litre	Parts by Weight	Parts by Volume
Asplit ET SOLUTION	0.265	100	-
Asplit ET HARDENER	0.053	20	-
Asplit ET POWDER	1.640	619	-

Asplit ET BEDDING & JOINTING MORTAR CONDUCTIVE	KG per Litre	Parts by Weight	Parts by Volume
Asplit ET SOLUTION	0.390	100	-
Asplit ET HARDENER	0.078	20	-
Asplit ET POWDER CONDUCTIVE BLACK	0.975	250	-

## CONSUMPTION

Bedding and jointing (Bed Joint 5 mm / Cross Joint 5-7 mm)

Material	Sizes [mm]	Coverage [kg/m <sup>2</sup> ]
Tiles	240 x 115 x 20	ca. 17
Tiles	240 x 115 x 40	ca. 19
Bricks	240 x 115 x 65	ca. 22
Bricks	240 x 115 x 80	ca. 24

## POT LIFE (20°C)

Product	Time [min]
Primer	ca. 30 - 60
Bedding & jointing mortar	ca. 90

## CURING (20°C)

Load Capacity	Time
Accessible	ca. 16 h
Over workable	ca. 16 h
Chemical load	ca. 7 Days

## CLEANING

Clean all equipment with **Asplit CLEANER N** immediately after use. The cleaning is done while the material is still not hardened.

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
Asplit ET HARDENER	5 kg	592 0520
Asplit ET HARDENER	20 kg	592 0510
Asplit ET SOLUTION	20 kg	592 0500
Asplit ET POWDER	25 kg	592 0530
Asplit ET POWDER CONDUCTIVE BLACK	25 kg	592 0540
Asplit CLEANER N	25 kg	592 0920
Asplit CLEANER N DEFOAMER	0.25 kg	592 0921

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
Asplit ET HARDENER	≤ +25°C	24 Months
Asplit ET SOLUTION	≤ +25°C	24 Months
Asplit ET POWDER	-	24 Months
Asplit ET POWDER CONDUCTIVE BLACK	-	24 Months
Asplit CLEANER N	-	24 Months
Asplit CLEANER N DEFOAMER	≤ +20°C	24 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

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# Asplit ET BEDDING MORTAR

Technical Data	Standard	Unit	Value
Resistance to Ground	DIN 14879-6	$\Omega$	$\leq 1 \times 10^{6*}$
Flexural Strength	EN ISO 178	N/mm <sup>2</sup>	40
Density (Mixture)	EN ISO 2811 (ASTM D1475)	g/cm <sup>3</sup>	2.05
Compressive Strength	EN ISO 604	N/mm <sup>2</sup>	100
E-Modulus	-	N/mm <sup>2</sup>	$1.1 \times 10^4$
Coefficient of Thermal Expansion	-	1/K	$45 \times 10^{-6}$
Thermal Conductivity	-	W/(m · K)	1.7
Tensile Strength	EN ISO 527	N/mm <sup>2</sup>	40
Max. Operating Temperature Dry	-	°C	+60 / +120**

\* ET tiling black \*\* In combination with ceramic tiles or bricks

**Note:** The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## Asplit ET TROWELLING

### PRODUCT DESCRIPTION

**Asplit ET TROWELLING** is a three-component, cold curing synthetic mortar based on an epoxy resin and depending on the application with different fillers.

### FIELDS OF APPLICATION

**Asplit ET TROWELLING** is suitable to build up chemically, thermally and mechanically resistant linings. It has been specifically designed for bedding and jointing acid resistant brick and tile linings to form chemically, thermally and mechanically resistant coatings and linings. The **Asplit ET TROWELLING** has the following variations:

1. Thin trowelling
2. Self levelling trowelling, with or without reinforcement
3. Trowelling, conductive Filler - grey and black, cement trowelling, screed and concrete

### FEATURES

- Excellent adhesion to concrete and ceramic
- Good chemical resistance
- Nearly shrinkage-free curing

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Components shall be designed and manufactured in accordance with EN 14879-1. Before start of brick lining work, the suitability of the surface preparation measures according EN 14879-1 must be checked and recorded.

### SURFACE PRE-TREATMENT

Unevenness or surface defects such as rock pockets, casting failures, laitance and other failures which degrade the rigidity of the surface shall be removed and repaired.

The repairs can be performed with **Asplit ET BEDDING MORTAR** or **Asplit ET TROWELLING**, on top of the primer application. Larger defects need to be remedied with **Asplit ET** notched trowel, **Asplit ET** screed or concrete to flatten. The steel structures connected to the component or mounted in the concrete have to be cleaned down to white metal (SA 2½).

#### Concrete and cement-base areas:

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup>. The residual moisture in the concrete shall not exceed 4%. New casted concrete surfaces should be kept for at least 28 days to dry. All surfaces on the substrate shall be free of cracks.

### ENVIRONMENTAL CONDITIONS

The specified environmental conditions must be observed during surface preparation and brick lining and be tested and recorded according EN 14879-6.

Environmental Conditions	Value
Relative Humidity	≤ 80%
Surface Temperature	≥ +10°C up to +30°C
Application Temperature	+20°C ± 5°C recommended
Dew Point Distance	min. 3K

### APPLICATION

The execution of the brick lining work is only permitted, if the requirements of „Surface Pre-treatment“ and „Environmental Conditions“ are met.

#### Asplit ET PRIMER

For all trowelled products the **Asplit ET PRIMER** is necessary. The **Asplit ET PRIMER** is applied onto the substrate or onto the lined membrane firmly and uniformly by means of a masonry brush, paste brush, paint brush, roller or paint pad. The further bedding mortar can be applied immediately onto the fresh primer, otherwise after broadcasting crushed quartz sand onto the hardened primer layer. The consumption is about 300 to 400 g/m<sup>2</sup>.

#### Asplit ET THIN TROWELLING

Onto the primer, the **Asplit ET THIN TROWELLING** is applied with a consumption of 3 l/m<sup>2</sup>. With this consumption building a sealing layer with a thickness of 2 - 3 mm is possible. The hardened layer forms a seal, which is applied cross wise with lambs wool rollers.

#### Asplit ET SELF LEVELLING TROWELLING

**Asplit ET SELF LEVELLING TROWELLING** is applied onto the primer with a consumption of 1.3 -1.4 kg / m<sup>2</sup> per mm layer thickness by means of a notched smoothing trowel. The trapped air is removed by using a spiked roller.

For applying a fabric layer, a slide resistant fabric (**Asplit VES**) is laid on top of a 2nd layer of **Asplit ET PRIMER**. Thereafter, the application of the ET self levelling trowelling is carried out.

#### Asplit ET TROWELLING

**Asplit ET TROWELLING** is applied on floor surfaces approximately 4 - 6 mm and on wall surfaces approximately 3 - 4 mm thick in general. **Asplit ET TROWELLING** is applied onto the primer with a trowel. Plane levelling is achieved by means of level staff, grout spreader or smoothing/finishing trowels. With **Asplit ET POWDER CONDUCTIVE BLACK** or **Asplit ET POWDER CONDUCTIVE GREY** a dissipative layer of tiles/bricks can be achieved. Copper strips or cords must be integrated into the mortar and connected to an earthing line.

#### Asplit ET CEMENT TROWELLING

The **Asplit ET CEMENT TROWELLING** is used for building layer thicknesses up to 8 mm. By using the **Asplit ET**, material components can be prepared by adding fillers of PC screed and PC concrete mixtures in masses. Such components are built in where thicker layers (> 8 mm) are required. It can be used in particular, as a screed to form levelling layers or slopes, as well as it can be used to fill dents and holes in the concrete structure. The layer thicknesses should be built up at least three times thicker than the largest grain diameter. Likewise, the concrete mix can be used to manufacture stairways, pedestals, foundation or other rigid structures. In case of using gravel and sand aggregates, only washed and dried materials should be chosen. For mixing larger quantities a compulsory mixer is required.

### WORK TOOLS

The following tools are essential for the application:

- Stirrer (max. 300 r/min.)
- Measuring cup & Mixing vessels
- Flat / wide brush / floor brush / paint pad / Mortar trowel
- Miscellaneous (safety glasses, rubber gloves etc.)

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# Asplit ET TROWELLING

## MIXING RATIO

Pour **Asplit ET SOLUTION** in a mixing vessel and add **Asplit ET HARDENER** at the specified mixing ratio. The stirring of the merged components should be at least 3 minutes and must result in a homogeneous mixture. Then add **Asplit ET** powders in the recommended mixing ratio to this mixture and stirrer again. The stirring of the merged components should be at least 3 minutes and must result in a homogeneous mixture. Then pour the mixture into a clean pail and mix again briefly. When mixing larger quantities, a forced mixer should be used.

Asplit ET PRIMER	KG per Litre	Parts by Weight	Parts by Volume
Asplit ET SOLUTION	0.300	100	-
Asplit ET HARDENER	0.060	20	-

Asplit ET THIN TROWELLING	KG per Litre	Parts by Weight	Parts by Volume
Asplit ET SOLUTION	0.265	100	-
Asplit ET HARDENER	0.053	20	-
Asplit ET POWDER	1.640	619	-

Asplit ET SEALER	KG per Litre	Parts by Weight	Parts by Volume
Asplit ET SOLUTION	0.150	100	-
Asplit ET HARDENER	0.030	20	-
Asplit POWDER FINE GREY	0.070	47	-

Asplit ET SELF LEVELLING TROWELLING	KG per Litre	Parts by Weight	Parts by Volume
Asplit ET SOLUTION	0.765	100	-
Asplit ET HARDENER	0.153	20	-
Asplit POWDER FINE GREY or Asplit POWDER FINE WHITE	0.382	50	-

Asplit ET SELF LEVELLING TROWELLING BLACK	KG per Litre	Parts by Weight	Parts by Volume
Asplit ET SOLUTION	0.610	100	-
Asplit ET HARDENER	0.122	20	-
Asplit POWDER FINE BLACK	0.668	110	-

Asplit ET TROWELLING (floor area)	KG per Litre	Parts by Weight	Parts by Volume
Asplit ET SOLUTION	0.250	100	-
Asplit ET HARDENER	0.050	20	-
Asplit ET POWDER	1.750	700	-

Asplit ET TROWELLING (wall area)	KG per Litre	Parts by Weight	Parts by Volume
Asplit ET SOLUTION	0.250	100	-
Asplit ET HARDENER	0.050	20	-
Asplit ET POWDER	1.690	675	-

Asplit ET TROWELLING CONDUCTIVE GREY	KG per Litre	Parts by Weight	Parts by Volume
Asplit ET SOLUTION	0.300	100	-
Asplit ET HARDENER	0.060	20	-
Asplit ET POWDER CONDUCTIVE GREY	1.500	500	-

Asplit ET TROWELLING CONDUCTIVE BLACK	KG per Litre	Parts by Weight	Parts by Volume
Asplit ET SOLUTION	0.390	100	-
Asplit ET HARDENER	0.078	20	-
Asplit ET POWDER CONDUCTIVE BLACK	0.702	180	-

Asplit ET	Cement Trowelling [kg]	Screed [kg]	Concrete [kg]
Asplit ET SOLUTION	0.170	0.130	0.110
Asplit ET HARDENER	0.034	0.026	0.022
Asplit ET POWDER	-	0.450	0.380
Asplit 724 POWDER	2.00	-	-
Washed river sand 0 – 3 mm	-	0.450	0.380
Washed gravel 3 - 7 mm	-	0.700	0.600
Washed gravel 7 - 15 mm	-	0.500	0.400
Washed gravel 15 - 30 mm	-	-	0.400
1 Litre = ca.	<b>2.2 kg</b>	<b>2.2 kg</b>	<b>2.3 kg</b>

## POT LIFE (20°C)

Product	Time [min]
Primer	ca. 30 - 60
Bedding & jointing mortar	ca. 90
Cement trowelling, screed, concrete	ca. 120

## CURING (20°C)

Load Capacity	Time
Accessible	ca. 16 h
Over workable	ca. 16 h
Chemical load	ca. 7 Days

## CLEANING

Clean all equipment with **Asplit CLEANER N** immediately after use. The cleaning is done while the material is still not hardened.

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# Asplit ET TROWELLING

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
Asplit ET HARDENER	5 kg	592 0520
Asplit ET HARDENER	20 kg	592 0510
Asplit ET SOLUTION	20 kg	592 0500
Asplit ET POWDER	25 kg	592 0530
Asplit ET POWDER CONDUCTIVE GREY	25 kg	592 0550
Asplit ET POWDER CONDUCTIVE BLACK	25 kg	592 0540
Asplit 724 POWDER	25 kg	592 0590
Asplit POWDER FINE GREY	25 kg	592 0560
Asplit POWDER FINE BLACK	25 kg	592 0580
Asplit POWDER FINE WHITE	25 kg	592 0570
Asplit CLEANER N	25 kg	592 0920
Asplit CLEANER N DEFOAMER	0.25 kg	592 0921

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
Asplit 724 POWDER	-	24 Months
Asplit ET HARDENER	≤ +25°C	24 Months
Asplit ET SOLUTION	≤ +25°C	24 Months
Asplit ET POWDER	-	24 Months
Asplit ET POWDER CONDUCTIVE GREY	-	24 Months
Asplit ET POWDER CONDUCTIVE BLACK	-	24 Months
Asplit POWDER FINE GREY	-	24 Months
Asplit POWDER FINE BLACK	-	24 Months
Asplit POWDER FINE WHITE	-	24 Months
Asplit CLEANER N	-	24 Months
Asplit CLEANER N DEFOAMER	≤ +20°C	24 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Resistance to Ground	DIN 14879-6	Ω	≤ 1 x 10 <sup>6****</sup> / ≤ 1 x 10 <sup>4****</sup>
Flexural Strength	EN ISO 178	N/mm <sup>2</sup>	40
Density (Mixture)	EN ISO 2811 (ASTM D1475)	g/cm <sup>3</sup>	2.05
Compressive Strength	EN ISO 604	N/mm <sup>2</sup>	100
E-Modulus	-	N/mm <sup>2</sup>	1.1 x 10 <sup>4</sup>
Coefficient of Thermal Expansion	-	1/K	45 x 10 <sup>-6</sup>
Thermal Conductivity	-	W/(m • K)	1.7
Tensile Strength	EN ISO 527	N/mm <sup>2</sup>	40
Max. Operating Temperature Dry	-	°C	+60 / +120** / +80*****

\*\* In combination with ceramic tiles or bricks \*\*\* Conductive grey \*\*\*\* conductive black \*\*\*\*\* as trowel layer

Note: The indicated temperatures are dependent on the present load and may vary

Information given in the fact sheet above corresponds to the current knowledge available to us regarding our products at the time of its drafting and is intended as a guideline for informational purposes. However, because of the multiple possibilities regarding possible applications, processing and on site conditions, any information given in the fact sheet above is not legally binding, in particular, without being limited to, such information shall not be interpreted as a warranty of merchantability or of fitness for a particular purpose. Customer therefore is advised to conduct its own testing or make an inquiry with our technical department before ordering. We reserve the right to change the product at any time, in particular, without being limited to, minor changes because of advancements in technology. If by way of exception, the information given in the fact sheet above is incorporated by reference into any contract concluded with us under German Law, such information, shall only be interpreted as determining the specific requirements of the contractual products as set out in § 434 BGB (German Civil Code) and shall not be interpreted as constituting a guarantee of condition.

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# PRODUCT INFORMATION

## Asplit ET PROTECTIVE COATING

### PRODUCT DESCRIPTION

**Asplit ET PROTECTIVE COATING** is a three-component, cold curing synthetic mortar based on a epoxy resin and depending on the application with different fillers.

### FIELDS OF APPLICATION

**Asplit ET PROTECTIVE COATING** is suitable as bedding and jointing mortar for tiles, bricks and fittings made of ceramic, to construct a chemically, thermally and mechanically resistant layer or lining. In addition, **Asplit ET** can be used on cement based substrates as filling and levelling mortar with the thicknesses of 2 to 5 mm as well as a thin **Asplit ET** protective coating (coating thickness of about 0.3 - 0.7 mm).

### FEATURES

- Excellent adhesion to concrete and ceramic
- Good chemical resistance
- Nearly shrinkage-free curing

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Components shall be designed and manufactured in accordance with EN 14879-1. Before start of brick lining work, the suitability of the surface preparation measures according EN 14879-1 must be checked and recorded.

### SURFACE PRE-TREATMENT

Unevenness or surface defects such as rock pockets, casting failures, laitance and other failures which degrade the rigidity of the surface shall be removed and repaired.

The repairs can be performed with **Asplit ET BEDDING MORTAR** or **Asplit ET TROWELLING**, on top of the primer application. Larger defects need to be remedied with **Asplit ET** notched trowel, **Asplit ET** screed or concrete to flatten. The steel structures connected to the component or mounted in the concrete have to be cleaned down to white metal (SA 2½).

#### Concrete and cement-base areas:

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup>. The residual moisture in the concrete shall not exceed 4%. New casted concrete surfaces should be kept for at least 28 days to dry. All surfaces on the substrate shall be free of cracks.

### ENVIRONMENTAL CONDITIONS

The specified environmental conditions must be observed during surface preparation and lining work and be tested and recorded according EN 14879.

Environmental Conditions	Value
Relative Humidity	≤ 80%
Surface Temperature	≥ +10°C up to +30°C
Application Temperature	+20°C ± 5°C recommended
Dew Point Distance	min. 3K

### APPLICATION

The execution of the lining work is only permitted, if the requirements of „Surface Pre-treatment“ and „Environmental Conditions“ are met.

#### Asplit ET PRIMER

The **Asplit ET PRIMER** is applied onto the substrate or onto the lined membrane firmly and uniformly by means of a masonry brush, paste brush, paint brush, roller or paint pad. The consumption is about 300 to 400 g/m<sup>2</sup>.

#### Asplit ET PROTECTIVE COATING

**Asplit ET PROTECTIVE COATING** is applied onto the primer layer or onto the previous layer cross-wise, firmly and uniformly by means of a masonry brush, paste brush, or roller. The pot life depends on the substrate and the ambient temperature. If acid-proof bricks or tiles are going to be lined over the **Asplit ET PROTECTIVE COATING**, flame dried silica sand (0.7 -1.2 mm) has to be broadcasted onto the very top fresh layer of the coating. The consumption is about 400 g / m<sup>2</sup>.

Exposure of the fresh protective coating to direct sunlight has to be avoided to prevent blistering. If possible, the coated surfaces may be shaded.

### WORK TOOLS

The following tools are essential for the application:

- Stirrer (max. 300 r/min.)
- Measuring cup & Mixing vessels
- Flat / wide brush / floor brush / paint pad
- Mortar trowel
- Miscellaneous (safety glasses, rubber gloves etc.)

### MIXING RATIO

Pour **Asplit ET SOLUTION** in a mixing vessel and add **Asplit ET HARDENER** at the specified mixing ratio. The stirring of the merged components should be at least 3 minutes and must result in a homogeneous mixture. Then add **ASPLIT ET** powders in the recommended mixing ratio to this mixture and stirrer again. The stirring of the merged components should be at least 3 minutes and must result in a homogeneous mixture. Then pour the mixture into a clean pail and mix again briefly. When mixing larger quantities, a forced mixer should be used.

Asplit ET PRIMER	KG per Litre	Parts by Weight	Parts by Volume
Asplit ET SOLUTION	0.300	100	-
Asplit ET HARDENER	0.060	20	-

Asplit ET PROTECTIVE COATING GREY / WHITE	KG per Litre	Parts by Weight	Parts by Volume
Asplit ET SOLUTION	0.250	100	-
Asplit ET HARDENER	0.050	20	-
Asplit POWDER FINE GREY or Asplit POWDER FINE WHITE	0.100	40	-

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# Asplit ET PROTECTIVE COATING

1 <sup>st</sup> Asplit ET PROTECTIVE COATING BLACK	KG per Litre	Parts by Weight	Parts by Volume
Asplit ET SOLUTION	0.220	100	-
Asplit ET HARDENER	0.044	20	-
Asplit POWDER FINE BLACK	0.136	60	-

2 <sup>nd</sup> + 3 <sup>rd</sup> Asplit ET PROTECTIVE COATING GREY / WHITE	KG per Litre	Parts by Weight	Parts by Volume
Asplit ET SOLUTION	0.220	100	-
Asplit ET HARDENER	0.044	20	-
Asplit POWDER FINE GREY or Asplit POWDER FINE WHITE	0.136	60	-

2 <sup>nd</sup> + 3 <sup>rd</sup> Asplit ET PROTECTIVE COATING BLACK	KG per Litre	Parts by Weight	Parts by Volume
Asplit ET SOLUTION	0.170	100	-
Asplit ET HARDENER	0.034	20	-
Asplit POWDER FINE BLACK	0.204	120	-

## POT LIFE (20°C)

Product	Time [min]
Asplit ET PRIMER	ca. 30 - 60
Asplit ET PROTECTIVE COATING	ca. 30

## CURING (20°C)

Load Capacity	Time
Accessible	ca. 16 h
Over workable	ca. 16 h
Chemical load	ca. 7 Days

## CLEANING

Clean all equipment with **Asplit CLEANER N** immediately after use. The cleaning is done while the material is still not hardened.

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
Asplit ET HARDENER	5 kg	592 0520
Asplit ET HARDENER	20 kg	592 0510
Asplit ET SOLUTION	20 kg	592 0500
Asplit 724 POWDER	25 kg	592 0590
Asplit POWDER FINE GREY	25 kg	592 0560
Asplit POWDER FINE BLACK	25 kg	592 0580
Asplit POWDER FINE WHITE	25 kg	592 0570
Asplit CLEANER N	25 kg	592 0920
Asplit CLEANER N DEFOAMER	0.25 kg	592 0921

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
Asplit 724 POWDER	-	24 Months
Asplit ET HARDENER	≤ +25°C	24 Months
Asplit ET SOLUTION	≤ +25°C	24 Months
Asplit POWDER FINE GREY	-	24 Months
Asplit POWDER FINE BLACK	-	24 Months
Asplit POWDER FINE WHITE	-	24 Months
Asplit CLEANER N	-	24 Months
Asplit CLEANER N DEFOAMER	≤ +20°C	24 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

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# Asplit ET PROTECTIVE COATING

Technical Data	Standard	Unit	Value
Flexural Strength	EN ISO 178	N/mm <sup>2</sup>	40
Density (Mixture)	EN ISO 2811 (ASTM D1475)	g/cm <sup>3</sup>	2.05
Compressive Strength	EN ISO 604	N/mm <sup>2</sup>	100
E-Modulus	-	N/mm <sup>2</sup>	1.4 x 10 <sup>4</sup>
Coefficient of Thermal Expansion	-	1/K	45 x 10 <sup>-6</sup>
Thermal Conductivity	-	W/(m · K)	1.7
Tensile Strength	EN ISO 527	N/mm <sup>2</sup>	40
Max. Operating Temperature Dry	-	°C	+60 / +120**

\*\* In combination with ceramic tiles or bricks

**Note:** The indicated temperatures are dependent on the present load and may vary

Information given in the fact sheet above corresponds to the current knowledge available to us regarding our products at the time of its drafting and is intended as a guideline for informational purposes. However, because of the multiple possibilities regarding possible applications, processing and on site conditions, any information given in the fact sheet above is not legally binding, in particular, without being limited to, such information shall not be interpreted as a warranty of merchantability or of fitness for a particular purpose. Customer therefore is advised to conduct its own testing or make an inquiry with our technical department before ordering. We reserve the right to change the product at any time, in particular, without being limited to, minor changes because of advancements in technology. If by way of exception, the information given in the fact sheet above is incorporated by reference into any contract concluded with us under German Law, such information, shall only be interpreted as determining the specific requirements of the contractual products as set out in § 434 BGB (German Civil Code) and shall not be interpreted as constituting a guarantee of condition.

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# PRODUCT INFORMATION

## Asplit ETS

### PRODUCT DESCRIPTION

**Asplit ETS** is a black, three-component, cold curing synthetic mortar based on a epoxy resin with very good resistance against abrasive loads.

### FIELDS OF APPLICATION

**Asplit ETS** is suitable as bedding and jointing mortar for wear resistant materials like ceramic bricks, split tiles, casted basalt bricks and - tiles or steel plates.

### FEATURES

- Excellent adhesion to concrete and ceramic
- Good chemical resistance
- Nearly shrinkage-free curing

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Components shall be designed and manufactured in accordance with EN 14879-1. Before start of brick lining work, the suitability of the surface preparation measures according EN 14879-1 must be checked and recorded.

### SURFACE PRE-TREATMENT

Concrete surfaces must be covered with a suitable primer and if necessary with an additional top coat prior to application. Any unevenness on the surface needs be flattened.

#### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup>. The residual moisture in the concrete shall not exceed 4%.

A mechanical treatment by abrasive blasting, high-pressure water blasting or shot blasting is recommended. After milling, flame cleaning or bush hammering the concrete surface, an abrasive blasting is also required.

### ENVIRONMENTAL CONDITIONS

The specified environmental conditions must be observed during surface preparation and brick lining and be tested and recorded according EN 14879-6.

Environmental Conditions	Value
Relative Humidity	≤ 80%
Surface Temperature	≥ +10°C up to +30°C
Application Temperature	+20°C ± 5°C recommended
Dew Point Distance	min. 3K

### APPLICATION

The execution of the brick lining work is only permitted, if the requirements of „Surface Pre-treatment“ and „Environmental Conditions“ are met.

The **Asplit ET PRIMER** is applied onto the substrate or onto the lined membrane firmly and uniformly by means of a floor brush, wide brush, paint brush, roller or paint pad. Afterwards flame dried quartz sand is broadcasted onto the fresh primer. Broadcasting of the quartz sand can be omitted if the following layer is going to be applied within 24 hours (even immediately). **Asplit ETS** is applied with a trowel onto the substrate or onto the membrane. The installation of the

tiles or bricks have to be performed as cavity-free as possible, as well as with full coverage and with hollow joint method.

### WORK TOOLS

The following tools are essential for the application:

- Stirrer (max. 300 r/min.)
- Measuring cup & Mixing vessels
- Flat / wide brush / floor brush / roller / paint pad
- Mortar trowel
- Grouting tool
- Miscellaneous (safety glasses, rubber gloves etc.)

### MIXING RATIO

Pour **Asplit ET SOLUTION** in a mixing vessel and add **Asplit ET HARDENER** at the specified mixing ratio. The stirring of the merged components should be at least 3 minutes and must result in a homogeneous mixture. Then add **Asplit ETS POWDER** in the recommended mixing ratio to this mixture and stirrer again. The stirring of the merged components should be at least 3 minutes and must result in a homogeneous mixture.

Primer	KG per Litre	Parts by Weight	Parts by Volume
<b>Asplit ET SOLUTION</b>	0.300	100	-
<b>Asplit ET HARDENER</b>	0.060	20	-

Asplit ETS	KG per Litre	Parts by Weight	Parts by Volume
<b>Asplit ETS SOLUTION</b>	0.512	100	-
<b>Asplit ET HARDENER</b>	0.093	18	-
<b>Asplit ETS POWDER</b>	1.395	273	-

### CONSUMPTION

Bedding and jointing (Bed Joint 5 mm / Cross Joint 5-7 mm)

Material	Sizes [mm]	Coverage [kg/m <sup>2</sup> ]
Tiles	240 x 115 x 20	ca. 14
Tiles	240 x 115 x 40	ca. 17
Bricks	240 x 115 x 65	ca. 22
Bricks	240 x 115 x 80	ca. 24

### POT LIFE (20°C)

Product	Time [min]
Primer	ca. 30 - 60
Synthetic resin	ca. 50

### CURING (20°C)

Load Capacity	Time
Over workable	ca. 24 h
Load	ca. 3 - 5 Days

### CLEANING

Clean all equipment with **Asplit UNIVERSAL CLEANER** or **Asplit CLEANER N** immediately after use. The cleaning is done while the material is still not hardened.

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# Asplit ETS

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
Asplit ET HARDENER	5 kg	592 0520
Asplit ET HARDENER	20 kg	592 0510
Asplit ET SOLUTION	20 kg	592 0500
Asplit ETS SOLUTION	20 kg	592 0840
Asplit ETS POWDER	25 kg	592 0850
Asplit CLEANER N	25 kg	592 0920
Asplit CLEANER N DEFOAMER	0.25 kg	592 0921
Asplit UNIVERSAL CLEANER	8.4 kg	592 0900

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
Asplit ET HARDENER	≤ +25°C	24 Months
Asplit ET SOLUTION	≤ +25°C	24 Months
Asplit ETS SOLUTION	≤ +25°C	12 Months
Asplit ETS POWDER	-	24 Months
Asplit CLEANER N	-	24 Months
Asplit CLEANER N DEFOAMER	≤ +20°C	24 Months
Asplit UNIVERSAL CLEANER	≤ +20°C	24 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Information given in the fact sheet above corresponds to the current knowledge available to us regarding our products at the time of its drafting and is intended as a guideline for informational purposes. However, because of the multiple possibilities regarding possible applications, processing and on site conditions, any information given in the fact sheet above is not legally binding, in particular, without being limited to, such information shall not be interpreted as a warranty of merchantability or of fitness for a particular purpose. Customer therefore is advised to conduct its own testing or make an inquiry with our technical department before ordering. We reserve the right to change the product at any time, in particular, without being limited to, minor changes because of advancements in technology. If by way of exception, the information given in the fact sheet above is incorporated by reference into any contract concluded with us under German Law, such information, shall only be interpreted as determining the specific requirements of the contractual products as set out in § 434 BGB (German Civil Code) and shall not be interpreted as constituting a guarantee of condition.

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# PRODUCT INFORMATION

## Asplit FLAKE M

### PRODUCT DESCRIPTION

**Asplit FLAKE M** is a two-component; vapour diffusion resistant, C-glass flake filled polymer coating based on a chemical and thermal resistant Novolac vinyl ester resin.

The C-glass flake fillers are oriented parallel to the substrate surface to form a high level of pREdetection against permeation and ensure a long service life.

### COATING LAYERS CONSUMPTION

The coating system consists of the two-component **Asplit FLAKE M PRIMER** and at least two, generally three coats of the two-component **Asplit FLAKE M** topcoat applied at approx. 400 - 600 µm DFT per coat, alternating in beige and pink colours. The total applied DFT is based on the chemical and thermal load present and can be up to 2.0 mm.

### FIELDS OF APPLICATION

**Asplit FLAKE M** is used mainly in flue gas ducts, heat exchangers, stacks and gas pre-heaters of flue gas desulphurization plants. Furthermore it is also used successfully in other process plants.

### FEATURES

- High dry temperature stability up to +180°C
- Excellent permeation resistance
- Excellent chemical resistance
- Outstanding adhesion to steel
- Application by spraying, brushing or rolling
- Can be exposed to process conditions shortly after application

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are steel components. Components to be coated shall be designed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

Surfaces to be coated must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht # 28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 70 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate.

### ENVIRONMENTAL CONDITIONS

Throughout the coating process, the temperatures of the substrate and coating materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### APPLICATION

During the application of the product, the application instruction must always be observed.

**Asplit FLAKE M PRIMER** and each **Asplit FLAKE M** topcoat are applied using an airless air spray system or by rolling or brushing.

In case **Asplit FLAKE M** is applied by brushing or rolling, additional coats may be required to achieve the required total DFT.

**Note:** During application, the lined surface should be shaded from direct or indirect sunlight whenever possible.

### MIXING RATIO

The primer and coating components are supplied in pre-measured units so that weighing or measuring of the components is kept to a minimum. After the unit has been mixed it shall be used within the specified pot life.

Primer	Parts by Weight	Parts by Volume
<b>Asplit FLAKE M PRIMER</b>	100	100
<b>Asplit HARDENER No. 1</b>	2	2.11

Coating	Parts by Weight	Parts by Volume
<b>Asplit FLAKE M</b>	100	100
<b>Asplit HARDENER No. 1</b>	2	2.32

### CONSUMPTION PER COAT

Product	Thickness [µm]	Coverage [g/m²]
<b>Asplit FLAKE M PRIMER</b>	covering	ca. 150
<b>Asplit FLAKE M</b>	ca. 400 - 600	ca. 800 - 1000

The information about coverage is an average for spray applications. Actual coverage depends on the object geometry and the method of application. It can vary.

### POT LIFE / WORKING TIME [min]

Product	15°C	20°C	30°C
<b>Asplit FLAKE M PRIMER</b>	ca. 60	ca. 40	ca. 20
<b>Asplit FLAKE M</b>	ca. 90	ca. 60	ca. 30

### RECOAT TIME (20°C)

Product	Min. [h]	Max. [Days]
<b>Asplit FLAKE M PRIMER</b>	ca. 6	ca. 7
<b>Asplit FLAKE M</b>	ca. 4	ca. 3

### CLEANING

Clean all equipment with **Asplit UNIVERSAL CLEANER** immediately after use. The cleaning is done while the material is still not hardened.

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# Asplit FLAKE M

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
Asplit FLAKE M	5 kg	590 0552
Asplit FLAKE M	20 kg	590 0071
Asplit FLAKE M PRIMER	5 kg	590 0167
Asplit FLAKE M PRIMER	20 kg	590 0033
Asplit HARDENER No. 1	0.1 kg	592 0455
Asplit HARDENER No. 1	0.4 kg	592 0450
Asplit HARDENER No. 1 RED	0.1 kg	592 0795
Asplit HARDENER No. 1 RED	0.4 kg	592 0790
Asplit UNIVERSAL CLEANER	8.4 kg	592 0900

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
Asplit FLAKE M	≤ +20°C	5 Months
Asplit FLAKE M PRIMER	≤ +20°C	6 Months
Asplit HARDENER No. 1	≤ +20°C	12 Months
Asplit HARDENER No. 1 RED	≤ +20°C	12 Months
Asplit UNIVERSAL CLEANER	≤ +20°C	24 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Abrasion	ASTM D4060	mg	90
Density (Mixture)	EN ISO 2811 (ASTM D1475)	g/cm <sup>3</sup>	1.20 ± 0.04
Hardness Barcol	EN 59 (ASTM D2583)	-	35
Min. Adhesion Strength Steel	EN ISO 4624 (ASTM D4541)	N/mm <sup>2</sup>	7
Test Voltage (earliest after 24 hours)	EN 14879-2	kV / 100µm DFT	0.5
Viscosity	EN ISO 2555	mPa·s	2550 ± 250
Linear Coefficient of Thermal Expansion	ISO 11359-2 (ASTM C531)	1/K	27-30 x 10 <sup>-6</sup>
Water Vapour Permeability	ASTM E-96; Method E	perm-inch	0.001
Tensile Strength	EN ISO 527 (ASTM D638)	N/mm <sup>2</sup>	40
Max. Operating Temperature Liquids	-	°C	+70
Max. Operating Temperature Dry (Flue Gas)	-	°C	+180
Short-term Operating Temperature Dry (Flue Gas)	-	°C	+200

**Note:** The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## Asplit FN

### PRODUCT DESCRIPTION

**Asplit FN** is a black, two-component, cold curing synthetic mortar based on a modified furan resin with carbon fillers.

### FIELDS OF APPLICATION

**Asplit FN** is suitable for bedding and jointing of tiles, bricks and fittings made of ceramic or carbon for the production of chemical, thermal and mechanic resistant coatings and protective linings.

Due to the high shrinkage rate **Asplit FN** is not suitable as bedding mortar for great flooring areas. There is no negative influence for the use in tanks, vessels and for the joining of bricks and tiles. **Asplit FN** is particularly suitable for brick lining of chemical equipments (reactors, columns, gas scrubbers etc.) which are exposed to high chemical and thermal loads.

### FEATURES

- High temperature resistance up to +220°C
- Excellent adhesion to ceramic and carbon bricks
- High universal chemical resistance.
- Excellent chemical resistance to acids, solvents and alkalis
- The hardened mortar conducts electricity
- Long shelf life even at high temperatures, therefore suitable also in tropic regions

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Components shall be designed and manufactured in accordance with EN 14879-1. Before start of brick lining work, the suitability of the surface preparation measures according EN 14879-1 must be checked and recorded.

### SURFACE PRE-TREATMENT

Steel and concrete surfaces must be primed with **Asplit 876 PRIMER** before application. The primer must be sanded in a fresh state after the final coat. If a sealing layer of rubber or coating is present, **Asplit FN** can be directly applied on the sealing layer. Unevenness should be compensated in the ground.

#### C-STEEL

All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 must be achieved. The primer must be applied immediately after the blasting.

#### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%.

### ENVIRONMENTAL CONDITIONS

The specified environmental conditions must be observed during surface preparation and brick lining and be tested and recorded according EN 14879-6.

Environmental Conditions	Value
Relative Humidity	≤ 80%
Surface Temperature	≥ +10°C up to +30°C
Application Temperature	+20°C ± 5°C recommended
Dew Point Distance	min. 3K

### APPLICATION

The execution of the brick lining work is only permitted, if the requirements of „Surface Pre-treatment“ and „Environmental Conditions“ are met.

**Asplit FN** is applied on the substrate or sealing layer by using a mortar trowel. Tiles and bricks must be free of voids, fully bedded and hollow jointed. If tiles have to be laid in alkaline mortar with open joints, make sure that the mortar is hardened, acidified and dried before applying **Asplit FN**.

The joints have to be square with a depth of min. 15 mm and a width of 5-8 mm. The edges of the tiles have to be free from mortar and the joints must be cleaned.

### WORK TOOLS

The following tools are essential for the application:

- Stirrer (max. 300 r/min.)
- Measuring cup & Mixing vessels
- Flat / wide brush
- Mortar trowel
- Grouting tool
- Miscellaneous (safety glasses, rubber gloves etc.)

### MIXING RATIO

Pour **Asplit FN SOLUTION** in a mixing vessel and add **Asplit FN POWDER** at the specified mixing ratio. The stirring of the merged components should be at least 3 minutes and must result in a homogeneous mixture.

Primer	KG per Litre	Parts by Weight	Parts by Volume
<b>Asplit 876 SOLUTION</b>	0.815	100	0.87
<b>Asplit 876 HARDENER</b>	0.325	40	0.36

Asplit FN	KG per Litre	Parts by Weight	Parts by Volume
<b>Asplit FN SOLUTION</b>	0.600	100	1.00
<b>Asplit FN POWDER</b>	1.000	167	2.91

### CONSUMPTION

Bedding and jointing (Bed Joint 5 mm / Cross Joint 5-7 mm)

Material	Sizes [mm]	Coverage [kg/m <sup>2</sup> ]
Tiles	240 x 115 x 20	ca. 12
Tiles	240 x 115 x 40	ca. 15
Bricks	240 x 115 x 65	ca. 18
Bricks	240 x 115 x 80	ca. 20

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# Asplit FN

## POT LIFE (20°C)

Product	Time [min]
Asplit FN	ca. 60

## CURING (20°C)

Load Capacity	Time
Accessible	ca. 24 h
Chemical load	ca. 8 Days

## POST TREATMENT

To obtain optimum resistance of brick linings inside vessels - preferable to solvents - an after treatment with hot water (16 - 24 hours at 70°C - 80°C) is strongly recommended. In case of extended time period between completion of lining work and starting the apparatus, it is advisable to fill in slightly acid water to a third of its volume.

## CLEANING

Clean all equipment with **Asplit UNIVERSAL CLEANER** immediately after use. The cleaning is done while the material is still not hardened.

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
Asplit 876 HARDENER	8 kg	592 0615
Asplit 876 SOLUTION	20 kg	592 0605
Asplit FN SOLUTION	20 kg	592 0060
Asplit FN SOLUTION	50 kg	592 0061
Asplit FN POWDER	25 kg	592 0050
Asplit UNIVERSAL CLEANER	8.4 kg	592 0900

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
Asplit 876 HARDENER	≤ +25°C	24 Months
Asplit 876 SOLUTION	≤ +25°C	24 Months
Asplit FN SOLUTION	≤ +30°C	24 Months
Asplit FN POWDER	-	24 Months
Asplit UNIVERSAL CLEANER	≤ +20°C	24 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Resistance to Ground	DIN 14879-6	Ω	≤ 1 x 10 <sup>8</sup>
Flexural Strength	EN ISO 178	N/mm <sup>2</sup>	30
Density (Mixture)	EN ISO 2811 (ASTM D1475)	g/cm <sup>3</sup>	1.6
Compressive Strength	EN ISO 604	N/mm <sup>2</sup>	70
E-Modulus	-	N/mm <sup>2</sup>	0.8 x 10 <sup>4</sup>
Coefficient of Thermal Expansion	-	1/K	24 x 10 <sup>-6</sup>
Thermal Conductivity	-	W/(m • K)	2.0
Tensile Strength	EN ISO 527	N/mm <sup>2</sup>	8
Max. Operating Temperature Liquids	-	°C	+220

**Note:** The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## Asplit FQ

### PRODUCT DESCRIPTION

**Asplit FQ** is a black, two-component, cold curing synthetic mortar based on a furan resin with mineral fillers.

### FIELDS OF APPLICATION

**Asplit FQ** is suitable for bedding and jointing of tiles, bricks and fittings made of ceramic or carbon for the production of chemical, thermal and mechanic resistant coatings and protective linings.

Main applications are tiling and brick linings in apparatuses for the chemical industry, waste water and process water treatment, in canals, pits and reservoirs, power plants, warehouses and workshops, neutralization- and pickling lines.

### FEATURES

- High mechanical loads
- Excellent chemical resistance to solvents and organic compounds
- High temperature resistance up to +180°C

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Components shall be designed and manufactured in accordance with EN 14879-1. Before start of brick lining work, the suitability of the surface preparation measures according EN 14879-1 must be checked and recorded.

### SURFACE PRE-TREATMENT

Steel and concrete surfaces must be primed with **Asplit 876 PRIMER** before application. The primer must be sanded in a fresh state after the final coat. If a sealing layer of rubber or coating is present, **Asplit FQ** can be directly applied on the sealing layer. Unevenness should be compensated in the ground.

#### C-STEEL

All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 must be achieved. The primer must be applied immediately after the blasting.

#### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%.

### ENVIRONMENTAL CONDITIONS

The specified environmental conditions must be observed during surface preparation and brick lining and be tested and recorded according EN 14879-6.

Environmental Conditions	Value
Relative Humidity	≤ 80%
Surface Temperature	≥ +10°C up to +30°C
Application Temperature	+20°C ± 5°C recommended
Dew Point Distance	min. 3K

### APPLICATION

The execution of the brick lining work is only permitted, if the requirements of „Surface Pre-treatment“ and „Environmental Conditions“ are met.

**Asplit FQ** is applied on the substrate or sealing layer by using a mortar trowel. Tiles and bricks must be free of voids, fully bedded and hollow jointed.

### WORK TOOLS

The following tools are essential for the application:

- Stirrer (max. 300 r/min.)
- Measuring cup & Mixing vessels
- Flat / wide brush
- Mortar trowel
- Grouting tool
- Miscellaneous (safety glasses, rubber gloves etc.)

### MIXING RATIO

Pour **Asplit FQ SOLUTION** in a mixing vessel and add **Asplit FQ POWDER** at the specified mixing ratio. The stirring of the merged components should be at least 3 minutes and must result in a homogeneous mixture.

Primer	KG per Litre	Parts by Weight	Parts by Volume
<b>Asplit 876 SOLUTION</b>	0.815	100	0.87
<b>Asplit 876 HARDENER</b>	0.325	40	0.36

Asplit FQ	KG per Litre	Parts by Weight	Parts by Volume
<b>Asplit FQ SOLUTION</b>	0.340	100	1.00
<b>Asplit FQ POWDER</b>	1.860	550	4.06

### CONSUMPTION

Bedding and jointing (Bed Joint 5 mm / Cross Joint 5-7 mm)

Material	Sizes [mm]	Coverage [kg/m <sup>2</sup> ]
Tiles	240 x 115 x 20	ca. 18
Tiles	240 x 115 x 40	ca. 21
Bricks	240 x 115 x 65	ca. 25
Bricks	240 x 115 x 80	ca. 27

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# Asplit FQ

## POT LIFE (20°C)

Product	Time [min]
Asplit FQ	ca. 45

## CURING (20°C)

Load Capacity	Time
Accessible	ca. 24 h
Chemical load	ca. 8 Days

## POST TREATMENT

To obtain optimum resistance of brick linings inside vessels - preferable to solvents - an after treatment with hot water (16 - 24 hours at 70°C - 80°C) is strongly recommended. In case of extended time period between completion of lining work and starting the apparatus, it is advisable to fill in slightly acid water to a third of its volume.

## CLEANING

Clean all equipment with **Asplit UNIVERSAL CLEANER** immediately after use. The cleaning is done while the material is still not hardened.

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
Asplit 876 HARDENER	8 kg	592 0615
Asplit 876 SOLUTION	20 kg	592 0605
Asplit FQ SOLUTION	20 kg	592 0300
Asplit FQ POWDER	25 kg	592 0340
Asplit UNIVERSAL CLEANER	8.4 kg	592 0900

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
Asplit 876 HARDENER	≤ +25°C	24 Months
Asplit 876 SOLUTION	≤ +25°C	24 Months
Asplit FQ SOLUTION	≤ +25°C	12 Months
Asplit FQ POWDER	-	24 Months
Asplit UNIVERSAL CLEANER	≤ +20°C	24 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Resistance to Ground	DIN 14879-6	Ω	> 10 <sup>9</sup>
Density (Mixture)	EN ISO 2811 (ASTM D1475)	g/cm <sup>3</sup>	2.2
Compressive Strength	EN ISO 604	N/mm <sup>2</sup>	80
Adhesion Strength		N/mm <sup>2</sup>	≥ 4
Coefficient of Thermal Expansion	-	1/K	21 x 10 <sup>-6</sup>
Max. Operating Temperature Liquids	-	°C	+180

**Note:** The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## Asplit HB

### PRODUCT DESCRIPTION

**Asplit HB** is a two-component, halogen-free, bedding and jointing mortar based on potassium silicate

### FIELDS OF APPLICATION

**Asplit HB** is suitable for bedding and jointing of acid resistant ceramic tiles, bricks, brick lining of vessels, apparatus and chimneys. **Asplit HB** exhibits excellent resistance to water and rinsing actions, which allows rinsing even at neutral range for several weeks, yet permanent rinsing, is not possible. For consistent rinsing or abrasion resistance, use an Asplit synthetic resin based mortar for jointing.

Except to hydrofluoric acid, **Asplit HB** is resistant to all acids, solvents, oxidising agents, oils and fats; but it is not resistant to alkalis.

### FEATURES

- Halogen-Free, containing no Fluoride
- Extremely high resistance against acids
- Temperature Resistance up to +900°C

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Components to be brick lined shall be designed and manufactured in accordance with EN 14879-1.

Before start of brick lining work, the suitability of the surface preparation measures according EN 14879-1 must be checked and recorded. Concrete surfaces needs to be covered with a sealing barrier layer, since all silicate based mortars have a certain porosity due to their nature, which allows the ingress of liquids.

### SURFACE PRE-TREATMENT

#### C-STEEL

All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 must be achieved. The primer must be applied immediately after the blasting.

#### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%.

### ENVIRONMENTAL CONDITIONS

The specified environmental conditions must be observed during surface preparation and brick lining and be tested and recorded according EN 14879-6.

Environmental Conditions	Value
Relative Humidity	≤ 80%
Surface Temperature	≥ +10°C up to +30°C
Application Temperature	+20°C ± 5°C recommended
Dew Point Distance	min. 3K

### APPLICATION

The execution of the brick lining work is only permitted, if the requirements of „Surface Pre-treatment“ and „Environmental Conditions“ are met.

The scratch coat is applied on the substrate by using a wide brush or a lambs wool roller.

**Asplit HB** is applied on the substrate or sealing layer by using a mortar trowel. Tiles and bricks must be free of voids, fully bedded and hollow jointed

### WORK TOOLS

The following tools are essential for the application:

- Stirrer (max. 300 r/min.)
- Measuring cup & Mixing vessels
- Flat / wide brush / lambs wool roller
- Mortar trowel
- Grouting tool
- Miscellaneous (safety glasses, rubber gloves etc.)

### MIXING RATIO

Pour **Asplit HB SOLUTION** in a mixing vessel and add **Asplit HB POWDER** at the specified mixing ratio. The stirring of the merged components should be at least 3 minutes and must result in a homogeneous mixture.

Scratch Coat for 1m <sup>2</sup>	KG per Litre	Parts by Weight	Parts by Volume
<b>Asplit HB SOLUTION</b>	0.500	100	-
<b>Asplit HB POWDER</b>	0.500	100	-

Asplit HB	KG per Litre	Parts by Weight	Parts by Volume
<b>Asplit HB SOLUTION</b>	0.500	100	-
<b>Asplit HB POWDER</b>	1.500	300	-

### CONSUMPTION

Bedding and jointing (Bed Joint 5 mm / Cross Joint 5-7 mm)

Material	Sizes [mm]	Coverage [kg/m <sup>2</sup> ]
Tiles	240 x 115 x 20	ca. 15
Tiles	240 x 115 x 40	ca. 18
Bricks	240 x 115 x 65	ca. 23
Bricks	240 x 115 x 80	ca. 26

### POT LIFE (20°C)

Product	Time [min]
<b>Asplit HB</b>	ca. 60

### CURING (20°C)

Load Capacity	Time
Accessible	ca. 1 - 2 Days
Chemical load	ca. 8 - 10 Days

### POST TREATMENT

The brickwork and flooring with **Asplit HB** will be waterproof after 2 – 3 weeks, even if it is not acidified. If an earlier water-proofing is sought, then it should be acidified.

Acidifying is also necessary when **Asplit HB** is applied without jointing; where it is to be post jointed with a furanic or phenolic resin based mortar.

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# Asplit HB

In this case, after the potassium silicate mortar is set, it is necessary to acidify the voids / joints 2 or 3 times, with a few hours interval between. Acidifying can be done with a mixture (by weight) of: 20% alcoholic sulphuric acid (mixture of 20 parts water + 20 parts 96% sulphuric acid + 60 parts isopropyl alcohol). 20% watery sulphuric acid can also be used, but it has a slower drying time. When mixing, the water has to be added first.

## COMMISSIONING

Brick and tile linings with **Asplit HB** can be exposed to chemical stresses of fluids, at the earliest after 5 days; except when the liquid temperature is +150°C, then there should be a time lapse of 8 -10 days after completion. In the case of chimneys, the actual norms and guidelines should be followed. Brick lined vessels or apparatus, should be put into operation initially with diluted mineral acids. If there is a long period of time between the completion of the linings and normal operation; or after the apparatus has been out of service for a longer time, it is mandatory to fill the vessel or apparatus with a weak concentration of acid and water. Open vessels should be covered.

## CLEANING

Clean all equipment with **Asplit UNIVERSAL CLEANER** immediately after use. The cleaning is done while the material is still not hardened.

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

Technical Data	Standard	Unit	Value
Flexural Strength	EN ISO 178	N/mm <sup>2</sup>	10
Density (Mixture)	EN ISO 2811 (ASTM D1475)	g/cm <sup>3</sup>	2.0
Compressive Strength	EN ISO 604	N/mm <sup>2</sup>	30
E-Modulus	-	N/mm <sup>2</sup>	1.1 x 10 <sup>4</sup>
Hardness Shore D	-	-	> 20
Coefficient of Thermal Expansion	-	1/K	12 x 10 <sup>-6</sup>
Thermal Conductivity	-	W/(m • K)	1.2
Max. Operating Temperature Dry	-	°C	+900

**Note:** The indicated temperatures are dependent on the present load and may vary

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## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
<b>Asplit HB SOLUTION</b>	20 kg	592 0230
<b>Asplit HB SOLUTION</b>	290 kg	592 0220
<b>Asplit HB POWDER</b>	25 kg	592 0090
<b>Asplit UNIVERSAL CLEANER</b>	8.4 kg	592 0900

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
<b>Asplit HB SOLUTION</b>	≤ +30°C	24 Months
<b>Asplit HB POWDER</b>	-	24 Months
<b>Asplit UNIVERSAL CLEANER</b>	≤ +20°C	24 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

# PRODUCT INFORMATION

## Asplit HES

### PRODUCT DESCRIPTION

**Asplit HES** is a grey, halogen free sodium silicate mortar, which by mixing with water, chemically reacts to harden. The hardener and binder are included in the powder.

### FIELDS OF APPLICATION

**Asplit HES** is used mainly as a polarising mortar for ceramic lining of chimneys in domestic households. Further, it is also used for the laying of tiles, bricks and shapes for floor and vessel linings.

**Asplit HES** exhibits good properties to water and rinsing actions for several weeks, yet permanent rinsing is not possible. For constant rinsing or abrasion resistance, use an Asplit synthetic resin based mortar for jointing.

Except to hydrofluoric acid, **Asplit HES** is resistant to all acids, solvents, oxidising agents, oils and fats; but it is not resistance to alkalis.

### FEATURES

- Halogen-Free, containing no Fluoride
- Extreme high corrosion protection
- Temperature Resistance to +900°C
- Easy to use

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Components to be brick lined shall be designed and manufactured in accordance with EN 14879-1. Before start of brick lining work, the suitability of the surface preparation measures according EN 14879-1 must be checked and recorded. Concrete surfaces needs to be covered with a sealing barrier layer, since all silicate based mortars have a certain porosity due to their nature, which allows the ingress of liquids.

### SURFACE PRE-TREATMENT

#### C-STEEL

All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 must be achieved. The primer must be applied immediately after the blasting.

#### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%.

### ENVIRONMENTAL CONDITIONS

The specified environmental conditions must be observed during surface preparation and brick lining and be tested and recorded according EN 14879-6.

Environmental Conditions	Value
Relative Humidity	≤ 80%
Surface Temperature	≥ +10°C up to +30°C
Application Temperature	+20°C ± 5°C recommended
Dew Point Distance	min. 3K

### APPLICATION

The execution of the brick lining work is only permitted, if the requirements of „Surface Pre-treatment“ and „Environmental Conditions“ are met.

The scratch coat is applied on the substrate by using a wide brush or a lambs wool roller.

**Asplit HES** is applied on the substrate or sealing layer by using a mortar trowel. Tiles and bricks must be free of voids, fully bedded and hollow jointed

### WORK TOOLS

The following tools are essential for the application:

- Stirrer (max. 300 r/min.)
- Measuring cup & Mixing vessels
- Flat / wide brush / lambs wool roller
- Mortar trowel
- Grouting tool
- Miscellaneous (safety glasses, rubber gloves etc.)

### MIXING RATIO

Pour water in a mixing vessel and add **Asplit HES POWDER** at the specified mixing ratio. The stirring of the merged components should be at least 3 minutes and must result in a homogeneous mixture. When mixing **Asplit HES**, a characteristic is that mixture is often found to be too dry at first; although after 5 min of mixing, a mix is produced which is good to apply.

Scratch Coat for 1m <sup>2</sup>	KG per Litre	Parts by Weight	Parts by Volume
Water	0.200	100	-
<b>Asplit HES POWDER</b>	0.800	400	-

Asplit HES	KG per Litre	Parts by Weight	Parts by Volume
Water	0.250	100	-
<b>Asplit HES POWDER</b>	1.750	700	-

### CONSUMPTION

Bedding and jointing (Bed Joint 5 mm / Cross Joint 5-7 mm)

Material	Sizes [mm]	Coverage [kg/m <sup>2</sup> ]
Tiles	240 x 115 x 20	ca. 15
Tiles	240 x 115 x 40	ca. 18
Bricks	240 x 115 x 65	ca. 23
Bricks	240 x 115 x 80	ca. 26

### POT LIFE (20°C)

Product	Time [min]
<b>Asplit HES</b>	ca. 90

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# Asplit HES

## CURING (20°C)

Load Capacity	Time
Load	ca. 24 h
Chemical load	ca. 10 Days

## POST TREATMENT

The brickwork and flooring with **Asplit HES** will be water-proof after 10 days, even if it is not acidified. If an earlier water-proofing is sought, then it should be acidified.

Acidifying is also necessary when **Asplit HES** is applied without jointing; where it is to be post jointed with a furanic or phenolic resin based mortar. In this case, after the potassium silicate mortar is set, it is necessary to acidify the voids / joints 2 or 3 times, with a few hours interval between. Acidifying can be done with a mixture (by weight) of: 20% alcoholic sulphuric acid (mixture of 20 parts water + 20 parts 96% sulphuric acid + 60 parts isopropyl alcohol).

20% watery sulphuric acid can also be used, but it has a slower drying time. When mixing, the water has to be added first.

## COMMISSIONING

Brick and tile linings with **Asplit HES**, can be exposed to chemical stresses of fluids, at the earliest after 5 days; except when the liquid temperature is +150° C, then there should be a time lapse of 8 -10 days after completion. In the case of chimneys, the actual norms and guidelines should be followed. Brick lined vessels or apparatus, should be put into operation initially with diluted mineral acids. If there is a long period of time between the completion of the linings and normal operation; or after the apparatus has been out of service for a longer time, it is mandatory to fill the vessel or apparatus with a weak concentration of acid and water. Open vessels should be covered.

## CLEANING

Clean all equipment with water immediately after use. The cleaning is done while the material is still not hardened.

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
<b>Asplit HES POWDER</b>	25 kg	592 0110

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
<b>Asplit HES POWDER</b>	-	24 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Flexural Strength	EN ISO 178	N/mm <sup>2</sup>	10
Density (Mixture)	EN ISO 2811 (ASTM D1475)	g/cm <sup>3</sup>	2.0
Compressive Strength	EN ISO 604	N/mm <sup>2</sup>	25
E-Modulus	-	N/mm <sup>2</sup>	1.1 x 10 <sup>4</sup>
Coefficient of Thermal Expansion	-	1/K	12 x 10 <sup>-6</sup>
Thermal Conductivity	-	W/(m • K)	1.2
Max. Operating Temperature Dry	-	°C	+900

**Note:** The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## Asplit HSP

### PRODUCT DESCRIPTION

**Asplit HSP** is a halogen free potassium silicate mortar, which has been specially designed to be used by spraying (similar to sprayed concrete).

**Asplit HSP** is a compact system which includes a specially formulated hardener, which by mixing with water, chemically reacts to harden.

### FIELDS OF APPLICATION

**Asplit HSP** is used as a corrosion protection in larger buildings and vessel areas, as a monolithic coating. The coating thickness should be between 10 – 20 mm thick. The coating is mainly designed for steel areas; such as steel chimney flues, Cowper and Cyclones. It is not recommended for the storage of liquids in steel tanks. The cylinders, vessels etc. must have sufficient space to accommodate the spraying pipes. The free working space should not be less than 1.50 m in diameter.

### FEATURES

- Halogen free containing no fluorides
- Extremely high acid resistance
- Temperature Resistance to +900° C
- Very good bonding strength to steel
- Nearly the same coefficient of expansion as steel

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Components to be coated shall be designed and manufactured in accordance with EN 14879-1. Before start of coating work, the suitability of the surface preparation measures according EN 14879-1 must be checked and recorded.

### SURFACE PRE-TREATMENT

#### C-STEEL

All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 must be achieved. The primer must be applied immediately after the blasting.

#### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%.

### ENVIRONMENTAL CONDITIONS

The specified environmental conditions must be observed during surface preparation and brick lining and be tested and recorded according EN 14879-6.

Environmental Conditions	Value
Relative Humidity	≤ 80%
Surface Temperature	≥ +10°C up to +30°C
Application Temperature	+20°C ± 5°C recommended
Dew Point Distance	min. 3K

### APPLICATION

The execution of the brick lining work is only permitted, if the requirements of „Surface Pre-treatment“ and „Environmental Conditions“ are met.

**Asplit HSP** is spray applied with a rotary machine, incorporating a sandblasting rotor, which applies the coat by operating continuously like the revolver system (e.g. Alivia-246).

The diameter of the hose at the front should be between 25 mm and 32 mm. Generally the pressure is set at between 2 – 3 bar. It should be finely adjusted, so that it results in a faultless coating. Pressure being set too high will result in loss of material, when it rebounds.

### WORK TOOLS

The following tools are essential for the application:

- Stirrer (max. 300 r/min.)
- Measuring cup & Mixing vessels
- Flat / wide brush
- Mortar trowel
- Rotary machine (Alivia-246)
- Miscellaneous (safety glasses, rubber gloves etc.)

### MIXING RATIO

The spray coating of **Asplit HSP** occurs, when the **Asplit HSP Powder** is rotary mixed at the spray nozzle with water, similar to the guniting process.

Asplit HSP	KG per Litre	Parts by Weight	Parts by Volume
Water	3.300	18	-
<b>Asplit HSP POWDER</b>	18.000	100	-

### POT LIFE (20°C)

Product	Time [min]
<b>Asplit HSP</b>	ca. 90

### CURING (20°C)

Load Capacity	Time
Over workable	ca. 24 h
Thermal loadable	ca. 48 h
Chemical load	ca. 14 Days

### CLEANING

Clean all equipment with water immediately after use. The cleaning is done while the material is still not hardened.

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# Asplit HSP

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
Asplit HSP POWDER	25 kg	592 0170

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
Asplit HSP POWDER	-	24 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Flexural Strength	EN ISO 178	N/mm <sup>2</sup>	10
Compressive Strength	EN ISO 604	N/mm <sup>2</sup>	30
Coefficient of Thermal Expansion	-	1/K	12 x 10 <sup>-6</sup>
Max. Operating Temperature Dry	-	°C	+900

**Note:** The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## Asplit K 14

### PRODUCT DESCRIPTION

**Asplit K 14** is a potassium silicate mortar with corresponding chemical but higher thermal resistance compared to conventional potassium silicate mortars.

### FIELDS OF APPLICATION

**Asplit K 14** is used as temperature and chemical resistant mortar for brick linings with refractory and acid proof bricks. **Asplit K 14** is suitable for all refractory brick linings, which can not be done with fireclay mortar, because of its lower mechanical and chemical resistance.

Working with **Asplit K 14**, the drying processes can be shortened by mixing, because the mixing is without water and is applied on dry brick material.

**Asplit K 14** is used mainly for brick linings in ovens, such as rotary kilns; drying drums; roasting ovens; sulphate ovens and especially where SO<sub>2</sub> and SO<sub>3</sub> gases are released and in corresponding temperatures, where refractory mortars are used; such as in ovens on cooling cladding, such as, oven walls or T-Joints in Ovens.

Except to hydrofluoric acid, **Asplit K 14** is resistant to all acids, solvents, oxidising agents, oils and fats; but is not resistance to alkalis.

### FEATURES

- Hardening at room temperature therefore self supporting brickwork, even before sintering
- Fast sintering, which prevents the mortar flowing out of the joints
- Temperature Resistance up to +1400° C
- The expansion coefficient is similar to ceramic bricks

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Components shall be designed and manufactured in accordance with EN 14879-1. Before start of brick lining work, the suitability of the surface preparation measures according EN 14879-1 must be checked and recorded.

### SURFACE PRE-TREATMENT

#### C-STEEL

All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 must be achieved. The primer must be applied immediately after the blasting.

### ENVIRONMENTAL CONDITIONS

The specified environmental conditions must be observed during surface preparation and brick lining and be tested and recorded according EN 14879-6.

Environmental Conditions	Value
Relative Humidity	≤ 80%
Surface Temperature	≥ +10°C up to +30°C
Application Temperature	+20°C ± 5°C recommended
Dew Point Distance	min. 3K

### APPLICATION

The execution of the brick lining work is only permitted, if the requirements of „Surface Pre-treatment“ and „Environmental Conditions“ are met.

The Scratch Coat is applied on the substrate by using a wide brush or a lambs wool roller.

**Asplit K 14** is applied on the substrate or sealing layer by using a mortar trowel. Tiles and bricks must be free of voids, fully bedded and hollow jointed

### WORK TOOLS

The following tools are essential for the application:

- Stirrer (max. 300 r/min.)
- Measuring cup & Mixing vessels
- Flat / wide brush / lambs wool roller
- Mortar trowel
- Grouting tool
- Miscellaneous (safety glasses, rubber gloves etc.)

### MIXING RATIO

Pour **Asplit K 14 SOLUTION** in a mixing vessel and add **Asplit K 14 POWDER** at the specified mixing ratio. The stirring of the merged components should be at least 3 minutes and must result in a homogeneous mixture.

Scratch Coat for 1m <sup>2</sup>	KG per Litre	Parts by Weight	Parts by Volume
<b>Asplit K 14 SOLUTION</b>	0.500	100	-
<b>Asplit K 14 POWDER</b>	0.500	100	-

Asplit K 14	KG per Litre	Parts by Weight	Parts by Volume
<b>Asplit K 14 SOLUTION</b>	0.500	100	-
<b>Asplit K 14 POWDER</b>	1.500	300	-

### CONSUMPTION

Bedding and jointing (Bed Joint 5 mm / Cross Joint 5-7 mm)

Material	Sizes [mm]	Coverage [kg/m <sup>2</sup> ]
Tiles	240 x 115 x 20	ca. 15
Tiles	240 x 115 x 40	ca. 18
Bricks	240 x 115 x 65	ca. 23
Bricks	240 x 115 x 80	ca. 26

### POT LIFE (20°C)

Product	Time [min]
<b>Asplit K 14</b>	ca. 40

### CURING (20°C)

Load Capacity	Time
Load	ca. 48 h

### POST TREATMENT

The brickwork and flooring, with **Asplit K 14** does not have to be post thermally treated after brick laying.

### COMMISSIONING

Brick and tile linings with **Asplit K 14** can be exposed to chemical stresses of fluids, at the earliest after 5 days; except when the liquid temperature is +150°C, then there

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# Asplit K 14

should be a time lapse of 8 -10 days after completion. In the case of chimneys, the actual Norms and Guidelines should be followed.

## CLEANING

Clean all equipment with **Asplit UNIVERSAL CLEANER** or water immediately after use. The cleaning is done while the material is still not hardened.

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
<b>Asplit K 14 SOLUTION</b>	20 kg	592 0240
<b>Asplit K 14 SOLUTION</b>	270 kg	592 0250
<b>Asplit K 14 POWDER</b>	25 kg	592 0190
<b>Asplit UNIVERSAL CLEANER</b>	8.4 kg	592 0900

Technical Data	Standard	Unit	Value
Flexural Strength	EN ISO 178	N/mm <sup>2</sup>	6
Density (Mixture)	EN ISO 2811 (ASTM D1475)	g/cm <sup>3</sup>	2.0
Compressive Strength	EN ISO 604	N/mm <sup>2</sup>	20
Max. Operating Temperature Dry	-	°C	+1400

**Note:** The indicated temperatures are dependent on the present load and may vary

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
<b>Asplit K 14 SOLUTION</b>	≤ +30°C	24 Months
<b>Asplit K 14 POWDER</b>	-	24 Months
<b>Asplit UNIVERSAL CLEANER</b>	≤ +20°C	24 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

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# PRODUCT INFORMATION

## Asplit 876 LAMINATE

### PRODUCT DESCRIPTION

**Asplit 876 LAMINATE** is a yellow-brown, approx. 3 mm thick glass mat reinforced lining system based on an epoxy resin.

### FIELDS OF APPLICATION

**Asplit 876 LAMINATE** is used both on steel and on concrete surfaces. The coating is suitable for areas subjected to mechanical stresses.

The chemical resistance of **Asplit 876** Primer is generally similar to **Asplit ET**, but it has a better resistance against organic acids and solvents

### FEATURES

- Direct adhering primer on steel and concrete surfaces
- Excellent chemical resistance
- High temperature resistance up to +160°C (dry)

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Components to be coated shall be designed and manufactured in accordance with EN 14879-1. Before start of coating work, the suitability of the surface preparation measures according EN 14879-1 must be checked and recorded.

### SURFACE PRE-TREATMENT

#### C-STEEL

All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 must be achieved. The primer must be applied immediately after the blasting.

#### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%.

### ENVIRONMENTAL CONDITIONS

The specified environmental conditions must be observed during surface preparation and coating work and be tested and recorded according EN 14879.

Environmental Conditions	Value
Relative Humidity	≤ 80%
Surface Temperature	≥ +10°C up to +30°C
Application Temperature	+20°C ± 5°C recommended
Dew Point Distance	min. 3K

### APPLICATION

The execution of the coating work is only permitted, if the requirements of „Surface Pre-treatment“ and „Environmental Conditions“ are met.

**Asplit 876 PRIMER** is only necessary if **Asplit 876 LAMINATE** is not applied directly after blasting.

**Asplit 876** laminate solution is applied on the surface by using a roller and then the first 450 g/m<sup>2</sup> glass mat is pressed fresh in fresh - with an overlapping width of approx. 4 – 5 cm – and rolled on reasonably free from bubbles by using a roller, saturated with **Asplit 876** laminate solution. The remaining air must be removed by using a laminate roller.

The second 450 g/m<sup>2</sup> glass mat is pressed - with an overlapping width of approx. 50 cm – on the uncured layer, soaked with **Asplit 876** laminate solution again and rolled on reasonably free from bubbles by using a roller, saturated with **Asplit 876** laminate solution. The remaining air must be removed again by using a laminate roller. Finally, a 30 g/m<sup>2</sup> surface veil is applied on the second glass mat fresh in fresh and reasonably free from bubbles. To improve the slip resistance of **Asplit 876 LAMINATE**, the fresh laminate coating can be sanded with silicon carbide (0.5mm; Consumption: 1.5 kg/m<sup>2</sup>).

### WORK TOOLS

The following tools are essential for the application:

- Stirrer (max. 300 r/min.)
- Measuring cup & Mixing vessels
- Flat / wide brush / roller
- Laminate roller
- Scissors
- Miscellaneous (safety glasses, rubber gloves etc.)

### MIXING RATIO

**Asplit 876 PRIMER** must be agitated before adding the **Asplit 876 HARDENER** in the recommended mixing ratio. The stirring of the merged components should be at least 3 minutes and must result in a homogeneous mixture. Then pour the mixture into a clean pail and mix again briefly.

Primer	KG per Litre	Parts by Weight	Parts by Volume
<b>Asplit 876 SOLUTION</b>	0.815	100	0.87
<b>Asplit 876 HARDENER</b>	0.325	40	0.36

Asplit 876 LAMINATE	KG per Litre	Parts by Weight	Parts by Volume
<b>Asplit 876 SOLUTION</b>	0.815	100	0.87
<b>Asplit 876 HARDENER</b>	0.325	40	0.36

### CONSUMPTION

Layer	Product	Coverage [g/m <sup>2</sup> ]
Primer	<b>Asplit 876 PRIMER</b>	ca. 300 - 350 (concrete) / ca. 250 (steel)
Laminate Layer	<b>Asplit 876 LAMINATE</b>	ca. 2400
	2 x Fibreglass mats 450 g/m <sup>2</sup>	ca. 1000
	1 x Surface veil 30 g/m <sup>2</sup>	ca. 33

### POT LIFE (20°C)

Product	Time [min]
<b>Asplit 876 LAMINATE</b>	ca. 60

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# Asplit 876 LAMINATE

## CURING (20°C)

Load Capacity	Time
Over workable	ca. 24 h
Accessible	ca. 24 h

## CLEANING

Clean all equipment with **Asplit UNIVERSAL CLEANER** or **Asplit CLEANER N** immediately after use. The cleaning is done while the material is still not hardened.

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
<b>Asplit 876 SOLUTION</b>	20 kg	592 0605
<b>Asplit 876 HARDENER</b>	8 kg	592 0615
<b>Asplit CLEANER N</b>	25 kg	592 0920
<b>Asplit CLEANER N DEFOAMER</b>	0.25 kg	592 0921
<b>Asplit UNIVERSAL CLEANER</b>	8.4 kg	592 0900

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
<b>Asplit 876 HARDENER</b>	≤ +25°C	24 Months
<b>Asplit 876 SOLUTION</b>	≤ +25°C	24 Months
<b>Asplit CLEANER N</b>	-	24 Months
<b>Asplit CLEANER N DEFOAMER</b>	≤ +20°C	24 Months
<b>Asplit UNIVERSAL CLEANER</b>	≤ +20°C	24 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Density (Mixture)	EN ISO 2811 (ASTM D1475)	g/cm <sup>3</sup>	1.2
Density <b>Asplit 876 SOLUTION</b>			1.15
Adhesion Strength Concrete	-	N/mm <sup>2</sup>	Own tensile strength
Adhesion Strength Steel	-	N/mm <sup>2</sup>	4
Hardness Shore D	-	-	> 60
Max. Operating Temperature Dry	-	°C	+160

**Note:** The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## Asplit LC LAMINATE

### PRODUCT DESCRIPTION

**Asplit LC LAMINATE** is a black, approx. 3 mm thick; glass mat reinforced lining system based on a phenol resin. **Asplit LC LAMINATE** is electrically conductive by using a hybrid mat.

### FIELDS OF APPLICATION

**Asplit LC LAMINATE** can be applied on EP-coatings, sheets or rubber linings.

### FEATURES

- Excellent chemical resistance, especially against acids and solvents
- High temperature resistance up to 100°C (dry)
- Electrically conductive

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Components to be coated shall be designed and manufactured in accordance with EN 14879-1. Before start of coating work, the suitability of the surface preparation measures according EN 14879-1 must be checked and recorded.

### SURFACE PRE-TREATMENT

Steel and concrete surfaces must be primed with **Asplit 876 PRIMER** before application. If a sealing layer of rubber or coating is present, **Asplit LC LAMINATE** can be directly applied on the sealing layer. Unevenness should be compensated in the ground.

#### C-STEEL

All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 must be achieved. The primer must be applied immediately after the blasting.

#### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm². The residual moisture content must not exceed 4%.

### ENVIRONMENTAL CONDITIONS

The specified environmental conditions must be observed during surface preparation and coating work and be tested and recorded according EN 14879.

Environmental Conditions	Value
Relative Humidity	≤ 80%
Surface Temperature	≥ +10°C up to +30°C
Application Temperature	+20°C ± 5°C recommended
Dew Point Distance	min. 3K

### APPLICATION

The execution of the coating work is only permitted, if the requirements of „Surface Pre-treatment“ and „Environmental Conditions“ are met.

**Asplit 876 PRIMER** is applied twice (undiluted) by using brushes, wide brushes or rollers. If the overworking time is > 24 hours, the last coat must be sanded in fresh state with dry quartz sand (0.3 – 0.7 mm) – if no sanding is carried out – it must be grinded.

**Asplit LC** laminate solution is applied on the surface by using a roller and then the first 450 g/m² glass mat is pressed fresh in fresh – with an overlapping width of approx. 5 cm – and rolled on reasonably free from bubbles by using a roller, saturated with **Asplit LC** laminate solution. The remaining air must be removed by using a laminate roller. The second 450 g/m² glass mat is pressed - with an overlapping width of approx. 50 cm – on the uncured layer, soaked with **Asplit LC** laminate solution again and rolled on reasonably free from bubbles by using a roller, saturated with **Asplit LC** laminate solution. The remaining air must be removed again by using a laminate roller. Finally, a 30 g/m² surface veil is applied on the second glass mat fresh in fresh and reasonably free from bubbles. To improve the slip resistance of **Asplit 876 LAMINATE**, the fresh laminate coating can be sanded with silicon carbide (0.5mm; Consumption: 1.5 kg/m²). To improve the slip resistance of **Asplit LC LAMINATE**, the fresh laminate coating can be sanded with silicon carbide (0.5mm; Consumption: 1.5 kg/m²).

### CONDUCTIVITY

If **Asplit LC LAMINATE** should be conductive, a 280 g/m² hybrid fleece must be applied on the second glass mat instead of the 30 g/m² surface veil.

### WORK TOOLS

The following tools are essential for the application:

- Stirrer (max. 300 r/min.)
- Measuring cup & Mixing vessels
- Flat / wide brush / roller
- Laminate roller
- Scissors
- Miscellaneous (safety glasses, rubber gloves etc.)

### MIXING RATIO

#### MIXING PRIMER

**Asplit 876 PRIMER** must be stirred before adding the **Asplit 876 HARDENER** in the recommended mixing ratio. The stirring of the merged components should be at least 3 minutes and must result in a homogeneous mixture. Then pour the mixture into a clean pail and mix again briefly.

#### MIXING Asplit LC LAMINATE SOLUTION

**Asplit LC SOLUTION** must be stirred before adding the **Asplit LC HARDENER** in the recommended mixing ratio. The stirring of the merged components should be at least 3 minutes and must result in a homogeneous mixture. Then pour the mixture into a clean pail and mix again briefly.

Primer	KG per Litre	Parts by Weight	Parts by Volume
<b>Asplit 876 SOLUTION</b>	0.815	100	0.87
<b>Asplit 876 HARDENER</b>	0.325	40	0.36

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# Asplit LC LAMINATE

Asplit LC LAMINATE	KG per Litre	Parts by Weight	Parts by Volume
<b>Asplit LC SOLUTION</b>	1.000	100	1.00
<b>Asplit LC HARDENER</b>	0.160	16	0.16

## CONSUMPTION

Layer	Product	Coverage [g/m <sup>2</sup> ]
Primer	<b>Asplit 876 PRIMER</b>	ca. 300 - 350 (concrete) / ca. 250 (steel)
Laminate Layer	<b>Asplit LC LAMINATE</b>	ca. 2600 / ca. 3300*
	2 x Fibreglass mats 450 g/m <sup>2</sup>	ca. 1000
	1 x Surface veil 30 g/m <sup>2</sup>	ca. 33

\* When applying a hybrid fleece

## POT LIFE (20°C)

Product	Time [min]
<b>Asplit LC LAMINATE</b>	ca. 20

## CURING (20°C)

Load Capacity	Time
Over workable	ca. 24 h
Accessible	ca. 24 h

## CLEANING

Clean all equipment with **Asplit UNIVERSAL CLEANER** immediately after use. The cleaning is done while the material is still not hardened.

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
<b>Asplit 876 SOLUTION</b>	20 kg	592 0605
<b>Asplit 876 HARDENER</b>	8 kg	592 0615
<b>Asplit LC HARDENER</b>	10 kg	592 0830
<b>Asplit LC SOLUTION</b>	20 kg	592 0820
<b>Asplit UNIVERSAL CLEANER</b>	8.4 kg	592 0900

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
<b>Asplit 876 HARDENER</b>	≤ +25°C	24 Months
<b>Asplit 876 SOLUTION</b>	≤ +25°C	24 Months
<b>Asplit LC HARDENER</b>	≤ +25°C	24 Months
<b>Asplit LC SOLUTION</b>	≤ +25°C	9 Months
<b>Asplit UNIVERSAL CLEANER</b>	≤ +20°C	24 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Resistance to Ground	DIN 14879-6	Ω	≤ 1 x 10 <sup>6</sup>
Density (Mixture)	EN ISO 2811 (ASTM D1475)	g/cm <sup>3</sup>	1.16
Adhesion Strength Concrete	-	N/mm <sup>2</sup>	Own tensile strength
Adhesion Strength Steel	-	N/mm <sup>2</sup>	3
Hardness Shore D	-	-	> 60
Max. Operating Temperature Dry	-	°C	+100

**Note:** The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## Asplit LC 916 LAMINATE

### PRODUCT DESCRIPTION

**Asplit LC 916 LAMINATE** is a black, approx. 3 mm thick; glass mat reinforced lining system based on a phenol resin. **Asplit LC 916 LAMINATE** is electrically conductive by using a hybrid mat.

### FIELDS OF APPLICATION

**Asplit LC 916 LAMINATE** can be applied on EP-coatings, sheets or rubber linings.

### FEATURES

- Excellent chemical resistance, especially against acids and solvents
- High temperature resistance up to +90°C (dry)
- Electrically conductive

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Components to be coated shall be designed and manufactured in accordance with EN 14879-1. Before start of coating work, the suitability of the surface preparation measures according EN 14879-1 must be checked and recorded.

### SURFACE PRE-TREATMENT

Steel and concrete surfaces must be primed with **Asplit 876 PRIMER** before application. If a sealing layer of rubber or coating is present, **Asplit LC 916 LAMINATE** can be directly applied on the sealing layer. Unevenness should be compensated in the ground.

#### C-STEEL

All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 must be achieved. The primer must be applied immediately after the blasting.

#### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%.

### ENVIRONMENTAL CONDITIONS

The specified environmental conditions must be observed during surface preparation and coating work and be tested and recorded according EN 14879.

Environmental Conditions	Value
Relative Humidity	≤ 80%
Surface Temperature	≥ +10°C up to +30°C
Application Temperature	+20°C ± 5°C recommended
Dew Point Distance	min. 3K

### APPLICATION

The execution of the coating work is only permitted, if the requirements of „Surface Pre-treatment“ and „Environmental Conditions“ are met.

**Asplit 876 PRIMER** is applied twice (undiluted) by using brushes, wide brushes or rollers. If the overworking time is > 24 hours, the last coat must be sanded in fresh state with dry quartz sand (0.3 – 0.7 mm) – if no sanding is carried out – it must be grinded.

**Asplit LC 916** laminate solution is applied on the surface by using a roller and then the first 450 g/m<sup>2</sup> glass mat is pressed fresh in fresh – with an overlapping width of approx. 5 cm – and rolled on reasonably free from bubbles by using a roller, saturated with **Asplit LC 916** laminate solution. The remaining air must be removed by using a laminate roller. The second 450 g/m<sup>2</sup> glass mat is pressed - with an overlapping width of approx. 50 cm – on the uncured layer, soaked with **Asplit LC 916** laminate solution again and rolled on reasonably free from bubbles by using a roller, saturated with **Asplit LC 916** laminate solution. The remaining air must be removed again by using a laminate roller. Finally, a 30 g/m<sup>2</sup> surface veil is applied on the second glass mat fresh in fresh and reasonably free from bubbles. To improve the slip resistance of **Asplit LC 916 LAMINATE**, the fresh laminate coating can be sanded with silicon carbide (0.5mm; Consumption: 1.5 kg/m<sup>2</sup>). To improve the slip resistance of **Asplit LC 916 LAMINATE**, the fresh laminate coating can be sanded with silicon carbide (0.5mm; Consumption: 1.5 kg/m<sup>2</sup>).

### CONDUCTIVITY

If **Asplit LC 916 LAMINATE** should be conductive, a 280 g/m<sup>2</sup> hybrid fleece must be applied on the second glass mat instead of the 30 g/m<sup>2</sup> surface veil.

### WORK TOOLS

The following tools are essential for the application:

- Stirrer (max. 300 r/min.)
- Measuring cup & Mixing vessels
- Flat / wide brush / roller
- Laminate roller
- Scissors
- Miscellaneous (safety glasses, rubber gloves etc.)

### MIXING RATIO

#### MIXING PRIMER

**Asplit 876 PRIMER** must be stirred before adding the **Asplit 876 HARDENER** in the recommended mixing ratio. The stirring of the merged components should be at least 3 minutes and must result in a homogeneous mixture. Then pour the mixture into a clean pail and mix again briefly.

#### MIXING Asplit LC 916 LAMINATE SOLUTION

**Asplit CN 916 SOLUTION** must be stirred before adding the **Asplit LC HARDENER** in the recommended mixing ratio. The stirring of the merged components should be at least 3 minutes and must result in a homogeneous mixture. Then pour the mixture into a clean pail and mix again briefly.

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# Asplit LC 916 LAMINATE

Primer	KG per Litre	Parts by Weight	Parts by Volume
Asplit 876 SOLUTION	0.815	100	0.87
Asplit 876 HARDENER	0.325	40	0.36

Asplit LC 916 LAMINATE	KG per Litre	Parts by Weight	Parts by Volume
Asplit CN 916 SOLUTION	1.000	100	1.00
Asplit LC HARDENER	0.200	20	0.20

## CONSUMPTION

Layer	Product	Coverage [g/m <sup>2</sup> ]
Primer	Asplit 876 PRIMER	ca. 300 - 350 (concrete) / ca. 250 (steel)
Laminate Layer	Asplit LC 916 LAMINATE	ca. 2600 / ca. 3300*
	2 x Fibreglass mats 450 g/m <sup>2</sup>	ca. 1000
	1 x Surface veil 30 g/m <sup>2</sup>	ca. 33

\* When applying a hybrid fleece

## POT LIFE (20°C)

Product	Time [min]
Asplit LC 916 LAMINATE	ca. 30

## CURING (20°C)

Load Capacity	Time
Over workable	ca. 24 h
Accessible	ca. 24 h

## CLEANING

Clean all equipment with **Asplit UNIVERSAL CLEANER** immediately after use. The cleaning is done while the material is still not hardened.

Technical Data	Standard	Unit	Value
Resistance to Ground	DIN 14879-6	Ω	≤ 1 x 10 <sup>6</sup>
Density (Mixture)	EN ISO 2811 (ASTM D1475)	g/cm <sup>3</sup>	1.20
Adhesion Strength Concrete	-	N/mm <sup>2</sup>	Own tensile strength
Adhesion Strength Steel	-	N/mm <sup>2</sup>	4
Hardness Shore D	-	-	> 60
Max. Operating Temperature Dry	-	°C	+90

**Note:** The indicated temperatures are dependent on the present load and may vary

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## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
Asplit 876 SOLUTION	20 kg	592 0605
Asplit 876 HARDENER	8 kg	592 0615
Asplit CN 916 SOLUTION	20 kg	592 0040
Asplit CN 916 SOLUTION	50 kg	592 0041
Asplit LC HARDENER	10 kg	592 0830
Asplit UNIVERSAL CLEANER	8.4 kg	592 0900

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
Asplit 876 HARDENER	≤ +25°C	24 Months
Asplit 876 SOLUTION	≤ +25°C	24 Months
Asplit CN 916 SOLUTION	≤ +20°C	6 Months
Asplit LC HARDENER	≤ +25°C	24 Months
Asplit UNIVERSAL CLEANER	≤ +20°C	24 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

# PRODUCT INFORMATION

## Asplit LF LAMINATE

### PRODUCT DESCRIPTION

**Asplit LF LAMINATE** is a black, approx. 3 mm thick; glass mat reinforced lining system based on a furan resin. **Asplit LF LAMINATE** is electrically conductive by using a hybrid mat.

### FIELDS OF APPLICATION

**Asplit LF LAMINATE** can be applied on EP-coatings, sheets or rubber linings.

### FEATURES

- Universal chemical resistance, especially against acids and solvents
- High temperature resistance up to +100°C (dry)
- Electrically conductive
- Very good storage stability

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Components to be coated shall be designed and manufactured in accordance with EN 14879-1. Before start of coating work, the suitability of the surface preparation measures according EN 14879-1 must be checked and recorded.

### SURFACE PRE-TREATMENT

Steel and concrete surfaces must be primed with **Asplit 876 PRIMER** before application. If a sealing layer of rubber or coating is present, **Asplit LF LAMINATE** can be directly applied on the sealing layer. Unevenness should be compensated in the ground.

#### C-STEEL

All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 must be achieved. The primer must be applied immediately after the blasting.

#### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm². The residual moisture content must not exceed 4%.

### ENVIRONMENTAL CONDITIONS

The specified environmental conditions must be observed during surface preparation and coating work and be tested and recorded according EN 14879.

Environmental Conditions	Value
Relative Humidity	≤ 80%
Surface Temperature	≥ +10°C up to +30°C
Application Temperature	+20°C ± 5°C recommended
Dew Point Distance	min. 3K

### APPLICATION

The execution of the coating work is only permitted, if the requirements of „Surface Pre-treatment“ and „Environmental Conditions“ are met.

**Asplit 876 PRIMER** is applied twice (undiluted) by using brushes, wide brushes or rollers. If the overworking time is > 24 hours, the last coat must be sanded in fresh state with dry quartz sand (0.3 – 0.7 mm) – if no sanding is carried out – it must be grinded.

**Asplit LF LAMINATE** solution is applied on the surface by using a roller and then the first 450 g/m² glass mat is pressed fresh in fresh – with an overlapping width of approx. 5 cm – and rolled on reasonably free from bubbles by using a roller, saturated with **Asplit LF LAMINATE** solution. The remaining air must be removed by using a laminate roller. The second 450 g/m² glass mat is pressed - with an overlapping width of approx. 50 cm – on the uncured layer, soaked with **Asplit LF LAMINATE** solution again and rolled on reasonably free from bubbles by using a roller, saturated with **Asplit LF LAMINATE** solution. The remaining air must be removed again by using a laminate roller. Finally, a 30 g/m² surface veil is applied on the second glass mat fresh in fresh and reasonably free from bubbles. To improve the slip resistance of **Asplit LF LAMINATE**, the fresh laminate coating can be sanded with silicon carbide (0.5mm; Consumption: 1.5 kg/m²). To improve the slip resistance of **Asplit LC LAMINATE**, the fresh laminate coating can be sanded with silicon carbide (0.5mm; Consumption: 1.5 kg/m²).

### CONDUCTIVITY

If **Asplit LF LAMINATE** should be conductive, a 280 g/m² hybrid fleece must be applied on the second glass mat instead of the 30 g/m² surface veil.

### WORK TOOLS

The following tools are essential for the application:

- Stirrer (max. 300 r/min.)
- Measuring cup & Mixing vessels
- Flat / wide brush / roller
- Laminate roller
- Scissors
- Miscellaneous (safety glasses, rubber gloves etc.)

### MIXING RATIO

#### MIXING PRIMER

**Asplit 876 PRIMER** must be stirred before adding the **Asplit 876 HARDENER** in the recommended mixing ratio. The stirring of the merged components should be at least 3 minutes and must result in a homogeneous mixture. Then pour the mixture into a clean pail and mix again briefly.

#### MIXING Asplit LF LAMINATE SOLUTION

**Asplit LF SOLUTION** must be stirred before adding the **Asplit LF HARDENER** in the recommended mixing ratio. The stirring of the merged components should be at least 3 minutes and must result in a homogeneous mixture. Then pour the mixture into a clean pail and mix again briefly.

Primer	KG per Litre	Parts by Weight	Parts by Volume
<b>Asplit 876 SOLUTION</b>	0.815	100	0.87
<b>Asplit 876 HARDENER</b>	0.325	40	0.36

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# Asplit LF LAMINATE

Asplit LF LAMINATE	KG per Litre	Parts by Weight	Parts by Volume
Asplit LF SOLUTION	1.120	100	1.00
Asplit LF HARDENER	0.034	3	0.03

## CONSUMPTION

Layer	Product	Coverage [g/m <sup>2</sup> ]
Primer	Asplit 876 PRIMER	ca. 300 - 350 (concrete) / ca. 250 (steel)
Laminate Layer	Asplit LF LAMINATE	ca. 2600 / ca. 3300*
	2 x Fibreglass mats 450 g/m <sup>2</sup>	ca. 1000
	1 x Surface veil 30 g/m <sup>2</sup>	ca. 33

\* When applying a hybrid fleece

## POT LIFE (20°C)

Product	Time [min]
Asplit LF LAMINATE	ca. 30

## CURING (20°C)

Load Capacity	Time
Over workable	ca. 24 h
Accessible	ca. 24 h

## CLEANING

Clean all equipment with **Asplit UNIVERSAL CLEANER** immediately after use. The cleaning is done while the material is still not hardened.

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
Asplit 876 SOLUTION	20 kg	592 0605
Asplit 876 HARDENER	8 kg	592 0615
Asplit LF HARDENER	10 kg	592 0800
Asplit LF SOLUTION	20 kg	592 0810
Asplit LF SOLUTION	50 kg	592 0811
Asplit UNIVERSAL CLEANER	8.4 kg	592 0900

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
Asplit 876 HARDENER	≤ +25°C	24 Months
Asplit 876 SOLUTION	≤ +25°C	24 Months
Asplit LF HARDENER	≤ +25°C	24 Months
Asplit LF SOLUTION	≤ +25°C	12 Months
Asplit UNIVERSAL CLEANER	≤ +20°C	24 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Resistance to Ground	DIN 14879-6	Ω	≤ 1 x 10 <sup>6</sup>
Density (Mixture)	EN ISO 2811 (ASTM D1475)	g/cm <sup>3</sup>	1.154
Adhesion Strength Concrete	-	N/mm <sup>2</sup>	Own tensile strength
Adhesion Strength Steel	-	N/mm <sup>2</sup>	3
Hardness Shore D	-	-	> 60
Max. Operating Temperature Dry	-	°C	+100

**Note:** The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## Asplit VE 145 LAMINATE

### PRODUCT DESCRIPTION

**Asplit VE 145 LAMINATE** is an approx. 3 mm thick glass mat reinforced lining system based on a epoxy resin. The coating system consists of a trowel applied primer, a laminate layer and optionally a top coat. The topcoat is used optionally, if an electrical conductive or a grey surface is required.

### FIELDS OF APPLICATION

The laminate system **Asplit VE 145 LAMINATE** is designed as an internal lining for sumps and collecting basins made of reinforced concrete, and it can also be used indoors and outdoors in liquid storage areas. Furthermore **Asplit VE 145 LAMINATE** is suitable as a flooring material where the traffic consists of vehicles with inflated or solid tyres, or with Polyurethane (Vulkollan) or polyamide wheels, mainly in galvanizing plants, pickling plants and HBV (manufacture of water polluting substances) plants where the floors are in contact with oxidizing media. The optional feature of the coating system which ensures the dissipation of static charge enables the storage of flammable liquids.

### FEATURES

- Temperature resistant up to +80°C on steel
- Excellent chemical resistance to acids, alkalis, solvents
- Crack-bridging properties. Can bridge cracks of  $\leq 0.25$  mm in concrete according EN 14879-3
- Electrically Conductive
- Drivable
- Excellent adhesion to concrete surfaces
- Very good mechanical properties

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Components to be coated shall be designed and manufactured in accordance with EN 14879-1. Before start of coating work, the suitability of the surface preparation measures according EN 14879-1 must be checked and recorded.

### SURFACE PRE-TREATMENT

#### C-STEEL

All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 must be achieved. The primer must be applied immediately after the blasting.

#### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%.

### ENVIRONMENTAL CONDITIONS

The specified environmental conditions must be observed during surface preparation and coating work and be tested and recorded according EN 14879.

Environmental Conditions	Value
Relative Humidity	$\leq 80\%$
Surface Temperature	$\geq +10^{\circ}\text{C}$ up to $+30^{\circ}\text{C}$
Application Temperature	$+20^{\circ}\text{C} \pm 5^{\circ}\text{C}$ recommended
Dew Point Distance	min. 3K

### APPLICATION

The execution of the coating work is only permitted, if the requirements of „Surface Pre-treatment“ and „Environmental Conditions“ are met.

**Asplit VE 145 PRIMER** is applied onto the prepared substrate by using a roller, mortar trowel or grout spreader. As the trowelled primer hardens, **Asplit VE 145** laminate solution is applied, and the first layer of 450 g/m<sup>2</sup> glass mat is laid into the solution. It is then saturated with **Asplit VE 145** laminate solution and rolled on reasonably free from bubbles by using a roller (segmented roller). The glass mats need to be placed with approximately 5 cm overlapping onto each other.

Before the previous layer hardens, the second layer of 450 g/m<sup>2</sup> glass mat is placed, saturated with **Asplit VE 145** laminate solution and rolled on reasonably free from bubbles. The overlapping distance between the subsequent layers need to be minimum 50 cm. Finally, a 30 g/m<sup>2</sup> surface veil is applied onto the second glass mat, fresh in fresh and reasonably free from bubbles.

After hardening of the **Asplit VE 145 LAMINATE** two coats of grey VE-topcoat can be rolled on the top optionally.

To achieve a conductive top coat, self bonding copper tapes are bonded onto the hardened **Asplit VE 145 LAMINATE** and then the first coat of conductive topcoat is rolled. Following the hardening of the 1st Topcoat (approx. 3 - 5 hours), 2nd coat of the conductive topcoat can be rolled.

To improve the slip resistance of **Asplit VE 145 LAMINATE**, the fresh laminate coating can be sanded with silicon carbides (0.5mm; Consumption: 1.5 kg/m<sup>2</sup>).

### WORK TOOLS

The following tools are essential for the application:

- Stirrer (max. 300 r/min.)
- Measuring cup & Mixing vessels
- Flat / wide brush / roller
- Laminate roller
- Scissors
- Miscellaneous (safety glasses, rubber gloves etc.)

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# Asplit VE 145 LAMINATE

## MIXING RATIO

### MIXING PRIMER

Pour **Asplit VE 145 SOLUTION** in a mixing vessel and add **Asplit HARDENER No. 1** at the specified mixing ratio. The stirring of the merged components should be at least 3 minutes and must result in a homogeneous mixture. Then add **Asplit VEL POWDER** in the recommended mixing ratio to this mixture and stirrer again. The stirring of the merged components should be at least 3 minutes and must result in a homogeneous mixture. Then pour the mixture into a clean pail and mix again briefly.

### MIXING Asplit VE 145 LAMINATE SOLUTION

Pour **Asplit VE 145 SOLUTION** in a mixing vessel and add **Asplit HARDENER No. 1** at the specified mixing ratio. The stirring of the merged components should be at least 3 minutes and must result in a homogeneous mixture.

Primer	KG per Litre	Parts by Weight	Parts by Volume
Asplit VE 145 SOLUTION	1.000	100	-
Asplit HARDENER No. 1	0.020	2	-
Asplit VEL POWDER	0.800	80	-

Asplit VE 145 LAMINATE	KG per Litre	Parts by Weight	Parts by Volume
Asplit VE 145 SOLUTION	1.000	100	-
Asplit HARDENER No. 1	0.020	2	-

Topcoat	KG per Litre	Parts by Weight	Parts by Volume
Asplit VE 145 SOLUTION CONDUCTIVE or Asplit VE 145 SOLUTION GREY	1.200	100	-
Asplit HARDENER No. 1	0.012	1	-

## CONSUMPTION

ayer	Product	Coverage [g/m <sup>2</sup> ]
Primer	Primer	ca. 700 - 1500
Laminate Layer	<b>Asplit VE 145 LAMINATE</b>	ca. 2700
	2 x Fibreglass mats 450 g/m <sup>2</sup>	ca. 1000
	1 x Surface veil 30 g/m <sup>2</sup>	ca. 33
1 <sup>st</sup> Topcoat	1. <b>Asplit VE 145</b> Topcoat	ca. 300
2 <sup>nd</sup> Topcoat	2. <b>Asplit VE 145</b> Topcoat	ca. 300

## POT LIFE (20°C)

Product	Time [min]
Primer	ca. 40
Laminate layer	ca. 45
Topcoat	ca. 60

## CURING (20°C)

Load Capacity	Time
Accessible	ca. 4 h
Chemical load	ca. 3 Days

## CLEANING

Clean all equipment with **Asplit UNIVERSAL CLEANER** immediately after use. The cleaning is done while the material is still not hardened.

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
Asplit HARDENER No. 1	0.1 kg	592 0455
Asplit HARDENER No. 1	0.4 kg	592 0450
Asplit VE 145 SOLUTION	20 kg	592 0716
Asplit VE SOLUTION CONDUCTIVE	5 kg	592 0740
Asplit VE SOLUTION CONDUCTIVE	20 kg	592 0730
Asplit VE SOLUTION GREY	5 kg	592 0714
Asplit VE SOLUTION GREY	20 kg	592 0713
Asplit VEL POWDER	25 kg	592 0720
Asplit UNIVERSAL CLEANER	8.4 kg	592 0900

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
Asplit HARDENER No. 1	≤ +20°C	12 Months
Asplit UNIVERSAL CLEANER	≤ +20°C	24 Months
Asplit VE 145 SOLUTION	≤ +20°C	6 Months
Asplit VE SOLUTION CONDUCTIVE	≤ +20°C	3 Months
Asplit VE SOLUTION GREY	≤ +20°C	3 Months
Asplit VEL POWDER	-	24 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

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# Asplit VE 145 LAMINATE

Technical Data	Standard	Unit	Value
Resistance to Ground	DIN 14879-6	$\Omega$	$\leq 1 \times 10^6$
Density (Mixture)	EN ISO 2811 (ASTM D1475)	g/cm <sup>3</sup>	1.10
Compressive Strength	EN ISO 604	N/mm <sup>2</sup>	60
Hardness Shore D	-	-	> 60
Max. Operating Temperature Dry	-	°C	+80

**Note:** The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## Asplit OC

### PRODUCT DESCRIPTION

**Asplit OC** is a black, three-component, cold curing synthetic resin mortar, based on a unsaturated polyester and vinyl ester resin with carbon fillers. The cured mortar is electrically conductive.

### FIELDS OF APPLICATION

**Asplit OC** is suitable for bedding and jointing of tiles, bricks and fittings made of ceramic or carbon for the production of chemical, thermal and mechanic resistant coatings and protective linings. **Asplit OC** is especially suitable for linings of neutralization and pickling lines which are exposed to high temperatures and aggressive chemicals.

### FEATURES

- High universal chemical resistance. Excellent chemical resistance, especially to oxidizing acids and acid mixtures and hydrofluoric acid as well as solvents.
- Cured mortar is electrically conductive
- Very good mechanical strength

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Components shall be designed and manufactured in accordance with EN 14879-1. Before start of brick lining work, the suitability of the surface preparation measures according EN 14879-1 must be checked and recorded.

### SURFACE PRE-TREATMENT

Steel and concrete surfaces, plastic sheets and other sealing layers (except on VE and UP based layers) must be primed with **Asplit VE 145 PRIMER** before application. The primer must be sanded with corundum (d = 0.7 – 1.2 mm) in a fresh state after the final coat. Unevenness should be compensated in the ground.

### C-STEEL

All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 must be achieved. The primer must be applied immediately after the blasting.

### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%.

### ENVIRONMENTAL CONDITIONS

The specified environmental conditions must be observed during surface preparation and brick lining and be tested and recorded according EN 14879-6.

Environmental Conditions	Value
Relative Humidity	≤ 80%
Surface Temperature	≥ +10°C up to +30°C
Application Temperature	+20°C ± 5°C recommended
Dew Point Distance	min. 3K

### APPLICATION

The execution of the brick lining work is only permitted, if the requirements of „Surface Pre-treatment“ and „Environmental Conditions“ are met.

**Asplit OC** is applied on the substrate or sealing layer by using a mortar trowel. Tiles and bricks must be free of voids, fully bedded and hollow jointed. If tiles have to be laid in alkaline mortar with open joints, make sure that the mortar is hardened, acidified and dried before applying **Asplit OC**. The joints have to be square with a depth of minimum 15 mm and a width of 5 - 8 mm. The edges of the tiles have to be free from mortar and the joints must be cleaned.

### WORK TOOLS

The following tools are essential for the application:

- Stirrer (max. 300 r/min.)
- Measuring cup & Mixing vessels
- Flat / wide brush
- Mortar trowel
- Grouting tool
- Miscellaneous (safety glasses, rubber gloves etc.)

### MIXING RATIO

Pour **Asplit OC SOLUTION** in a mixing vessel and add **Asplit OC POWDER** at the specified mixing ratio. The stirring of the merged components should be at least 3 minutes and must result in a homogeneous mixture.

Primer	KG per Litre	Parts by Weight	Parts by Volume
<b>Asplit VE 145 SOLUTION</b>	1.000	100	-
<b>Asplit HARDENER No. 1</b>	0.020	2	-

Asplit OC	KG per Litre	Parts by Weight	Parts by Volume
<b>Asplit OC SOLUTION</b>	0.450	100	1.00
<b>Asplit OC HARDENER</b>	0.025	5.6	0.16
<b>Asplit OC POWDER</b>	1.350	300	3.25

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# Asplit OC

## CONSUMPTION

Bedding and jointing (Bed Joint 5 mm / Cross Joint 5-7 mm)

Material	Sizes [mm]	Coverage [kg/m <sup>2</sup> ]
Tiles	240 x 115 x 20	ca. 15
Tiles	240 x 115 x 40	ca. 17
Bricks	240 x 115 x 65	ca. 20
Bricks	240 x 115 x 80	ca. 22

## POT LIFE (20°C)

Product	Time [min]
Asplit OC	ca. 40
Asplit VE 145 PRIMER	ca. 40

The pot life of **Asplit OC** can be set by addition of an inhibitor. Contact TIP TOP before adding the inhibitor.

## CURING (20°C)

Load Capacity	Time
Accessible	ca. 12 h
Chemical load	ca. 8 Days

## CLEANING

Clean all equipment with **Asplit UNIVERSAL CLEANER** immediately after use. The cleaning is done while the material is still not hardened.

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
Asplit HARDENER No. 1	0.1 kg	592 0455
Asplit HARDENER No. 1	0.4 kg	592 0450
Asplit OC HARDENER	0.5 kg	592 0670
Asplit OC INHIBITOR	1 kg	592 0680
Asplit OC SOLUTION	20 kg	592 0650
Asplit OC POWDER	25 kg	592 0660
Asplit VE 145 SOLUTION	20 kg	592 0716
Asplit UNIVERSAL CLEANER	8.4 kg	592 0900

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
Asplit HARDENER No. 1	≤ +20 °C	12 Months
Asplit OC HARDENER	≤ +20 °C	6 Months
Asplit OC INHIBITOR	≤ +20 °C	12 Months
Asplit OC SOLUTION	≤ +20 °C	6 Months
Asplit OC POWDER	-	12 Months
Asplit UNIVERSAL CLEANER	≤ +20 °C	24 Months
Asplit VE 145 SOLUTION	≤ +20 °C	6 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Resistance to Ground	DIN 14879-6	Ω	≤ 10 <sup>6</sup>
Density (Mixture)	EN ISO 2811 (ASTM D1475)	g/cm <sup>3</sup>	1.8
Compressive Strength	EN ISO 604	N/mm <sup>2</sup>	70
Adhesion Strength		N/mm <sup>2</sup>	> 3
Coefficient of Thermal Expansion	-	1/K	32 x 10 <sup>-6</sup>
Max. Operating Temperature Liquids	-	°C	+100

**Note:** The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## Asplit VEC

### PRODUCT DESCRIPTION

**Asplit VEC** is a black, three-component, cold curing synthetic resin mortar, based on a Novolac vinyl ester resin with carbon fillers.

### FIELDS OF APPLICATION

**Asplit VEC** is suitable for bedding and jointing of tiles, bricks and fittings, especially for chemical loads of concentrated acids, solvents and oxidizing medium. Furthermore, **Asplit VEC** has a good resistance against high temperatures and high mechanical stresses.

Main application fields are tiling and brick linings of components in the chemical industry, waste water and process water treatment, pulp and paper industry and pickling lines.

### FEATURES

- Very good mechanical resistance
- Very good chemical resistance, especially against oxidizing agents / acids (chlorine bleach, nitric acid) , alkalis and solvents
- Fast curing
- Electrically conductive

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Components shall be designed and manufactured in accordance with EN 14879-1. Before start of brick lining work, the suitability of the surface preparation measures according EN 14879-1 must be checked and recorded.

### SURFACE PRE-TREATMENT

Steel and concrete surfaces must be primed before application. The primer must be sanded in a fresh state after the final coat. Sealing layers, except VE or UP based layers, must be provided with a sanded primer before application of the synthetic mortar. Unevenness should be compensated in the ground.

#### C-STEEL

All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 must be achieved. The primer must be applied immediately after the blasting.

#### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%.

### ENVIRONMENTAL CONDITIONS

The specified environmental conditions must be observed during surface preparation and brick lining and be tested and recorded according EN 14879-6.

Environmental Conditions	Value
Relative Humidity	≤ 80%
Surface Temperature	≥ +10°C up to +30°C
Application Temperature	+20°C ± 5°C recommended
Dew Point Distance	min. 3K

### APPLICATION

The execution of the brick lining work is only permitted, if the requirements of „Surface Pre-treatment“ and „Environmental Conditions“ are met.

**Asplit VEC** is applied on the substrate or sealing layer by using a mortar trowel. Tiles and bricks must be free of voids, fully bedded and hollow jointed.

### WORK TOOLS

The following tools are essential for the application:

- Stirrer (max. 300 r/min.)
- Measuring cup & Mixing vessels
- Flat / wide brush
- Mortar trowel
- Grouting tool
- Miscellaneous (safety glasses, rubber gloves etc.)

### MIXING RATIO

Pour **Asplit VEC SOLUTION** in a mixing vessel and add **Asplit HARDENER No. 1** at the specified mixing ratio. The stirring of the merged components should be at least 3 minutes and must result in a homogeneous mixture. Then add **Asplit VEC POWDER** in the recommended mixing ratio to this mixture and stirrer again. The stirring of the merged components should be at least 3 minutes and must result in a homogeneous mixture.

Primer	KG per Litre	Parts by Weight	Parts by Volume
<b>Asplit VEC SOLUTION</b>	1.000	100	1.000
<b>Asplit HARDENER No. 1</b>	0.015	1.5	0.015

Asplit VEC	KG per Litre	Parts by Weight	Parts by Volume
<b>Asplit VEC SOLUTION</b>	0.450	100	1.000
<b>Asplit HARDENER No. 1</b>	0.007	1.5	0.015
<b>Asplit VEC POWDER</b>	0.810	180	2.200

### CONSUMPTION

Bedding and jointing (Bed Joint 5 mm / Cross Joint 5-7 mm)

Material	Sizes [mm]	Coverage [kg/m <sup>2</sup> ]
Tiles	240 x 115 x 20	ca. 9
Tiles	240 x 115 x 40	ca. 11
Bricks	240 x 115 x 65	ca. 14
Bricks	240 x 115 x 80	ca. 15

### POT LIFE (20°C)

Product	Time [min]
<b>Asplit VEC</b>	ca. 40

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# Asplit VEC

## CURING (20°C)

Load Capacity	Time
Accessible	ca. 24 h
Chemical load	ca. 3 Days

## CLEANING

Clean all equipment with **Asplit UNIVERSAL CLEANER** immediately after use. The cleaning is done while the material is still not hardened.

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
<b>Asplit HARDENER No. 1</b>	0.1 kg	592 0455
<b>Asplit HARDENER No. 1</b>	0.4 kg	592 0450
<b>Asplit VEC SOLUTION</b>	20 kg	592 1020
<b>Asplit VEC POWDER</b>	25 kg	592 1030
<b>Asplit UNIVERSAL CLEANER</b>	8.4 kg	592 0900

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
<b>Asplit HARDENER No. 1</b>	≤ +20°C	12 Months
<b>Asplit UNIVERSAL CLEANER</b>	≤ +20°C	24 Months
<b>Asplit VEC SOLUTION</b>	≤ +20°C	6 Months
<b>Asplit VEC POWDER</b>	-	24 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Resistance to Ground	DIN 14879-6	Ω	≤ 1 x 10 <sup>8</sup>
Flexural Strength	EN ISO 178	N/mm <sup>2</sup>	25
Density (Mixture)	EN ISO 2811 (ASTM D1475)	g/cm <sup>3</sup>	1.4
Compressive Strength	EN ISO 604	N/mm <sup>2</sup>	140
E-Modulus	-	N/mm <sup>2</sup>	0.6 x 10 <sup>4</sup>
Coefficient of Thermal Expansion	-	1/K	40 x 10 <sup>-6</sup>
Thermal Conductivity	-	W/(m · K)	1.0
Tensile Strength	EN ISO 527	N/mm <sup>2</sup>	10
Max. Operating Temperature Dry	-	°C	+120

**Note:** The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## Asplit VEL

### PRODUCT DESCRIPTION

**Asplit VEL** is an approx. 3 mm thick; glass mat reinforced lining system based on a Novolac vinyl ester resin. The coating system consists of a trowel applied primer, a laminate layer and optionally a top coat. The top coat is used optionally, if an electrical conductive or a grey surface is required.

### FIELDS OF APPLICATION

**Asplit VEL** is designed as an internal lining for sumps and collecting basins made of reinforced concrete, and it can also be used indoors and outdoors in liquid storage areas. Furthermore **Asplit VEL** is suitable as a flooring material where the traffic consists of vehicles with inflated or solid tyres, or with Polyurethane (Vulkollan) or polyamide wheels, mainly in galvanizing plants, pickling plants and HBV (manufacture of water polluting substances) plants where the floors are in contact with oxidizing media. The optional feature of the coating system which ensures the dissipation of static charges enables the storage of flammable liquids.

### FEATURES

- Temperature resistant up to +100°C on steel
- Excellent chemical resistance to acids, alkalis, solvents and especially oxidizing agents
- Crack-bridging properties. Can bridge cracks of  $\leq 0.25$  mm in concrete according EN 14879-3
- Electrically Conductive
- Drivable
- Excellent adhesion to concrete surfaces
- Very good mechanical properties

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Components to be coated shall be designed and manufactured in accordance with EN 14879-1. Before start of coating work, the suitability of the surface preparation measures according EN 14879-1 must be checked and recorded.

### SURFACE PRE-TREATMENT

#### C-STEEL

All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 must be achieved. The primer must be applied immediately after the blasting.

#### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%.

### ENVIRONMENTAL CONDITIONS

The specified environmental conditions must be observed during surface preparation and coating work and be tested and recorded according EN 14879.

Environmental Conditions	Value
Relative Humidity	$\leq 80\%$
Surface Temperature	$\geq +10^{\circ}\text{C}$ up to $+30^{\circ}\text{C}$
Application Temperature	$+20^{\circ}\text{C} \pm 5^{\circ}\text{C}$ recommended
Dew Point Distance	min. 3K

### APPLICATION

The execution of the coating work is only permitted, if the requirements of „Surface Pre-treatment“ and „Environmental Conditions“ are met.

**Asplit VEL PRIMER** is applied onto the prepared substrate by using a roller, mortar trowel or grout spreader. As the trowelled primer hardens, **Asplit VE** laminate solution is applied and the first layer of 450 g/m<sup>2</sup> glass mat is laid into the solution. It is then saturated with **Asplit VE** laminate solution and rolled on reasonably free from bubbles by using a roller (segmented roller). The glass mats need to be placed with approximately 5 cm overlapping onto each other.

Before the previous layer hardens, the second layer of 450 g/m<sup>2</sup> glass mat is placed, saturated with **Asplit VE** laminate solution and rolled on reasonably free from bubbles. The overlapping distance between the subsequent layers need to be minimum 50 cm. Finally, a 30 g/m<sup>2</sup> surface veil is applied onto the second glass mat, fresh in fresh and reasonably free from bubbles.

After hardening of the **Asplit VEL** two coats of grey VE-topcoat can be rolled on the top optionally.

To achieve a conductive top coat, self bonding copper tapes are bonded onto the hardened **Asplit VEL** and then the first coat of conductive topcoat is applied. Following the hardening of the 1st Topcoat (approx. 3 - 5 hours), 2nd coat of the conductive topcoat can be applied.

To improve the slip resistance of **Asplit VEL**, the fresh laminate coating can be sanded with silicon carbides (0.5mm; Consumption: 1.5 kg/m<sup>2</sup>).

### WORK TOOLS

The following tools are essential for the application:

- Stirrer (max. 300 r/min.)
- Measuring cup & Mixing vessels
- Flat / wide brush / roller
- Laminate roller
- Scissors
- Miscellaneous (safety glasses, rubber gloves etc.)

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# Asplit VEL

## MIXING RATIO

### MIXING PRIMER

Pour **Asplit VE SOLUTION** in a mixing vessel and add **Asplit HARDENER No. 1** at the specified mixing ratio. The stirring of the merged components should be at least 3 minutes and must result in a homogeneous mixture. Then add **Asplit VEL POWDER** in the recommended mixing ratio to this mixture and stirrer again. The stirring of the merged components should be at least 3 minutes and must result in a homogeneous mixture. Then pour the mixture into a clean pail and mix again briefly.

### MIXING Asplit VEL LAMINATE SOLUTION

Pour **Asplit VE SOLUTION** in a mixing vessel and add **Asplit HARDENER No. 1** at the specified mixing ratio. The stirring of the merged components should be at least 3 minutes and must result in a homogeneous mixture. Then add **Asplit VEL POWDER** in the recommended mixing ratio to this mixture and stirrer again. The stirring of the merged components should be at least 3 minutes and must result in a homogeneous mixture. Then pour the mixture into a clean pail and mix again briefly.

Primer	KG per Litre	Parts by Weight	Parts by Volume
Asplit VE SOLUTION	1.000	100	1.00
Asplit HARDENER No. 1	0.020	2	0.02
Asplit VEL POWDER	0.800	80	1.62

Asplit VEL	KG per Litre	Parts by Weight	Parts by Volume
Asplit VE SOLUTION	1.074	100	1.00
Asplit HARDENER No. 1	0.021	2	0.02

Topcoat	KG per Litre	Parts by Weight	Parts by Volume
Asplit VE SOLUTION CONDUCTIVE	1.250	100	1.00
Asplit HARDENER No. 1	0.012	1	0.01
Asplit VE SOLUTION GREY	1.120	100	1.00
Asplit HARDENER No. 1	0.010	1	0.01

## CONSUMPTION

Layer	Product	Coverage [g/m <sup>2</sup> ]
Primer	Primer	ca. 700 - 1500
Laminate Layer	Asplit VEL	ca. 2700
	2 x Fibreglass mats 450 g/m <sup>2</sup>	ca. 1000
	1 x Surface veil 30 g/m <sup>2</sup>	ca. 33
1 <sup>st</sup> Topcoat	Asplit VEL Topcoat	ca. 300
2 <sup>nd</sup> Topcoat	Asplit VEL Topcoat	ca. 300

## POT LIFE (20°C)

Product	Time [min]
Primer	ca. 40
Laminate layer	ca. 60
Topcoat	ca. 60

## CURING (20°C)

Load Capacity	Time
Accessible	ca. 4 h
Chemical load	ca. 3 Days

## CLEANING

Clean all equipment with **Asplit UNIVERSAL CLEANER** immediately after use. The cleaning is done while the material is still not hardened.

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
Asplit HARDENER No. 1	0.1 kg	592 0455
Asplit HARDENER No. 1	0.4 kg	592 0450
Asplit VE SOLUTION	5 kg	592 0710
Asplit VE SOLUTION	20 kg	592 0700
Asplit VE SOLUTION CONDUCTIVE	5 kg	592 0740
Asplit VE SOLUTION CONDUCTIVE	20 kg	592 0730
Asplit VE SOLUTION GREY	5 kg	592 0714
Asplit VE SOLUTION GREY	20 kg	592 0713
Asplit VEL POWDER	25 kg	592 0720
Asplit UNIVERSAL CLEANER	8.4 kg	592 0900

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
Asplit HARDENER No. 1	≤ +20°C	12 Months
Asplit UNIVERSAL CLEANER	≤ +20°C	24 Months
Asplit VE SOLUTION	≤ +20°C	6 Months
Asplit VE SOLUTION CONDUCTIVE	≤ +20°C	3 Months
Asplit VE SOLUTION GREY	≤ +20°C	3 Months
Asplit VEL POWDER	-	24 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

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# Asplit VEL

Technical Data	Standard	Unit	Value
Resistance to Ground	DIN 14879-6	Ω	≤ 1 x 10 <sup>6</sup>
Density (Mixture)	EN ISO 2811 (ASTM D1475)	g/cm <sup>3</sup>	1.4
Compressive Strength	EN ISO 604	N/mm <sup>2</sup>	60
Hardness Shore D	-	-	> 60
Max. Operating Temperature Dry	-	°C	+100

**Note:** The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## Asplit VEQ

### PRODUCT DESCRIPTION

**Asplit VEQ** is a two-component, cold curing synthetic resin mortar, based on a Novolac vinyl ester resin with mineral fillers.

### FIELDS OF APPLICATION

**Asplit VEQ** is suitable for bedding and jointing of tiles, bricks and fittings, especially for chemical loads of acids, solvents and oxidizing medium. Furthermore, **Asplit VEQ** has a good resistance against high temperatures and high mechanical stresses. Main application fields are tiling and brick linings of components in the chemical industry, waste water and process water treatment, pulp and paper industry and pickling lines.

### FEATURES

- Very good mechanical resistance
- Very good chemical resistance, especially against oxidizing media, as well as many organic compounds
- Fast curing

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Components shall be designed and manufactured in accordance with EN 14879-1. Before start of brick lining work, the suitability of the surface preparation measures according to EN 14879-1 must be checked and recorded.

### SURFACE PRE-TREATMENT

Steel and concrete surfaces must be primed before application. The primer must be sanded in a fresh state after the final coat. Sealing layers, except VE or UP based layers, must be provided with a sanded primer before application of the synthetic mortar. Unevenness should be compensated in the ground.

### C-STEEL

All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 must be achieved. The primer must be applied immediately after the blasting.

### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%.

### ENVIRONMENTAL CONDITIONS

The specified environmental conditions must be observed during surface preparation and brick lining and be tested and recorded according to EN 14879-6.

Environmental Conditions	Value
Relative Humidity	≤ 80%
Surface Temperature	≥ +10°C up to +30°C
Application Temperature	+20°C ± 5°C recommended
Dew Point Distance	min. 3K

### APPLICATION

The execution of the brick lining work is only permitted, if the requirements of „Surface Pre-treatment“ and „Environmental Conditions“ are met. **Asplit VEQ** is applied on the substrate or sealing layer by using a mortar trowel. Tiles and bricks must be free of voids, fully bedded and hollow jointed.

### WORK TOOLS

The following tools are essential for the application:

- Stirrer (max. 300 r/min.)
- Measuring cup & Mixing vessels
- Flat / wide brush
- Mortar trowel
- Grouting tool
- Miscellaneous (safety glasses, rubber gloves etc.)

### MIXING RATIO

Pour **Asplit VEQ SOLUTION** in a mixing vessel and add **Asplit VEQ POWDER** at the specified mixing ratio. The stirring of the merged components should be at least 3 minutes and must result in a homogeneous mixture.

Primer	KG per Litre	Parts by Weight	Parts by Volume
<b>Asplit VEQ SOLUTION</b>	1.000	100	1.000
<b>Asplit HARDENER No. 1</b>	0.020	2	0.020

Asplit VEQ	KG per Litre	Parts by Weight	Parts by Volume
<b>Asplit VEQ SOLUTION</b>	0.429	100	1.000
<b>Asplit VEQ POWDER</b>	1.371	320	2.450

### CONSUMPTION

Bedding and jointing (Bed Joint 5 mm / Cross Joint 5-7 mm)

Material	Sizes [mm]	Coverage [kg/m <sup>2</sup> ]
Tiles	240 x 115 x 20	ca. 15
Tiles	240 x 115 x 40	ca. 17
Bricks	240 x 115 x 65	ca. 20
Bricks	240 x 115 x 80	ca. 22

### POT LIFE (20°C)

Product	Time [min]
<b>Asplit VEQ</b>	ca. 40

### CURING (20°C)

Load Capacity	Time
Accessible	ca. 24 h
Chemical load	ca. 2 Days

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# Asplit VEQ

## CLEANING

Clean all equipment with **Asplit UNIVERSAL CLEANER** immediately after use. The cleaning is done while the material is still not hardened.

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
Asplit HARDENER No. 1	0.1 kg	592 0455
Asplit HARDENER No. 1	0.4 kg	592 0450
Asplit VEQ SOLUTION	20 kg	592 0350
Asplit VEQ POWDER	25 kg	592 0360
Asplit UNIVERSAL CLEANER	8.4 kg	592 0900

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
Asplit HARDENER No. 1	≤ +20 °C	12 Months
Asplit UNIVERSAL CLEANER	≤ +20 °C	24 Months
Asplit VEQ SOLUTION	≤ +20 °C	3 Months
Asplit VEQ POWDER	-	24 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Resistance to Ground	DIN 14879-6	Ω	> 10 <sup>9</sup>
Density (Mixture)	EN ISO 2811 (ASTM D1475)	g/cm <sup>3</sup>	1.8
Compressive Strength	EN ISO 604	N/mm <sup>2</sup>	80
Coefficient of Thermal Expansion	-	1/K	35 x 10 <sup>-6</sup>
Max. Operating Temperature Liquids	-	°C	+150

**Note:** The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## Asplit VP 788

### PRODUCT DESCRIPTION

**Asplit VP 788** is a black, two-component, cold curing synthetic resin mortar, based on a modified furan resin with carbon fillers.

### FIELDS OF APPLICATION

**Asplit VP 788** is suitable for bedding and jointing of tiles, bricks and fittings made of ceramic or carbon for the production of chemical, thermal and mechanic resistant coatings and protective linings.

### FEATURES

- The hardened mortar is electric conductive
- High chemical resistance against acids, alkalis and certain solvents
- High temperature resistance
- Lower shrinkage than other furan resins
- Low odour
- Long shelf life even at higher temperatures, therefore also suitable in tropic regions

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Components shall be designed and manufactured in accordance with EN 14879-1. Before start of brick lining work, the suitability of the surface preparation measures according EN 14879-1 must be checked and recorded.

### SURFACE PRE-TREATMENT

Steel and concrete surfaces must be primed with **Asplit 876 PRIMER** before application. The primer must be sanded in a fresh state after the final coat. If a sealing layer of rubber or coating is present, **Asplit VP 788** can be directly applied on the sealing layer. Unevenness should be compensated in the ground.

### C-STEEL

All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 must be achieved. The primer must be applied immediately after the blasting.

### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%.

### ENVIRONMENTAL CONDITIONS

The specified environmental conditions must be observed during surface preparation and brick lining and be tested and recorded according EN 14879-6.

Environmental Conditions	Value
Relative Humidity	≤ 80%
Surface Temperature	≥ +10°C up to +30°C
Application Temperature	+20°C ± 5°C recommended
Dew Point Distance	min. 3K

### APPLICATION

The execution of the brick lining work is only permitted, if the requirements of „Surface Pre-treatment“ and „Environmental Conditions“ are met.

**Asplit VP 788** is applied on the substrate or sealing layer by using a mortar trowel. Tiles and bricks must be free of voids, fully bedded and hollow jointed. If tiles have to be laid in alkaline mortar with open joints, make sure that the mortar is hardened, acidified and dried before applying **Asplit VP 788**.

The joints have to be square with a depth of minimum 15 mm and a width of 5 - 8 mm. The edges of the tiles have to be free from mortar and the joints must be cleaned.

### WORK TOOLS

The following tools are essential for the application:

- Stirrer (max. 300 r/min.)
- Measuring cup & Mixing vessels
- Flat / wide brush
- Mortar trowel
- Grouting tool
- Miscellaneous (safety glasses, rubber gloves etc.)

### MIXING RATIO

Pour **Asplit VP 788 SOLUTION** in a mixing vessel and add **Asplit VP 788 POWDER** at the specified mixing ratio. The stirring of the merged components should be at least 3 minutes and must result in a homogeneous mixture.

Primer	KG per Litre	Parts by Weight	Parts by Volume
<b>Asplit 876 SOLUTION</b>	0.815	100	0.87
<b>Asplit 876 HARDENER</b>	0.325	40	0.36

Asplit VP 788	KG per Litre	Parts by Weight	Parts by Volume
<b>Asplit VP 788 SOLUTION</b>	0.600	100	1.00
<b>Asplit VP 788 POWDER</b>	1.000	167	3.03

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# Asplit VP 788

## CONSUMPTION

Bedding and jointing (Bed Joint 5 mm / Cross Joint 5-7 mm)

Material	Sizes [mm]	Coverage [kg/m <sup>2</sup> ]
Tiles	240 x 115 x 20	ca. 12
Tiles	240 x 115 x 40	ca. 15
Bricks	240 x 115 x 65	ca. 18
Bricks	240 x 115 x 80	ca. 20

## POT LIFE (20°C)

Product	Time [min]
Asplit VP 788	ca. 60

## CURING (20°C)

Load Capacity	Time
Accessible	ca. 24 h
Chemical load	ca. 2 Days

## COMMISSIONING

Brick linings with **Asplit VP 788** should be taken in operation at earliest 1 week after completion.

## CLEANING

Clean all equipment with **Asplit UNIVERSAL CLEANER** immediately after use. The cleaning is done while the material is still not hardened.

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

Technical Data	Standard	Unit	Value
Resistance to Ground	DIN 14879-6	Ω	≤ 1 x 10 <sup>8</sup>
Flexural Strength	EN ISO 178	N/mm <sup>2</sup>	16
Density (Mixture)	EN ISO 2811 (ASTM D1475)	g/cm <sup>3</sup>	1.6
Compressive Strength	EN ISO 604	N/mm <sup>2</sup>	52
Tensile Strength	EN ISO 527	N/mm <sup>2</sup>	5
Max. Operating Temperature Dry	-	°C	+230

**Note:** The indicated temperatures are dependent on the present load and may vary

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
Asplit 876 SOLUTION	20 kg	592 0605
Asplit 876 HARDENER	8 kg	592 0615
Asplit VP 788 SOLUTION	20 kg	592 0080
Asplit VP 788 SOLUTION	50 kg	592 0081
Asplit VP 788 POWDER	25 kg	592 0070
Asplit UNIVERSAL CLEANER	8.4 kg	592 0900

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
Asplit 876 HARDENER	≤ +25°C	24 Months
Asplit 876 SOLUTION	≤ +25°C	24 Months
Asplit UNIVERSAL CLEANER	≤ +20°C	24 Months
Asplit VP 788 SOLUTION	≤ +30°C	24 Months
Asplit VP 788 POWDER	-	24 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

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# DESCRIPTION

## ESKANOL

Product	Product Description
ESKANOL E COATING	<b>ESKANOL E COATING</b> is a two-component, solvent-free, and an epoxy resin based coating which doesn't contain any fillers or pigments. Even at low temperatures, <b>ESKANOL E COATING</b> penetrates very well into the fine and small pores and capillaries of the substrate.
ESKANOL E PRIMER	<b>ESKANOL E PRIMER</b> is a two-component, solvent-free primer material which is not filled and pigmented and which is based on an epoxy resin. Even at low temperatures, <b>ESKANOL E PRIMER</b> penetrates very well into the fine and small pores and capillaries of the substrate.
ESKANOL EF	<b>ESKANOL EF</b> is a solvent-free, coloured and pre-filled coating material based on a two-component epoxy resin. <b>ESKANOL EF</b> is capable of bridging cracks up to 0.2 mm in accordance with DIBt (German Institute for Construction Technology) guidelines.
ESKANOL ET	<b>ESKANOL ET</b> is a two-component, solvent-free, coloured and pre-filled levelling material based on an epoxy resin.
ESKANOL PO MORTAR	<b>ESKANOL PO MORTAR</b> is a three-component, cold curing synthetic resin mortar based on vinyl ester resin with mineral fillers.
ESKANOL PU 23	<b>ESKANOL PU 23</b> is a two-component, solvent containing, coloured, highly opaque, and semi-gloss (when cured) spread coating based on acrylic polyurethane resin for applications on concrete-bound, reactive resin bound, or on asphalt-bound substrates.
ESKANOL PU 26	<b>ESKANOL PU 26</b> is a two-component, solvent-free, coloured, and pre-filled trowel coating based on a polyurethane resin for applications on mineral, reactive resin bound, and on asphalt-bound substrates.
ESKANOL FU MORTAR	<b>ESKANOL FU MORTAR</b> is a three-component, cold curing synthetic resin mortar, based on a furan resin with mineral fillers.
ESKANOL FU-L MORTAR	<b>ESKANOL FU-L MORTAR</b> is a three-component, cold curing synthetic resin mortar, based on a furan resin with carbon fillers. The cured, silicate-free resin mortar is electrically dissipating.
ESKANOL FU-SL MORTAR	<b>ESKANOL FU-SL MORTAR</b> is three-component, cold curing synthetic resin mortar, based on a furan resin with carbon fillers. The cured, silicate-free resin mortar is electrically dissipating.
ESKANOL VE MORTAR	<b>ESKANOL VE MORTAR</b> is a three-component, cold curing synthetic resin mortar based on vinyl ester resin with mineral fillers.
ESKANOL VE-L MORTAR	<b>ESKANOL VE-L MORTAR</b> is a three-component, cold curing synthetic resin mortar based on vinyl ester resin with carbon fillers.
ESKANOL VE-GFK	<b>ESKANOL VE-GFK</b> is a fibreglass mat reinforced; laminate lining based on vinyl ester resin. Due to the excellent mechanical properties, <b>ESKANOL VE-GFK</b> can cover cracks up to 0.3 mm according to DIBt (German Institute for Construction Technology) guidelines.
ESKANOL VE/L	<b>ESKANOL VE/L</b> is a fibreglass mat reinforced, conductive laminate lining based on vinyl ester resin.
ESKANOL VE TOPCOAT	<b>ESKANOL VE TOPCOAT</b> is a two-component polymer coating based on an Bisphenol-A vinyl ester resin with mineral fillers.

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# PHYSICAL DATA ESKANOL

Product	Resistance to Ground	Density	Compressive Strength	Adhesion Strength concrete	Adhesion Strength Ceramic	Max. Temperature Wet	Viscosity	Coefficient of Thermal Expansion
	DIN 14879-6 [2]	EN ISO 1183-1 [g/cm <sup>3</sup> ]	EN ISO 604 [N/mm <sup>2</sup> ]	EN ISO 4624 [N/mm]	EN ISO 4624 [N/mm]	-	-	ISO 11359-2 [1/K]
ESKANOL E COATING	---	1.12	---	> Concrete break	---	---	ESKANOL E SOLUTION: ca. 750 – 1000 ESKANOL E HARDENER: ca. 400 - 550 Mix Viscosity: ca. 600	---
ESKANOL E PRIMER	---	1.12	---	> Concrete break	---	---	ESKANOL E SOLUTION: ca. 750 – 1000 ESKANOL E HARDENER: ca. 400 - 550 Mix Viscosity: ca. 600	---
ESKANOL EF	---	1.50	120	> Concrete break	---	---	ESKANOL EF SOLUTION: 580 / ESKANOL EF HARDENER: 750 / ESKANOL E 450H HARDENER: 1830	---
ESKANOL ET	---	1.73	120	> Concrete break	---	---	ESKANOL ET COMP. A: 2000 – 3000 / ESKANOL ET COMP. B: 150 - 200	---
ESKANOL PO MORTAR	---	1.95	85	---	≥ 2.5	+100	---	35 x 10 <sup>-6</sup>
ESKANOL PU 23	---	1.25	---	---	---	---	ESKANOL PU 23 COMP. A: 850 – 1200 / ESKANOL PU 23 COMP. B: 90 - 130 Mix Viscosity: 1200	---
ESKANOL PU 26	---	1.48	---	---	---	---	ESKANOL PU 26 COMP. A: 1500 – 2300 / ESKANOL PU 26 COMP. B: 150 - 200 Mix Viscosity: 1200	---
ESKANOL FU MORTAR	---	2.3	80	---	≥ 3.5	+170	---	21 x 10 <sup>-6</sup>
ESKANOL FU-L MORTAR	≤ 10 <sup>6</sup>	2.1	70	---	≥ 3.5	+170	---	20 x 10 <sup>-6</sup>
ESKANOL FU-SL MORTAR	≤ 10 <sup>6</sup>	2.1	70	---	≥ 3.5	+170	---	20 x 10 <sup>-6</sup>
ESKANOL VE MORTAR	---	1.95	85	---	≥ 2.5	+130	---	35 x 10 <sup>-6</sup>
ESKANOL VE-L MORTAR	≤ 10 <sup>6</sup>	1.9	85	---	≥ 2.5	+130	---	35 x 10 <sup>-6</sup>

# PHYSICAL DATA ESKANOL

Product	Resistance to Ground	Density	Compressive Strength	Adhesion Strength concrete	Adhesion Strength Ceramic	Max. Temperature Wet	Viscosity	Coefficient of Thermal Expansion
	DIN 14879-6 [Ω]	EN ISO 1183-1 [g/cm <sup>3</sup> ]	EN ISO 604 [N/mm <sup>2</sup> ]	EN ISO 4624 [N/mm]	EN ISO 4624 [N/mm]	-	-	ISO 11359-2
ESKANOL VE-GFK	≤ 10 <sup>6</sup>	1.11	63 - 68	1.5	---	+80	ca. 300	[1/K] 27 - 30 x 10 <sup>-6</sup>
ESKANOL VE/L	≤ 10 <sup>6</sup>	1.11	63 - 68	1.5	---	+80	ca. 300	27 - 30 x 10 <sup>-6</sup>
ESKANOL VE TOPCOAT	---	1.1	---	---	---	+60	---	25-30 x 10 <sup>-6</sup>

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SKO Säureschutz und Kunststoffbau GmbH

ESKANOL  
PHYSIKAL DATA

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# PRODUCT INFORMATION

## ESKANOL E COATING

### PRODUCT DESCRIPTION

**ESKANOL E COATING** is a two-component, solvent-free, and an epoxy resin based coating which doesn't contain any fillers or pigments. Even at low temperatures, **ESKANOL E COATING** penetrates very well into the fine and small pores and capillaries of the substrate.

### COATING LAYERS CONSUMPTION

The two-component **ESKANOL E COATING** consists of the **ESKANOL E SOLUTION** and the **ESKANOL E HARDENER**.

### FIELDS OF APPLICATION

**ESKANOL E COATING** is mainly applied as a roller and brush coating.

### FEATURES

- Outstanding adhesion onto tiles, onto metallic substrates like aluminium, steel, zinc, brass etc, onto existing coatings as well as various plastics
- Formulated with moist acceptable fillers and mortar systems
- Low viscosity
- Strong capillary activity

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Components to be coated shall be designed and manufactured in accordance with EN 14879-1. Before start of coating work, the suitability of the surface preparation measures according EN 14879-1 must be checked and recorded.

### SURFACE PRE-TREATMENT

#### C-STEEL

All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 must be achieved. The primer must be applied immediately after the blasting.

#### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%.

### ENVIRONMENTAL CONDITIONS

The specified environmental conditions must be observed during surface preparation and brick lining and be tested and recorded according EN 14879-3.

Environmental Conditions	Value
Relative Humidity	≤ 80%
Application Temperature	+10°C up to +30°C
Dew Point Distance	min. 3K

### APPLICATION

The execution of the coating work is only permitted, if the requirements of „Surface Pre-treatment“ and „Environmental Conditions“ are met.

**ESKANOL E COATING** is evenly rolled onto the substrate with crosswise strokes using a short or medium pile roller. For larger areas, make sure that the working times of the material are followed to minimize colour differences and application marks. The application should be performed at a constant or gradually decreasing temperature in order to avoid blistering due to the expansion of air in the substrate. Good ventilation after the application and throughout the course of curing has to be ensured. The surface must be protected from direct contact with water during the entire curing phase.

### WORK TOOLS

The following tools are essential for the application:

- Stirrer (max. 300 r/min.)
- Measuring cup & Mixing vessels
- Roller
- Miscellaneous (safety glasses, rubber gloves etc.)

### MIXING RATIO

Add the whole quantity of **ESKANOL E HARDENER** into the **ESKANOL E SOLUTION** and stir the mixture with a low-speed agitator thoroughly (recommendation: twin shaft stirrers agitating in opposite directions). Make sure that both two components are mixed thoroughly. It is important that stirring reaches the wall and bottom of the container as well, in order to achieve a uniform mixture. Then pour the mixture into another container and mix further. The final composition of the mixture must be uniform and free of flow marks prior to application.

Coating	Parts by Weight	Parts by Volume
<b>ESKANOL E HARDENER</b>	50	1.00
<b>ESKANOL E SOLUTION</b>	100	2.00

### CONSUMPTION PER COAT

Product	Substrate	Coverage [g/m <sup>2</sup> ]
<b>ESKANOL E COATING</b>	Smooth	ca. 250 - 400
<b>ESKANOL E COATING</b>	Rough	ca. 300 - 500

### POT LIFE / WORKING TIME [min]

Product	15°C	20°C	30°C
<b>ESKANOL E COATING</b>	ca. 80 - 100	ca. 40 - 50	ca. 20 - 25

### RECOAT TIME (20°C)

Product	Min. [h]	Max. [Days]
<b>ESKANOL E COATING</b>	ca. 12 -16	ca. 24

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# ESKANOL E COATING

## CURING (at 50% relative humidity)

Product	10 °C	20°C	30°C
Mechanical load	ca. 10 Days	ca. 7 Days	ca. 3 Days

## CLEANING

Clean all equipment with **ESKANOL CLEANER** immediately after use.

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
ESKANOL E SOLUTION	25 kg	---
ESKANOL E HARDENER	12.5 kg	---
ESKANOL CLEANER	10 kg	---
ESKANOL CLEANER	25 kg	---

Technical Data	Unit	Value
Density	g/cm <sup>3</sup>	1.12
Hardness Shore D	-	78 - 84
Min. Adhesion Strength	N/mm <sup>2</sup>	> Concrete break
Colour	-	RAL 7032. Further colours on request
Solid Content	%	100
Viscosity	mPa·s	<b>ESKANOL E SOLUTION:</b> ca. 750 – 1000 <b>ESKANOL E HARDENER:</b> ca. 400 - 550 Mix Viscosity: ca. 600

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
ESKANOL E HARDENER	5 - 20°C	12 Months
ESKANOL E SOLUTION	5 - 20°C	12 Months
ESKANOL CLEANER	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Information given in the fact sheet above corresponds to the current knowledge available to us regarding our products at the time of its drafting and is intended as a guideline for informational purposes. However, because of the multiple possibilities regarding possible applications, processing and on site conditions, any information given in the fact sheet above is not legally binding, in particular, without being limited to, such information shall not be interpreted as a warranty of merchantability or of fitness for a particular purpose. Customer therefore is advised to conduct its own testing or make an inquiry with our technical department before ordering. We reserve the right to change the product at any time, in particular, without being limited to, minor changes because of advancements in technology. If by way of exception, the information given in the fact sheet above is incorporated by reference into any contract concluded with us under German Law, such information, shall only be interpreted as determining the specific requirements of the contractual products as set out in § 434 BGB (German Civil Code) and shall not be interpreted as constituting a guarantee of condition.

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# PRODUCT INFORMATION

## ESKANOL E PRIMER

### PRODUCT DESCRIPTION

**ESKANOL E PRIMER** is a two-component, solvent-free primer material which is not filled and pigmented and which is based on an epoxy resin.

Even at low temperatures, **ESKANOL E PRIMER** penetrates very well into the fine and small pores and capillaries of the substrate.

### COATING LAYERS CONSUMPTION

The two-component **ESKANOL E PRIMER** consists of **ESKANOL E SOLUTION** and the **ESKANOL E HARDENER**.

### FIELDS OF APPLICATION

**ESKANOL E PRIMER** is mainly used as the primer layer under the solvent-free coating systems.

### FEATURES

- Excellent adhesion on tiles, on metallic substrates such as aluminium, steel, zinc, brass etc, as well as on old coatings and various plastics
- Formulated with moist acceptable fillers and mortar systems
- Low viscosity
- Strong capillary activity

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Components to be coated shall be designed and manufactured in accordance with EN 14879-1. Before start of coating work, the suitability of the surface preparation measures according EN 14879-1 must be checked and recorded.

### SURFACE PRE-TREATMENT

#### C-STEEL

All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 must be achieved. The primer must be applied immediately after the blasting.

#### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%.

### ENVIRONMENTAL CONDITIONS

The specified environmental conditions must be observed during surface preparation and brick lining and be tested and recorded according EN 14879-3.

Environmental Conditions	Value
Relative Humidity	≤ 80%
Application Temperature	+10°C up to +30°C
Dew Point Distance	min. 3K

### APPLICATION

The execution of the coating work is only permitted, if the requirements of „Surface Pre-treatment“ and „Environmental Conditions“ are met.

The **ESKANOL E PRIMER** is spread onto the substrate with a rubber grout spreader and is evenly rolled out with cross-wise strokes using a short or medium pile roller.

For larger areas, make sure that the working times of the material are followed to minimize colour differences and application marks. The application should be performed at a constant or gradually decreasing temperature in order to avoid blistering due to the expansion of air in the substrate. Good ventilation after the application and throughout the course of curing has to be ensured. The surface must be

### WORK TOOLS

The following tools are essential for the application:

- Stirrer (max. 300 r/min.)
- Measuring cup & Mixing vessels
- Roller
- Miscellaneous (safety glasses, rubber gloves etc.)

### MIXING RATIO

Add the whole quantity of **ESKANOL EF HARDENER** into the **ESKANOL EF SOLUTION** and stir the mixture with a low-speed agitator thoroughly (recommendation: twin shaft stirrers agitating in opposite directions). Make sure that both two components are mixed thoroughly. It is important that stirring reaches the wall and bottom of the container as well, in order to achieve a uniform mixture. Then pour the mixture into another container and mix further. The final composition of the mixture must be uniform and free of flow marks prior to application.

Primer	Parts by Weight	Parts by Volume
<b>ESKANOL E HARDENER</b>	50	1.00
<b>ESKANOL E SOLUTION</b>	100	2.00

### CONSUMPTION PER COAT

Product	Substrate	Coverage [g/m <sup>2</sup> ]
<b>ESKANOL E PRIMER</b>	Smooth	ca. 250 - 400
<b>ESKANOL E PRIMER</b>	Rough	ca. 300 - 500

### POT LIFE / WORKING TIME [min]

Product	15°C	20°C	30°C
<b>ESKANOL E PRIMER</b>	ca. 80 - 100	ca. 40 - 50	ca. 20 - 25

### RECOAT TIME (20°C)

Product	Min. [h]	Max. [Days]
<b>ESKANOL E PRIMER</b>	ca. 12 -16	ca. 24

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# ESKANOL E PRIMER

## CURING (at 50% relative humidity)

Product	10 °C	20°C	30°C
Mechanical load	ca. 10 Days	ca. 7 Days	ca. 3 Days

## CLEANING

Clean all equipment with **ESKANOL CLEANER** immediately after use.

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
ESKANOL E SOLUTION	25 kg	---
ESKANOL E HARDENER	12.5 kg	---
ESKANOL CLEANER	10 kg	---
ESKANOL CLEANER	25 kg	---

Technical Data	Unit	Value
Density	g/cm <sup>3</sup>	1.12
Hardness Shore D	-	78 - 84
Min. Adhesion Strength	N/mm <sup>2</sup>	> Concrete break
Colour	-	RAL 7032. Further colours on request
Solid Content	%	100
Viscosity	mPa·s	<b>ESKANOL E SOLUTION:</b> ca. 750 – 1000 <b>ESKANOL E HARDENER:</b> ca. 400 - 550 Mix Viscosity: ca. 600

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
ESKANOL E HARDENER	5 - 20°C	12 Months
ESKANOL E SOLUTION	5 - 20°C	12 Months
ESKANOL CLEANER	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

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# PRODUCT INFORMATION

## ESKANOL EF

### PRODUCT DESCRIPTION

**ESKANOL EF** is a solvent-free, coloured and pre-filled coating material based on a two-component epoxy resin. **ESKANOL EF** is capable of bridging cracks up to 0.2 mm in accordance with DIBt (German Institute for Construction Technology) guidelines.

### COATING LAYERS CONSUMPTION

**ESKANOL EF** consists of the two-component primer **ESKANOL EF PRIMER** and the two-component coating **ESKANOL EF**. Depending on the application, the overall dry film thickness is approximately 2 - 3 mm.

### FIELDS OF APPLICATION

**ESKANOL EF** is used as an inner liner for industrial and commercial equipments with very high chemical and mechanical stress. Main fields of applications include electroplating plants, solvent storages, paint manufacturing plants and other chemical plants. The outdoor use is also possible, but the conditions need to be examined carefully and the suitability needs to be approved in advance. A slip-proof coating, fulfilling the requirements of the relevant professional association can be formed with the use of aggregates. The product is also suitable for use in continuously wet areas.

### APPROVALS

**ESKANOL EF** is approved (**Z-59.12-46**) by the German Institute of Construction Technology (DIBt) for sumps, collection pits and surfaces made of concrete.

### FEATURES

- Glossy surface
- Can be easily decontaminated
- Easy to clean
- High toughness and resilience properties
- High abrasion resistance
- Good chemical resistance against sea and waste water, alkalis, dilute acids, mineral oils, lubricants and fuels, as well as salt solutions to a variety of solvents

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Components to be coated shall be designed and manufactured in accordance with EN 14879-1. Before start of coating work, the suitability of the surface preparation measures according EN 14879-1 must be checked and recorded.

### SURFACE PRE-TREATMENT

Concrete surfaces must be covered with a suitable primer and if necessary with an additional top coat prior to application. Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup>. The residual moisture in the concrete shall not exceed 4% when using **ESKANOL EF PRIMER**. At a residual moisture of >4% and ≤10% **ESKANOL E HARDENER 450H PRIMER** must be used.

A mechanical treatment by abrasive blasting, high-pressure water blasting or shot blasting is recommended. After milling, flame cleaning or bush hammering the concrete surface, an abrasive blasting is also required.

### ENVIRONMENTAL CONDITIONS

The specified environmental conditions must be observed during surface preparation and brick lining and be tested and recorded according EN 14879-3.

Environmental Conditions	Value
Relative Humidity	≤ 80%
Application Temperature	+10°C up to +30°C
Dew Point Distance	min. 3K

### APPLICATION

The execution of the coating work is only permitted, if the requirements of „Surface Pre-treatment“ and „Environmental Conditions“ are met.

**ESKANOL EF** is poured onto the properly prepared substrate and evenly spread onto the ground with a grout spreader - preferably with a triangular notched one - or with a trowel. If necessary, the coating can be vented with a spiked roller. In case of a faulty texture on the substrate, the trapped air beneath the coating has to be vented.

For larger areas, make sure that the working times of the material are followed to minimize colour differences and application marks. The application should be performed at a constant or gradually decreasing temperature in order to avoid blistering due to the expansion of air in the substrate. Good ventilation after the application and throughout the course of curing has to be ensured. The surface must be protected from direct contact with water during the entire curing phase.

### WORK TOOLS

The following tools are essential for the application:

- Stirrer (max. 300 r/min.)
- Measuring cup & Mixing vessels
- Grout spreader
- Smoothing trowel
- Miscellaneous (safety glasses, rubber gloves etc.)

### MIXING RATIO

Add the whole quantity of **ESKANOL EF HARDENER** into the **ESKANOL EF SOLUTION** and stir the mixture with a low-speed agitator thoroughly (recommendation: twin shaft stirrers agitating in opposite directions). Then add the **ESKANOL PO POWDER** with the specified mixing ratio and stir the mixture again. Make sure that all components are mixed thoroughly. It is important that stirring reaches the wall and bottom of the container as well, in order to achieve a uniform mixture. Then pour the mixture into another container and mix further. The final composition of the mixture must be uniform and free of flow marks prior to application.

Primer	Parts by Weight	Parts by Volume
<b>ESKANOL EF PRIMER</b>	100	2.00
<b>ESKANOL EF HARDENER</b>	55	1.20
<b>ESKANOL EF PRIMER</b>	100	2.00
<b>ESKANOL E 450H HARDENER</b>	60	1.20

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# ESKANOL EF

Coating	Parts by Weight	Parts by Volume
ESKANOL EF SOLUTION	100	2.00
ESKANOL EF HARDENER	55	1.20
ESKANOL PO POWDER	230	3.00

## CONSUMPTION PER COAT

Product	Thickness [mm]	Coverage [g/m <sup>2</sup> ]
ESKANOL EF PRIMER	ca. 0.20	ca. 200
ESKANOL E HARDENER 450H PRIMER	ca. 0.20	ca. 200 - 300
ESKANOL EF	ca. 2.10	ca. 3200

## POT LIFE / WORKING TIME [min]

Product	20°C
ESKANOL EF	ca. 60 min

## RECOAT TIME (20°C)

Product	Min. [h]	Max. [Days]
ESKANOL EF	ca. 6 -10	ca. 24

## CURING (at 50% relative humidity)

Product	Time	Curing
ESKANOL EF	ca. 12 h	Accessible
ESKANOL EF	ca. 24 h	Chemical load
ESKANOL EF PRIMER	ca. 3 h	Accessible
ESKANOL E HARDENER 450H PRIMER	ca. 3 h	Accessible

## CLEANING

Clean all equipment with **ESKANOL CLEANER** immediately after use.

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
ESKANOL EF HARDENER	15 kg	
ESKANOL EF PRIMER	25 kg	
ESKANOL EF SOLUTION	25 kg	
ESKANOL E 450H HARDENER	15 kg	
ESKANOL PO POWDER	25 kg	
ESKANOL CLEANER	10 kg	
ESKANOL CLEANER	25 kg	

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
ESKANOL E 450H HARDENER	5 - 20°C	12 Months
ESKANOL EF PRIMER	5 - 20°C	12 Months
ESKANOL EF HARDENER	5 - 20°C	12 Months
ESKANOL EF SOLUTION	5 - 20°C	12 Months
ESKANOL PO POWDER	-	Unlimited
ESKANOL CLEANER	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Unit	Value
Bending Strength	N/mm <sup>2</sup>	45
Density	g/cm <sup>3</sup>	1.50
Compressive Strength	N/mm <sup>2</sup>	120
Adhesion Strength	N/mm <sup>2</sup>	> Concrete break
Colour	-	RAL 7032. Further colours on request
Solid Content	%	100
Viscosity	mPa·s	<b>ESKANOL EF SOLUTION: 580 /</b> <b>ESKANOL EF HARDENER: 750 /</b> <b>ESKANOL E 450H HARDENER: 1830</b>

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# PRODUCT INFORMATION

## ESKANOL ET

### PRODUCT DESCRIPTION

**ESKANOL ET** is a two-component, solvent-free, coloured and pre-filled levelling material based on an epoxy resin.

### COATING LAYERS CONSUMPTION

**ESKANOL ET** consists of the two-component primer **ESKANOL ET PRIMER** and the two-component **ESKANOL ET** self-levelling coating. Depending on the application, the overall dry film thickness is approximately 1-3 mm.

### FIELDS OF APPLICATION

**ESKANOL ET** is used as an inner liner for industrial and commercial equipments with very high chemical and mechanical stress. Main fields of applications include electroplating plants, solvent storages, paint manufacturing plants and other chemical plants. The outdoor use is also possible, but the conditions need to be examined carefully and the suitability needs to be approved in advance.

A slip-proof coating, fulfilling the requirements of the relevant professional association can be formed with the use of aggregates. The product is also suitable for use in continuously wet areas.

### FEATURES

- Glossy surface
- Can be easily decontaminated
- High abrasion resistance
- High mechanical strength
- Good chemical resistance against sea and waste water, dilute acids, mineral oils, lubricants and fuels, as well as a wide range of solvents

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Components to be coated shall be designed and manufactured in accordance with EN 14879-1. Before start of coating work, the suitability of the surface preparation measures according EN 14879-1 must be checked and recorded.

### SURFACE PRE-TREATMENT

Concrete surfaces must be covered with a suitable primer and if necessary with an additional top coat prior to application. Any unevenness on the surface needs to be flattened.

#### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup>. The residual moisture in the concrete shall not exceed 4%.

A mechanical treatment by abrasive blasting, high-pressure water blasting or shot blasting is recommended. After milling, flame cleaning or bush hammering the concrete surface, an abrasive blasting is also required.

### ENVIRONMENTAL CONDITIONS

The specified environmental conditions must be observed during surface preparation and coating work and be tested and recorded according EN 14879-3.

Environmental Conditions	Value
Relative Humidity	≤ 80%
Application Temperature	+10°C up to +30°C
Dew Point Distance	min. 3K

### APPLICATION

The execution of the coating work is only permitted, if the requirements of „Surface Pre-treatment“ and „Environmental Conditions“ are met.

**ESKANOL ET** is poured onto the properly prepared substrate and evenly spread onto the ground with a grout spreader - preferably with a triangular notched one - or with a trowel. If necessary, the coating can be vented with a spiked roller. In case of a faulty texture on the substrate, the trapped air beneath the coating has to be vented.

For larger areas, make sure that the working times of the material are followed to minimize colour differences and application marks. The application should be performed at a constant or gradually decreasing temperature in order to avoid blistering due to the expansion of air in the substrate. Good ventilation after the application and throughout the course of curing has to be ensured. The surface must be protected from direct contact with water during the entire curing phase.

### WORK TOOLS

The following tools are essential for the application:

- Stirrer (max. 300 r/min.)
- Measuring cup & Mixing vessels
- Grout spreader
- Smoothing trowel
- Miscellaneous (safety glasses, rubber gloves etc.)

### MIXING RATIO

Add the whole quantity of **ESKANOL ET COMP. B** into the **ESKANOL ET COMP. A** and stir the mixture with a low-speed agitator thoroughly (recommendation: twin shaft stirrers agitating in opposite directions). Make sure that both two components are mixed thoroughly. It is important that stirring reaches the wall and bottom of the container as well, in order to achieve a uniform mixture. Then pour the mixture into another container and mix further. The final composition of the mixture must be uniform and free of flow marks prior to application.

Primer	Parts by Weight	Parts by Volume
<b>ESKANOL E SOLUTION</b>	100	2.00
<b>ESKANOL E HARDENER</b>	50	1.00

Coating	Parts by Weight	Parts by Volume
<b>ESKANOL ET COMP. A</b>	100	4.75
<b>ESKANOL ET COMP. B</b>	12.5	1.00

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# ESKANOL ET

## CONSUMPTION PER COAT

Product	Thickness [mm]	Coverage [g/m <sup>2</sup> ]
ESKANOL ET	ca. 1	ca. 2000 - 3000

## POT LIFE / WORKING TIME [min]

Product	15°C	20°C	30°C
ESKANOL ET	ca. 60 - 80	ca. 30 - 40	ca. 15 - 20

## RECOAT TIME (20°C)

Product	Min. [h]	Max. [Days]
ESKANOL ET	ca. 12 - 16	ca. 24

## CURING (at 50% relative humidity)

Product	10 °C	20°C	30°C
Mechanical load	ca. 10 Days	ca. 7 Days	ca. 3 Days

## CLEANING

Clean all equipment with **ESKANOL CLEANER** immediately after use.

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
ESKANOL E SOLUTION	25 kg	---
ESKANOL E HARDENER	12.5 kg	---
ESKANOL ET COMP. A & COMP. B	30 kg	---
ESKANOL CLEANER	10 kg	---
ESKANOL CLEANER	25 kg	---

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
ESKANOL E HARDENER	5 - 20°C	12 Months
ESKANOL E SOLUTION	5 - 20°C	12 Months
ESKANOL ET COMP. A & COMP. B	5 - 20°C	12 Months
ESKANOL CLEANER	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Unit	Value
Bending Strength	N/mm <sup>2</sup>	45
Density	g/cm <sup>3</sup>	1.73
Compressive Strength	N/mm <sup>2</sup>	120
Adhesion Strength	N/mm <sup>2</sup>	> Concrete break
Hardness Shore A	-	88 - 94
Colour	-	RAL 7032. Further colours on request
Solid Content	%	100
Viscosity	mPa·s	<b>ESKANOL ET COMP. A:</b> 2000 – 3000 / <b>ESKANOL ET COMP. B:</b> 150 - 200

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# PRODUCT INFORMATION

## ESKANOL PO MORTAR

### PRODUCT DESCRIPTION

**ESKANOL PO MORTAR** is a three-component, cold curing synthetic resin mortar based on vinyl ester resin with mineral fillers.

### SYNTHETIC RESIN CONSUMPTION

The synthetic resin mortar **ESKANOL PO MORTAR** consists of the **ESKANOL PO SOLUTION**, the **ESKANOL VE HARDENER M50** and the filler **ESKANOL PO POWDER**.

### FIELDS OF APPLICATION

**ESKANOL PO MORTAR** is suitable as bedding and jointing mortar for tiles, bricks and fittings, especially for chemical loads of acids, solvents and oxidizing chemicals. Furthermore, **ESKANOL PO MORTAR** has a high temperature and a high mechanical stress resistance. Main applications are tiling and brick linings of components in the chemical industry, waste water and process water treatment, pulp and paper industry and in pickling lines.

### FEATURES

- Very high mechanical load capacity
- Very good chemical resistance, especially against oxidizing acids and many organic compounds
- Short curing time

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Components shall be designed and manufactured in accordance with EN 14879-1. Before start of brick lining work, the suitability of the surface preparation measures according EN 14879-1 must be checked and recorded.

### SURFACE PRE-TREATMENT

Steel and concrete surfaces, rubber sheets and other sealing layers (except on VE and UP based layers) must be primed with a suitable primer before application. The primer must be sanded in a fresh state after the final coat. Unevenness should be compensated in the ground.

#### C-STEEL

All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502. Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 must be achieved. The primer must be applied immediately after the blasting.

#### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm². The residual moisture content must not exceed 4%.

### ENVIRONMENTAL CONDITIONS

The specified environmental conditions must be observed during surface preparation and brick lining and be tested and recorded according EN 14879-6.

Environmental Conditions	Value
Relative Humidity	≤ 85%
Surface Temperature	≥ +10°C up to +35°C
Application Temperature	+10°C up to +30°C
Dew Point Distance	min. 3K

### APPLICATION

The execution of the brick lining work is only permitted, if the requirements of „Surface Pre-treatment“ and „Environmental Conditions“ are met. Sealing layers, except UP or VE based surfaces shall be primed with VE primer before mortar application. **ESKANOL PO MORTAR** is applied with a trowel onto various substrates like primer applied substrates, synthetic resin coated substrates, rubber lined or ceramic substrates. The bricks or tiles have to be bedded as far as possible without cavities, either filled-joint or hollow-joint. For the protection of rubber linings usually a thin layer of mortar is trowelled in advance to prevent mechanical damages.

### WORK TOOLS

The following tools are essential for the application:

- Stirrer (max. 300 r/min.)
- Measuring cup & Mixing vessels
- Flat / wide brush
- Mortar trowel
- Grouting tool
- Miscellaneous (safety glasses, rubber gloves etc.)

### MIXING RATIO

Pour **ESKANOL PO SOLUTION** in a mixing vessel and add certain amount of **ESKANOL VE HARDENER M50** with the specified mixing ratios, then stir well. Add the **ESKANOL PO POWDER** with the specified mixing ratios and mix further. The components must be mixed thoroughly and intensively. It is important that stirring reaches the wall and bottom of the container as well, considering that mortar may deposit at those areas. Mix for at least three minutes and until a uniform mixture is achieved. As a primer, the resin-hardener mixture with the specified mixing ratio (**ESKANOL PO SOLUTION + ESKANOL VE HARDENER M50**) is used without adding the filler **ESKANOL PO POWDER** and with broadcasting quartz sand (0.7 - 1.2) while still wet.

Product	Parts by Weight	Parts by Volume
<b>ESKANOL PO SOLUTION</b>	100	3.00
<b>ESKANOL VE HARDENER M50</b>	2	0.06
<b>ESKANOL PO POWDER</b>	365	7.30

### CONSUMPTION

Bedding and jointing (Bed Joint 5 mm / Cross Joint 5-7 mm)

Material	Sizes [mm]	Coverage [kg/m²]
Tiles	240 x 115 x 20	ca. 14
Tiles	240 x 115 x 40	ca. 18
Bricks	240 x 115 x 65	ca. 22
Bricks	240 x 115 x 80	ca. 24

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# ESKANOL PO MORTAR

## POT LIFE / WORKING TIME [h]

Product	15°C	20°C	30°C
ESKANOL PO MORTAR	ca. 40	ca. 30	ca. 20

## CURING (20°C)

Load Capacity	Time
Accessible	ca. 24 h

## CLEANING

Clean all equipment with **ESKANOL CLEANER** immediately after use.

## TESTING

The brick lining work shall be assessed according EN 14879-6 by visual inspection without magnifying lens. There shall be no imperfections (e.g. gaps, voids, unevenness, cracks or mechanical damages), which could impair the protective effect of the tile / brick lining.

## REPAIR

The defective areas have to be removed with suitable tools and have to be renewed again. Care has to be taken that no damages to the primer and / or sealing layers will occur. Optionally they also have to be renewed. Where post jointing is required, the min. joint depth must be 5 mm. When replacing multi-layered brick linings a stair-like outbreak has to be ensured.

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

Technical Data	Standard	Unit	Value
Density	DIN EN ISO 2811 (ASTM D1475)	g/cm <sup>3</sup>	1.95
Compressive Strength	DIN EN ISO 604 (ASTM D695)	N/mm <sup>2</sup>	85
Adhesion Strength		N/mm <sup>2</sup>	≥ 2.5
Coefficient of Thermal Expansion	DIN 53752 (ASTM C531)	1/K	35 x 10 <sup>-6</sup>
Max. Operating Temperature Liquids	-	°C	+100

**Note:** The indicated temperatures are dependent on the present load and may vary

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
ESKANOL PO SOLUTION	25 kg	---
ESKANOL VE HARDENER M50	5 kg	---
ESKANOL PO POWDER	25 kg	---
ESKANOL CLEANER	10 kg	---
ESKANOL CLEANER	25 kg	---

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
ESKANOL PO SOLUTION	≤ +20°C	6 Months
ESKANOL PO POWDER	-	Unlimited
ESKANOL CLEANER	5 - 25°C	60 Months
ESKANOL VE HARDENER M50	≤ +20°C	6 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

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# PRODUCT INFORMATION

## ESKANOL PU 23

### PRODUCT DESCRIPTION

**ESKANOL PU 23** is a two-component, solvent containing, coloured, highly opaque, and semi-gloss (when cured) spread coating based on acrylic polyurethane resin for applications on concrete-bound, reactive resin bound, or on asphalt-bound substrates.

### COATING LAYERS CONSUMPTION

**ESKANOL PU 23** consists of the two-component primer **ESKANOL E PRIMER** and the two-component **ESKANOL PU 23** spread coating. Depending on the application, the overall dry film thickness is 150 - 400 µm.

### FIELDS OF APPLICATION

**ESKANOL PU 23** is used as a protective liner on the indoor and outdoor areas with moderate mechanical and chemical stress, where special suitability is required like good scratch resistance, weather resistance and / or strong light-fade resistance (light fastness).

Main fields of applications are, for example, road marks, production and industrial halls, workshops, warehouses, and food businesses. A primer layer (except the applications on cement grouts) is always necessary.

### FEATURES

- Glossy surface
- High toughness and resilience properties
- High abrasion resistance
- Good wear properties (scratch resistance)
- Good chemical resistance against sea and waste water, alkalis, dilute acids, salt solutions, mineral oils, lubricants and fuels, as well as a wide range of solvents

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Components to be coated shall be designed and manufactured in accordance with EN 14879-1. Before start of coating work, the suitability of the surface preparation measures according EN 14879-1 must be checked and recorded.

### SURFACE PRE-TREATMENT

Concrete surfaces must be covered with a suitable primer and if necessary with an additional top coat prior to application. Any unevenness on the surface needs be flattened.

#### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup>. The residual moisture in the concrete shall not exceed 4%.

A mechanical treatment by abrasive blasting, high-pressure water blasting or shot blasting is recommended. After milling, flame cleaning or bush hammering the concrete surface, an abrasive blasting is also required.

### ENVIRONMENTAL CONDITIONS

The specified environmental conditions must be observed during surface preparation and coating work and be tested and recorded according EN 14879-3.

Environmental Conditions	Value
Relative Humidity	≤ 80%
Application Temperature	+10°C up to +30°C
Dew Point Distance	min. 3K

### APPLICATION

The execution of the coating work is only permitted, if the requirements of „Surface Pre-treatment“ and „Environmental Conditions“ are met.

**ESKANOL PU 23** is poured onto the properly prepared substrate, spread with a rubber grout spreader and is evenly rolled out with crosswise strokes using a short or medium pile roller. On rough surfaces, use drip grids to get rid of excess material and spread evenly with short or medium pile rollers with crosswise strokes.

For larger areas, make sure that the working times of the material are followed to minimize colour differences and application marks. The application should be performed at a constant or gradually decreasing temperature in order to avoid blistering due to the expansion of air in the substrate. Good ventilation after the application and throughout the course of curing has to be ensured. The surface must be protected from direct contact with water during the entire curing phase.

### WORK TOOLS

The following tools are essential for the application:

- Stirrer (max. 300 r/min.)
- Measuring cup & Mixing vessels
- Grout spreader
- Smoothing trowel
- Miscellaneous (safety glasses, rubber gloves etc.)

### MIXING RATIO

Add the whole quantity of **ESKANOL PU 23 COMP. B** into the **ESKANOL PU 23 COMP. A** and stir the mixture with a low-speed agitator thoroughly (recommendation: twin shaft stirrers agitating in opposite directions). Make sure that both two components are mixed thoroughly. It is important that stirring reaches the wall and bottom of the container as well, in order to achieve a uniform mixture. Then pour the mixture into another container and mix further. The final composition of the mixture must be uniform and free of flow marks prior to application. **ESKANOL PU 23** is formulated as a ready-mixed product and therefore the mixture should not be diluted or filled.

Primer	Parts by Weight	Parts by Volume
<b>ESKANOL E SOLUTION</b>	100	2.00
<b>ESKANOL E HARDENER</b>	50	1.00
Coating	Parts by Weight	Parts by Volume
<b>ESKANOL PU 23 COMP. A</b>	100	4.00
<b>ESKANOL PU 23 COMP. B</b>	20	1.00

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# ESKANOL PU 23

## CONSUMPTION PER COAT

Product	Substrate	Coverage [g/m <sup>2</sup> ]
ESKANOL PU 23	Smooth	ca. 150 - 250
ESKANOL PU 23	Rough	ca. 300 - 700

## POT LIFE / WORKING TIME [min]

Product	15°C	20°C	30°C
ESKANOL PU 23	ca. 55 - 70	ca. 35 - 45	ca. 20 - 25

## RECOAT TIME (20°C)

Product	Min. [h]	Max. [Days]
ESKANOL PU 23	ca. 8 - 12	ca. 24

## CURING (at 50% relative humidity)

Product	10 °C	20°C	30°C
Mechanical load	ca. 10 Days	ca. 7 Days	ca. 3 Days

## CLEANING

Clean all equipment with **ESKANOL CLEANER** immediately after use.

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
ESKANOL E SOLUTION	25 kg	---
ESKANOL E HARDENER	12.5 kg	---
ESKANOL PU 23 COMP. A & COMP. B	30 kg	---
ESKANOL CLEANER	10 kg	---
ESKANOL CLEANER	25 kg	---

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
ESKANOL E HARDENER	5 - 20°C	12 Months
ESKANOL E SOLUTION	5 - 20°C	12 Months
ESKANOL CLEANER	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Unit	Value
Density	g/cm <sup>3</sup>	1.25
Colour	-	RAL 7032. Further colours on request
Solid Content	%	100
Viscosity	mPa·s	ESKANOL PU 23 COMP. A: 850 – 1200 / ESKANOL PU 23 COMP. B: 90 - 130 Mix Viscosity: 1200

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# PRODUCT INFORMATION

## ESKANOL PU 26

### PRODUCT DESCRIPTION

**ESKANOL PU 26** is a two-component, solvent-free, coloured, and pre-filled trowel coating based on a polyurethane resin for applications on mineral, reactive resin bound, and on asphalt-bound substrates.

### COATING LAYERS CONSUMPTION

**ESKANOL PU 26** consists of the two-component primer **ESKANOL E PRIMER** and the two-component **ESKANOL PU 26** trowel coating. Depending on the application, the overall dry film thickness is approximately 1.3 to 3 mm.

### FIELDS OF APPLICATION

**ESKANOL PU 26** is used as a protective liner on the indoor and outdoor areas with moderate mechanical and chemical stress, where especially good crack bridging capability is required.

Main fields of applications are, industrial halls, process and storage halls, basement garages (underground car parks), and sanitary constructions.

Either smooth or anti-skid coatings which are fulfilling the requirements of the relevant professional association can be built up with **ESKANOL PU 26**. The product is also suitable for use in continuously wet areas. A primer layer is always necessary.

### FEATURES

- Glossy surface
- Can be easily decontaminated
- Easy to clean
- High elasticity
- Good chemical resistance against sea and waste water, dilute acids, mineral oils, lubricants and fuels, as well as a wide range of solvents

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Components to be coated shall be designed and manufactured in accordance with EN 14879-1. Before start of coating work, the suitability of the surface preparation measures according EN 14879-1 must be checked and recorded.

### SURFACE PRE-TREATMENT

Concrete surfaces must be covered with a suitable primer and if necessary with an additional top coat prior to application. Any unevenness on the surface needs to be flattened.

#### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup>. The residual moisture in the concrete shall not exceed 4%.

A mechanical treatment by abrasive blasting, high-pressure water blasting or shot blasting is recommended. After milling, flame cleaning or bush hammering the concrete surface, an abrasive blasting is also required.

### ENVIRONMENTAL CONDITIONS

The specified environmental conditions must be observed during surface preparation and coating work and be tested and recorded according EN 14879-3.

Environmental Conditions	Value
Relative Humidity	≤ 80%
Application Temperature	+10°C up to +30°C
Dew Point Distance	min. 3K

### APPLICATION

The execution of the coating work is only permitted, if the requirements of „Surface Pre-treatment“ and „Environmental Conditions“ are met.

**ESKANOL PU 26** is poured onto the properly prepared substrate and evenly spread onto the ground with a grout spreader - preferably with a triangular notched one - or with a trowel. If necessary, the coating can be vented with a spiked roller. In case of a faulty texture on the substrate, the trapped air beneath the coating has to be vented.

For larger areas, make sure that the working times of the material are followed to minimize colour differences and application marks. The application should be performed at a constant or gradually decreasing temperature in order to avoid blistering due to the expansion of air in the substrate. Good ventilation after the application and throughout the course of curing has to be ensured. The surface must be protected from direct contact with water during the entire curing phase.

### WORK TOOLS

The following tools are essential for the application:

- Stirrer (max. 300 r/min.)
- Measuring cup & Mixing vessels
- Grout spreader
- Smoothing trowel
- Miscellaneous (safety glasses, rubber gloves etc.)

### MIXING RATIO

Add the whole quantity of **ESKANOL PU 26 COMP. B** into the **ESKANOL PU 26 COMP. A** and stir the mixture with a low-speed agitator thoroughly (recommendation: twin shaft stirrers agitating in opposite directions). Make sure that both two components are mixed thoroughly. It is important that stirring reaches the wall and bottom of the container as well, in order to achieve a uniform mixture. Then pour the mixture into another container and mix further. The final composition of the mixture must be uniform and free of flow marks prior to application. **ESKANOL PU 26** is formulated as a ready-mixed product. Further addition of filler material into the mixture is not recommended as it results in loss of flexibility.

Primer	Parts by Weight	Parts by Volume
<b>ESKANOL E SOLUTION</b>	100	2.00
<b>ESKANOL E HARDENER</b>	50	1.00
Coating	Parts by Weight	Parts by Volume
<b>ESKANOL PU 26 COMP. A</b>	100	5.00
<b>ESKANOL PU 26 COMP. B</b>	16.66	1.00

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# ESKANOL PU 26

## CONSUMPTION PER COAT

Product	Thickness [mm]	Coverage [g/m <sup>2</sup> ]
ESKANOL PU 26	ca. 1	ca. 1500

## POT LIFE / WORKING TIME [min]

Product	15°C	20°C	30°C
ESKANOL PU 26	ca. 40 - 60	ca. 25 - 35	ca. 12 - 17

## RECOAT TIME (20°C)

Product	Min. [h]	Max. [Days]
ESKANOL PU 26	ca. 8 - 12	ca. 24

## CURING (at 50% relative humidity)

Product	10 °C	20°C	30°C
Mechanical load	ca. 10 Days	ca. 7 Days	ca. 3 Days

## CLEANING

Clean all equipment with **ESKANOL CLEANER** immediately after use.

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
ESKANOL E SOLUTION	25 kg	---
ESKANOL E HARDENER	12.5 kg	---
ESKANOL PU 26 COMP. A & COMP. B	12 kg	---
ESKANOL PU 26 COMP. A & COMP. B	30 kg	---
ESKANOL CLEANER	10 kg	---
ESKANOL CLEANER	25 kg	---

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
ESKANOL E HARDENER	5 - 20°C	12 Months
ESKANOL E SOLUTION	5 - 20°C	12 Months
ESKANOL CLEANER	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Unit	Value
Density	g/cm <sup>3</sup>	1.48
Colour	-	RAL 7032. Further colours on request
Solid Content	%	66
Viscosity	mPa·s	<b>ESKANOL PU 26 COMP. A:</b> 1500 – 2300 / <b>ESKANOL PU 26 COMP. B:</b> 150 - 200 Mix Viscosity: 1200

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# PRODUCT INFORMATION

## ESKANOL FU MORTAR

### PRODUCT DESCRIPTION

**ESKANOL FU MORTAR** is a three-component, cold curing synthetic resin mortar, based on a furan resin with mineral fillers.

### SYNTHETIC RESIN CONSUMPTION

The synthetic resin mortar **ESKANOL FU MORTAR** consists of the **ESKANOL FU SOLUTION**, **ESKANOL FU HARDENER** and of the filler **ESKANOL PO POWDER**.

### FIELDS OF APPLICATION

**ESKANOL FU MORTAR** is suited as bedding and jointing mortar for acid-resistant ceramic tiles, bricks and fittings, especially at high chemical exposure to acids, alkalis or organic solvents and high temperature and mechanical stresses.

Main applications are tiling and brick linings of components in the chemical industry, waste water and process water treatment, in channels, pits and sumps, power plants, warehouses and workshops, neutralization- and pickling lines.

### FEATURES

- Very high mechanical load capacity
- Outstanding chemical resistance, especially against solvents and other organic compounds.
- High temperature resistance

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Components shall be designed and manufactured in accordance with EN 14879-1. Before start of brick lining work, the suitability of the surface preparation measures according EN 14879-1 must be checked and recorded.

### SURFACE PRE-TREATMENT

Steel and concrete surfaces must be primed with a suitable primer before application. The primer must be sanded in a fresh state after the final coat. Usually a sealing layer made of rubber or synthetic resin coating is foreseen, where it is possible to work directly with **ESKANOL FU MORTAR** on the sealing layer. Unevenness should be compensated in the ground.

### C-STEEL

All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 must be achieved. The primer must be applied immediately after the blasting.

### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%.

### ENVIRONMENTAL CONDITIONS

The specified environmental conditions must be observed during surface preparation and brick lining and be tested and recorded according EN 14879-6.

Environmental Conditions	Value
Relative Humidity	≤ 85%
Surface Temperature	≥ +10°C up to +35°C
Application Temperature	+10°C up to +30°C
Dew Point Distance	min. 3K

### APPLICATION

The execution of the brick lining work is only permitted, if the requirements of „Surface Pre-treatment“ and „Environmental Conditions“ are met. **ESKANOL FU MORTAR** is applied with a trowel onto various substrates like primer applied substrates, synthetic resin coated substrates, rubber lined or ceramic substrates. A direct installation on a metallic or a mineral substrate is not possible. The bricks or tiles have to be bedded as far as possible without cavities, either filled-joint or hollow-joint. For the protection of rubber linings usually a thin layer of mortar is trowelled in advance to prevent mechanical damages. In case of an application of hollow-joint tiling into cement or potassium silicate bedding, acid washing with 10% hydrochloric acid or 20% alcoholic sulphuric acid of the open joints is necessary.

### WORK TOOLS

The following tools are essential for the application:

- Stirrer (max. 300 r/min.)
- Measuring cup & Mixing vessels
- Flat / wide brush
- Mortar trowel
- Grouting tool
- Miscellaneous (safety glasses, rubber gloves etc.)

### MIXING RATIO

Pour **ESKANOL FU SOLUTION** in a mixing vessel and add certain amount of **ESKANOL FU HARDENER** with the specified mixing ratios, then stir well. Add the **ESKANOL PO POWDER** with the specified portion and mix further. The components must be mixed thoroughly and intensively. It is important that stirring reaches the wall and bottom of the container as well, considering that mortar may deposit at those areas. Mix for at least three minutes and until a uniform mixture is achieved.

Product	Parts by Weight	Parts by Volume
<b>ESKANOL FU SOLUTION</b>	100	2.00
<b>ESKANOL FU HARDENER</b>	11	0.24
<b>ESKANOL PO POWDER</b>	430	6.00

### CONSUMPTION

Bedding and jointing (Bed Joint 5 mm / Cross Joint 5-7 mm)

Material	Sizes [mm]	Coverage [kg/m <sup>2</sup> ]
Tiles	240 x 115 x 20	ca. 15
Tiles	240 x 115 x 40	ca. 19
Bricks	240 x 115 x 65	ca. 23
Bricks	240 x 115 x 80	ca. 26

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# ESKANOL FU MORTAR

## POT LIFE / WORKING TIME [h]

Product	15°C	20°C	30°C
ESKANOL FU MORTAR	ca. 8	ca. 5	ca. 2.5

## CURING (20°C)

Load Capacity	Time
Accessible	ca. 24 h

## CLEANING

Clean all equipment with **ESKANOL CLEANER** immediately after use.

## TESTING

The brick lining work shall be assessed according EN 14879-6 by visual inspection without magnifying lens. There shall be no imperfections (e.g. gaps, voids, unevenness, cracks or mechanical damages), which could impair the protective effect of the tile / brick lining.

## REPAIR

The defective areas have to be removed with suitable tools and have to be renewed again. Care has to be taken that no damages to the primer and / or sealing layers will occur. Optionally they also have to be renewed. Where post jointing is required, the min. joint depth must be 5 mm. When replacing multi-layered brick linings a stair-like outbreak has to be ensured.

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

Technical Data	Standard	Unit	Value
Density	DIN EN ISO 2811 (ASTM D1475)	g/cm <sup>3</sup>	2.3
Compressive Strength	DIN EN ISO 604 (ASTM D695)	N/mm <sup>2</sup>	80
Adhesion Strength	-	N/mm <sup>2</sup>	≥ 3.5
Coefficient of Thermal Expansion	DIN 53752 (ASTM C531)	1/K	21 x 10 <sup>-6</sup>
Max. Operating Temperature Liquids	-	°C	+170

**Note:** The indicated temperatures are dependent on the present load and may vary

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
ESKANOL FU SOLUTION	25 kg	---
ESKANOL FU HARDENER	5 kg	---
ESKANOL PO POWDER	25 kg	---
ESKANOL CLEANER	10 kg	---
ESKANOL CLEANER	25 kg	---

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
ESKANOL FU HARDENER	≤ +25°C	12 Months
ESKANOL FU SOLUTION	≤ +25°C	6 Months
ESKANOL PO POWDER	-	Unlimited
ESKANOL CLEANER	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Information given in the fact sheet above corresponds to the current knowledge available to us regarding our products at the time of its drafting and is intended as a guideline for informational purposes. However, because of the multiple possibilities regarding possible applications, processing and on site conditions, any information given in the fact sheet above is not legally binding, in particular, without being limited to, such information shall not be interpreted as a warranty of merchantability or of fitness for a particular purpose. Customer therefore is advised to conduct its own testing or make an inquiry with our technical department before ordering. We reserve the right to change the product at any time, in particular, without being limited to, minor changes because of advancements in technology. If by way of exception, the information given in the fact sheet above is incorporated by reference into any contract concluded with us under German Law, such information, shall only be interpreted as determining the specific requirements of the contractual products as set out in § 434 BGB (German Civil Code) and shall not be interpreted as constituting a guarantee of condition.

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# PRODUCT INFORMATION

## ESKANOL FU-L MORTAR

### PRODUCT DESCRIPTION

**ESKANOL FU-L MORTAR** is a three-component, cold curing synthetic resin mortar, based on a furan resin with carbon fillers. The cured, silicate-free resin mortar is electrically dissipating.

### SYNTHETIC RESIN CONSUMPTION

The synthetic resin mortar **ESKANOL FU-L MORTAR** consists of the **ESKANOL FU SOLUTION**, **ESKANOL FU HARDENER** and of the filler **ESKANOL PO-L POWDER**.

### FIELDS OF APPLICATION

**ESKANOL FU-L MORTAR** is suitable as bedding and jointing mortar for tiles, bricks and fittings made of acid-resistant ceramic, carbon or graphite. **ESKANOL FU-L MORTAR** is particularly suitable for high chemical loads of acids, including hydrofluoric acid, strong lye and organic solvents at high temperature loads.

Main applications are tiling and brick linings of components in the chemical industry, waste water and process water treatment, in the phosphoric acid and sulphuric acid industry, in flue gas desulphurisation plants, neutralization- and pickling lines.

Due to its good electrical dissipation, **ESKANOL FU-L MORTAR** is recommended for areas, where sparking shall be avoided due to the possible risk of explosion.

### FEATURES

- Very high mechanical load capacity
- Outstanding chemical resistance, especially against hydrofluoric acid, strong lye, solvents and other organic compounds
- High temperature resistance
- Can be built up as a conductive mortar

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Components shall be designed and manufactured in accordance with EN 14879-1. Before start of brick lining work, the suitability of the surface preparation measures according EN 14879-1 must be checked and recorded.

### SURFACE PRE-TREATMENT

Steel and concrete surfaces must be primed with a suitable primer before application. The primer must be sanded in a fresh state after the final coat. Usually a sealing layer made of rubber or synthetic resin coating is foreseen, where it is possible to work directly with **ESKANOL FU-L MORTAR** on the sealing layer. Unevenness should be compensated in the ground.

### C-STEEL

All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 must be achieved. The primer must be applied immediately after the blasting.

### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%.

### ENVIRONMENTAL CONDITIONS

The specified environmental conditions must be observed during surface preparation and brick lining and be tested and recorded according EN 14879-6.

Environmental Conditions	Value
Relative Humidity	≤ 85%
Surface Temperature	≥ +10°C up to +35°C
Application Temperature	+10°C up to +30°C
Dew Point Distance	min. 3K

### APPLICATION

The execution of the brick lining work is only permitted, if the requirements of „Surface Pre-treatment“ and „Environmental Conditions“ are met.

**ESKANOL FU-L MORTAR** is applied with a trowel onto various substrates like primer applied substrates, synthetic resin coated substrates, rubber lined or ceramic substrates. A direct installation on a metallic or a mineral substrate is not possible. The bricks or tiles have to be bedded as far as possible without cavities, either filled-joint or hollow-joint. For the protection of rubber linings usually a thin layer of mortar is trowelled in advance to prevent mechanical damages. The filler content of the mixture can be reduced by max. 10% of the overall filler content.

In case of an application of hollow-joint tiling into cement or potassium silicate bedding, acid washing with 10% hydrochloric acid or 20% alcoholic sulphuric acid of the open joints is necessary.

### WORK TOOLS

The following tools are essential for the application:

- Stirrer (max. 300 r/min.)
- Measuring cup & Mixing vessels
- Flat / wide brush
- Mortar trowel
- Grouting tool
- Miscellaneous (safety glasses, rubber gloves etc.)

### MIXING RATIO

Pour **ESKANOL FU SOLUTION** in a mixing vessel and add certain amount of **ESKANOL FU HARDENER** with the specified mixing ratios, then stir well. Add the **ESKANOL PO-L POWDER** with the specified mixing ratios and mix further. The components must be mixed thoroughly and intensively. It is important that stirring reaches the wall and bottom of the container as well, considering that mortar may deposit at those areas. Mix for at least three minutes and until a uniform mixture is achieved.

Product	Parts by Weight	Parts by Volume
<b>ESKANOL FU SOLUTION</b>	100	2.00
<b>ESKANOL FU HARDENER</b>	11	0.24
<b>ESKANOL PO-L POWDER</b>	190	4.00

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# ESKANOL FU-L MORTAR

## CONSUMPTION

Bedding and jointing (Bed Joint 5 mm / Cross Joint 5-7 mm)

Material	Sizes [mm]	Coverage [kg/m <sup>2</sup> ]
Tiles	240 x 115 x 20	ca. 14
Tiles	240 x 115 x 40	ca. 18
Bricks	240 x 115 x 65	ca. 22
Bricks	240 x 115 x 80	ca. 25

## POT LIFE / WORKING TIME [h]

Product	15°C	20°C	30°C
ESKANOL FU-L MORTAR	ca. 8	ca. 5	ca. 2.5

## CURING (20°C)

Load Capacity	Time
Accessible	ca. 24 h

## CLEANING

Clean all equipment with **ESKANOL CLEANER** immediately after use.

## TESTING

The brick lining work shall be assessed according EN 14879-6 by visual inspection without magnifying lens. There shall be no imperfections (e.g. gaps, voids, unevenness, cracks or mechanical damages), which could impair the protective effect of the tile / brick lining.

## REPAIR

The defective areas have to be removed with suitable tools and have to be renewed again. Care has to be taken that no damages to the primer and / or sealing layers will occur. Optionally they also have to be renewed. Where post jointing is required, the min. joint depth must be 5 mm. When replacing multi-layered brick linings a stair-like outbreak has to be ensured.

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
ESKANOL FU SOLUTION	25 kg	---
ESKANOL FU HARDENER	5 kg	---
ESKANOL PO-L POWDER	25 kg	---
ESKANOL CLEANER	10 kg	---
ESKANOL CLEANER	25 kg	---

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
ESKANOL FU HARDENER	≤ +25°C	12 Months
ESKANOL FU SOLUTION	≤ +25°C	6 Months
ESKANOL PO-L POWDER	-	Unlimited
ESKANOL CLEANER	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Resistance to Ground	DIN 14879-6	Ω	≤ 10 <sup>6</sup>
Density	DIN EN ISO 2811 (ASTM D1475)	g/cm <sup>3</sup>	2.1
Compressive Strength	DIN EN ISO 604 (ASTM D695)	N/mm <sup>2</sup>	70
Adhesion Strength	-	N/mm <sup>2</sup>	≥ 3.5
Coefficient of Thermal Expansion	DIN 53752 (ASTM C531)	1/K	20 x 10 <sup>-6</sup>
Max. Operating Temperature Liquids	-	°C	+170

**Note:** The indicated temperatures are dependent on the present load and may vary

Information given in the fact sheet above corresponds to the current knowledge available to us regarding our products at the time of its drafting and is intended as a guideline for informational purposes. However, because of the multiple possibilities regarding possible applications, processing and on site conditions, any information given in the fact sheet above is not legally binding, in particular, without being limited to, such information shall not be interpreted as a warranty of merchantability or of fitness for a particular purpose. Customer therefore is advised to conduct its own testing or make an inquiry with our technical department before ordering. We reserve the right to change the product at any time, in particular, without being limited to, minor changes because of advancements in technology. If by way of exception, the information given in the fact sheet above is incorporated by reference into any contract concluded with us under German Law, such information, shall only be interpreted as determining the specific requirements of the contractual products as set out in § 434 BGB (German Civil Code) and shall not be interpreted as constituting a guarantee of condition.

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# PRODUCT INFORMATION

## ESKANOL FU-SL MORTAR

### PRODUCT DESCRIPTION

**ESKANOL FU-SL MORTAR** is three-component, cold curing synthetic resin mortar, based on a furan resin with carbon fillers. The cured, silicate-free resin mortar is electrically dissipating.

### SYNTHETIC RESIN CONSUMPTION

The synthetic resin mortar **ESKANOL FU-SL MORTAR** consists of the **ESKANOL FU SOLUTION**, the **ESKANOL FU HARDENER** and the filler **ESKANOL SL POWDER**.

### FIELDS OF APPLICATION

**ESKANOL FU-SL MORTAR** is suitable as bedding and jointing mortar for tiles, bricks and fittings made of acid-resistant ceramic, carbon or graphite. **ESKANOL FU-SL MORTAR** is particularly suitable for heavy chemical loads of acids, including hydrofluoric acid, strong lye and organic solvents at high temperature loads.

Main applications are tiling and brick linings of components in the chemical industry, waste water and process water treatment, in the phosphoric acid and sulphuric acid industry, in flue gas desulphurisation plants, neutralization- and pickling lines.

Due to its good electrical dissipation, **ESKANOL FU-SL MORTAR** is recommended for areas, where sparking shall be avoided due to the possible risk of explosion.

### FEATURES

- Very high mechanical load capacity
- Outstanding chemical resistance, especially against hydrofluoric acid, strong lye, solvents and other organic compounds
- High temperature resistance
- Can be built up as a conductive mortar

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Components shall be designed and manufactured in accordance with EN 14879-1. Before start of brick lining work, the suitability of the surface preparation measures according EN 14879-1 must be checked and recorded.

### SURFACE PRE-TREATMENT

Steel and concrete surfaces must be primed with a suitable primer before application. The primer must be sanded in a fresh state after the final coat. Usually a sealing layer made of rubber or synthetic resin coating is foreseen, where it is possible to work directly with **ESKANOL FU-SL MORTAR** on the sealing layer. Unevenness should be compensated in the ground.

### C-STEEL

All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 must be achieved. The primer must be applied immediately after the blasting.

### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%.

### ENVIRONMENTAL CONDITIONS

The specified environmental conditions must be observed during surface preparation and brick lining and be tested and recorded according EN 14879-6.

Environmental Conditions	Value
Relative Humidity	≤ 85%
Surface Temperature	≥ +10°C up to +35°C
Application Temperature	+10°C up to +30°C
Dew Point Distance	min. 3K

### APPLICATION

The execution of the brick lining work is only permitted, if the requirements of „Surface Pre-treatment“ and „Environmental Conditions“ are met.

**ESKANOL FU-SL MORTAR** is applied with a trowel onto various substrates like primer applied substrates, synthetic resin coated substrates, rubber lined or ceramic substrates. A direct installation on a metallic or a mineral substrate is not possible. The bricks or tiles have to be bedded as far as possible without cavities, either filled-joint or hollow-joint. For the protection of rubber linings usually a thin layer of mortar is trowelled in advance to prevent mechanical damages. The filler content of the mixture can be reduced by max. 10% of the overall filler content.

In case of an application of hollow-joint tiling into cement or potassium silicate bedding, acid washing with 10% hydrochloric acid or 20% alcoholic sulphuric acid of the open joints is necessary.

### WORK TOOLS

The following tools are essential for the application:

- Stirrer (max. 300 r/min.)
- Measuring cup & Mixing vessels
- Flat / wide brush
- Mortar trowel
- Grouting tool
- Miscellaneous (safety glasses, rubber gloves etc.)

### MIXING RATIO

Pour **ESKANOL FU SOLUTION** in a mixing vessel and add certain amount of **ESKANOL FU HARDENER** with the specified mixing ratios, then stir well. Add the **ESKANOL SL POWDER** with the specified mixing ratios and mix further. The components must be mixed thoroughly and intensively. It is important that stirring reaches the wall and bottom of the container as well, considering that mortar may deposit at those areas. Mix for at least three minutes and until a uniform mixture is achieved.

Product	Parts by Weight	Parts by Volume
<b>ESKANOL FU SOLUTION</b>	100	2.00
<b>ESKANOL FU HARDENER</b>	11	0.24
<b>ESKANOL SL POWDER</b>	500	3.50

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# ESKANOL FU-SL MORTAR

## CONSUMPTION

Bedding and jointing (Bed Joint 5 mm / Cross Joint 5-7 mm)

Material	Sizes [mm]	Coverage [kg/m <sup>2</sup> ]
Tiles	240 x 115 x 20	ca. 17
Tiles	240 x 115 x 40	ca. 21
Bricks	240 x 115 x 65	ca. 25
Bricks	240 x 115 x 80	ca. 29

## POT LIFE / WORKING TIME [h]

Product	15°C	20°C	30°C
ESKANOL FU-SL MORTAR	ca. 8	ca. 5	ca. 2.5

## CURING (20°C)

Load Capacity	Time
Accessible	ca. 24 h

## CLEANING

Clean all equipment with **ESKANOL CLEANER** immediately after use.

## TESTING

The brick lining work shall be assessed according EN 14879-6 by visual inspection without magnifying lens. There shall be no imperfections (e.g. gaps, voids, unevenness, cracks or mechanical damages), which could impair the protective effect of the tile / brick lining.

## REPAIR

The defective areas have to be removed with suitable tools and have to be renewed again. Care has to be taken that no damages to the primer and / or sealing layers will occur. Optionally they also have to be renewed. Where post jointing is required, the min. joint depth must be 5 mm. When replacing multi-layered brick linings a stair-like outbreak has to be ensured.

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
ESKANOL FU SOLUTION	25 kg	---
ESKANOL FU HARDENER	5 kg	---
ESKANOL SL POWDER	25 kg	---
ESKANOL CLEANER	10 kg	---
ESKANOL CLEANER	25 kg	---

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
ESKANOL FU HARDENER	≤ +25°C	12 Months
ESKANOL FU SOLUTION	≤ +25°C	6 Months
ESKANOL CLEANER	5 - 25°C	60 Months
ESKANOL SL POWDER	-	Unlimited

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Resistance to Ground	DIN 14879-6	Ω	≤ 10 <sup>6</sup>
Density	DIN EN ISO 2811 (ASTM D1475)	g/cm <sup>3</sup>	2.1
Compressive Strength	DIN EN ISO 604 (ASTM D695)	N/mm <sup>2</sup>	70
Adhesion Strength	-	N/mm <sup>2</sup>	≥ 3.5
Coefficient of Thermal Expansion	DIN 53752 (ASTM C531)	1/K	20 x 10 <sup>-6</sup>
Max. Operating Temperature Liquids	-	°C	+170

**Note:** The indicated temperatures are dependent on the present load and may vary

Information given in the fact sheet above corresponds to the current knowledge available to us regarding our products at the time of its drafting and is intended as a guideline for informational purposes. However, because of the multiple possibilities regarding possible applications, processing and on site conditions, any information given in the fact sheet above is not legally binding, in particular, without being limited to, such information shall not be interpreted as a warranty of merchantability or of fitness for a particular purpose. Customer therefore is advised to conduct its own testing or make an inquiry with our technical department before ordering. We reserve the right to change the product at any time, in particular, without being limited to, minor changes because of advancements in technology. If by way of exception, the information given in the fact sheet above is incorporated by reference into any contract concluded with us under German Law, such information, shall only be interpreted as determining the specific requirements of the contractual products as set out in § 434 BGB (German Civil Code) and shall not be interpreted as constituting a guarantee of condition.

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# PRODUCT INFORMATION

## ESKANOL VE MORTAR

### PRODUCT DESCRIPTION

**ESKANOL VE MORTAR** is a three-component, cold curing synthetic resin mortar based on vinyl ester resin with mineral fillers.

### SYNTHETIC RESIN CONSUMPTION

The synthetic resin mortar **ESKANOL VE MORTAR** consists of the **ESKANOL VE SOLUTION**, the **ESKANOL VE HARDENER M50** and the filler **ESKANOL PO POWDER**.

### FIELDS OF APPLICATION

**ESKANOL VE MORTAR** is suitable as bedding and jointing mortar for tiles, bricks and fittings, especially for chemical loads of acids, solvents and oxidizing chemicals. Furthermore, **ESKANOL VE MORTAR** has a high temperature and a high mechanical stress resistance.

Main applications are tiling and brick linings of components in the chemical industry, waste water and process water treatment, pulp and paper industry and in pickling lines.

### FEATURES

- Very high mechanical load capacity
- Very good chemical resistance, especially against oxidizing acids and organic compounds
- Short curing time

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Components shall be designed and manufactured in accordance with EN 14879-1. Before start of brick lining work, the suitability of the surface preparation measures according EN 14879-1 must be checked and recorded.

### SURFACE PRE-TREATMENT

Steel and concrete surfaces, rubber sheets and other sealing layers (except on VE and UP based layers) must be primed with a suitable primer before application. The primer must be sanded in a fresh state after the final coat. Unevenness should be compensated in the ground.

#### C-STEEL

All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 must be achieved. The primer must be applied immediately after the blasting.

#### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm². The residual moisture content must not exceed 4%.

### ENVIRONMENTAL CONDITIONS

The specified environmental conditions must be observed during surface preparation and brick lining and be tested and recorded according EN 14879-6.

Environmental Conditions	Value
Relative Humidity	≤ 85%
Surface Temperature	≥ +10°C up to +35°C
Application Temperature	+10°C up to +30°C
Dew Point Distance	min. 3K

### APPLICATION

The execution of the brick lining work is only permitted, if the requirements of „Surface Pre-treatment“ and „Environmental Conditions“ are met.

Sealing layers, except UP or VE based surfaces shall be primed with VE primer before mortar application. **ESKANOL VE MORTAR** is applied with a trowel onto various substrates like primer applied substrates, synthetic resin coated substrates, rubber lined or ceramic substrates. The bricks or tiles have to be bedded as far as possible without cavities, either filled-joint or hollow-joint. For the protection of rubber linings usually a thin layer of mortar is trowelled in advance to prevent mechanical damages.

### WORK TOOLS

The following tools are essential for the application:

- Stirrer (max. 300 r/min.)
- Measuring cup & Mixing vessels
- Flat / wide brush
- Mortar trowel
- Grouting tool
- Miscellaneous (safety glasses, rubber gloves etc.)

### MIXING RATIO

Pour **ESKANOL VE SOLUTION** in a mixing vessel and add certain amount of **ESKANOL VE HARDENER M50** with the specified mixing ratios, then stir well. Add the **ESKANOL PO POWDER** with the specified mixing ratios and mix further. The components must be mixed thoroughly and intensively. It is important that stirring reaches the wall and bottom of the container as well, considering that mortar may deposit at those areas. Mix for at least three minutes and until a uniform mixture is achieved. As a primer, the resin-hardener mixture with the specified mixing ratio (**ESKANOL VE SOLUTION + ESKANOL VE HARDER M50**) is used without adding the filler **ESKANOL PO POWDER** and with broadcasting quartz sand (0.7 - 1.2) while still wet.

Product	Parts by Weight	Parts by Volume
<b>ESKANOL VE SOLUTION</b>	100	3.00
<b>ESKANOL VE HARDENER M50</b>	2	0.06
<b>ESKANOL PO POWDER</b>	365	7.30

### CONSUMPTION

Bedding and jointing (Bed Joint 5 mm / Cross Joint 5-7 mm)

Material	Sizes [mm]	Coverage [kg/m²]
Tiles	240 x 115 x 20	ca. 14
Tiles	240 x 115 x 40	ca. 18
Bricks	240 x 115 x 65	ca. 22
Bricks	240 x 115 x 80	ca. 24

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# ESKANOL VE MORTAR

## POT LIFE / WORKING TIME [min]

Product	15°C	20°C	30°C
ESKANOL VE MORTAR	ca. 40	ca. 30	ca. 20

## CURING (20°C)

Load Capacity	Time
Accessible	ca. 24 h

## CLEANING

Clean all equipment with **ESKANOL CLEANER** immediately after use.

## TESTING

The brick lining work shall be assessed according EN 14879-6 by visual inspection without magnifying lens. There shall be no imperfections (e.g. gaps, voids, unevenness, cracks or mechanical damages), which could impair the protective effect of the tile / brick lining.

## REPAIR

The defective areas have to be removed with suitable tools and have to be renewed again. Care has to be taken that no damages to the primer and / or sealing layers will occur. Optionally they also have to be renewed. Where post jointing is required, the min. joint depth must be 5 mm. When replacing multi-layered brick linings a stair-like outbreak has to be ensured.

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

Technical Data	Standard	Unit	Value
Density	DIN EN ISO 2811 (ASTM D1475)	g/cm <sup>3</sup>	1.95
Compressive Strength	DIN EN ISO 604 (ASTM D695)	N/mm <sup>2</sup>	85
Adhesion Strength	-	N/mm <sup>2</sup>	≥ 2.5
Coefficient of Thermal Expansion	DIN 53752 (ASTM C531)	1/K	35 x 10 <sup>-6</sup>
Max. Operating Temperature Liquids	-	°C	+130

**Note:** The indicated temperatures are dependent on the present load and may vary

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
ESKANOL VE SOLUTION	25 kg	---
ESKANOL VE HARDENER M50	5 kg	---
ESKANOL PO POWDER	25 kg	---
ESKANOL CLEANER	10 kg	---
ESKANOL CLEANER	25 kg	---

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
ESKANOL PO POWDER	-	Unlimited
ESKANOL CLEANER	5 - 25°C	60 Months
ESKANOL VE HARDENER M50	≤ +20°C	6 Months
ESKANOL VE SOLUTION	≤ +20°C	6 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Information given in the fact sheet above corresponds to the current knowledge available to us regarding our products at the time of its drafting and is intended as a guideline for informational purposes. However, because of the multiple possibilities regarding possible applications, processing and on site conditions, any information given in the fact sheet above is not legally binding, in particular, without being limited to, such information shall not be interpreted as a warranty of merchantability or of fitness for a particular purpose. Customer therefore is advised to conduct its own testing or make an inquiry with our technical department before ordering. We reserve the right to change the product at any time, in particular, without being limited to, minor changes because of advancements in technology. If by way of exception, the information given in the fact sheet above is incorporated by reference into any contract concluded with us under German Law, such information, shall only be interpreted as determining the specific requirements of the contractual products as set out in § 434 BGB (German Civil Code) and shall not be interpreted as constituting a guarantee of condition.

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# PRODUCT INFORMATION

## ESKANOL VE-L MORTAR

### PRODUCT DESCRIPTION

**ESKANOL VE-L MORTAR** is a three-component, cold curing synthetic resin mortar based on vinyl ester resin with carbon fillers.

### SYNTHETIC RESIN CONSUMPTION

The synthetic resin mortar **ESKANOL VE-L MORTAR** consists of the **ESKANOL VE SOLUTION**, the **ESKANOL VE HARDENER M50** and the filler **ESKANOL PO-L POWDER**.

### FIELDS OF APPLICATION

**ESKANOL VE-L MORTAR** is suitable as bedding and jointing mortar for tiles, bricks and fittings, especially for chemical loads of acids, solvents and oxidizing chemicals, along with high temperature and heavy mechanical loads. Main applications are tiling and brick linings of components in the chemical industry, waste water and process water treatment, pulp and paper industry and in pickling lines. Furthermore, **ESKANOL VE-L MORTAR** is suitable for the areas, where sparking shall be avoided due to the possible risk of explosion.

### FEATURES

- Very high mechanical load capacity
- Very good chemical resistance, especially against oxidizing acids and many organic compounds
- Short curing time
- Can be built up as a conductive mortar

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Components shall be designed and manufactured in accordance with EN 14879-1. Before start of brick lining work, the suitability of the surface preparation measures according to EN 14879-1 must be checked and recorded.

### SURFACE PRE-TREATMENT

Steel and concrete surfaces, rubber sheets and other sealing layers (except on VE and UP based layers) must be primed with a suitable primer before application. The primer must be sanded in a fresh state after the final coat. Unevenness should be compensated in the ground.

#### C-STEEL

All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht #28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 must be achieved. The primer must be applied immediately after the blasting.

#### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%.

### ENVIRONMENTAL CONDITIONS

The specified environmental conditions must be observed during surface preparation and brick lining and be tested and recorded according to EN 14879-6.

Environmental Conditions	Value
Relative Humidity	≤ 85%
Surface Temperature	≥ +10°C up to +35°C
Application Temperature	+10°C up to +30°C
Dew Point Distance	min. 3K

### APPLICATION

The execution of the brick lining work is only permitted, if the requirements of „Surface Pre-treatment“ and „Environmental Conditions“ are met.

Sealing layers, except UP or VE based surfaces shall be primed with VE primer before mortar application. **ESKANOL VE-L MORTAR** is applied with a trowel onto various substrates like primer applied substrates, synthetic resin coated substrates, rubber lined or ceramic substrates. The bricks or tiles have to be bedded as far as possible without cavities, either filled-joint or hollow-joint. For the protection of rubber linings usually a thin layer of mortar is trowelled in advance to prevent mechanical damages.

### WORK TOOLS

The following tools are essential for the application:

- Stirrer (max. 300 r/min.)
- Measuring cup & Mixing vessels
- Flat / wide brush
- Mortar trowel
- Grouting tool
- Miscellaneous (safety glasses, rubber gloves etc.)

### MIXING RATIO

Pour **ESKANOL VE SOLUTION** in a mixing vessel and add certain amount of **ESKANOL VE HARDENER M50** with the specified mixing ratios, then stir well. Add the **ESKANOL PO-L POWDER** with the specified mixing ratios and mix further. The components must be mixed thoroughly and intensively. It is important that stirring reaches the wall and bottom of the container as well, considering that mortar may deposit at those areas. Mix for at least three minutes and until a uniform mixture is achieved. As a primer, the resin-hardener mixture with the specified mixing ratio (**ESKANOL VE SOLUTION + ESKANOL VE HARDENER M50**) is used without adding the filler **ESKANOL PO-L POWDER** and with broadcasting quartz sand (0.7 - 1.2) while still wet.

Product	Parts by Weight	Parts by Volume
<b>ESKANOL VE SOLUTION</b>	100	3.00
<b>ESKANOL VE HARDENER M50</b>	2	0.06
<b>ESKANOL PO-L POWDER</b>	365	7.30

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# ESKANOL VE-L MORTAR

## CONSUMPTION

Bedding and jointing (Bed Joint 5 mm / Cross Joint 5-7 mm)

Material	Sizes [mm]	Coverage [kg/m <sup>2</sup> ]
Tiles	240 x 115 x 20	ca. 13
Tiles	240 x 115 x 40	ca. 17
Bricks	240 x 115 x 65	ca. 21
Bricks	240 x 115 x 80	ca. 23

## POT LIFE / WORKING TIME [min]

Product	15°C	20°C	30°C
ESKANOL VE-L MORTAR	ca. 40	ca. 30	ca. 20

## CURING (20°C)

Load Capacity	Time
Accessible	ca. 24 h

## CLEANING

Clean all equipment with **ESKANOL CLEANER** immediately after use.

## TESTING

The brick lining work shall be assessed according EN 14879-6 by visual inspection without magnifying lens. There shall be no imperfections (e.g. gaps, voids, unevenness, cracks or mechanical damages), which could impair the protective effect of the tile / brick lining.

## REPAIR

The defective areas have to be removed with suitable tools and have to be renewed again. Care has to be taken that no damages to the primer and / or sealing layers will occur. Optionally they also have to be renewed. Where post jointing is required, the min. joint depth must be 5 mm. When replacing multi-layered brick linings a stair-like outbreak has to be ensured.

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
ESKANOL VE SOLUTION	25 kg	---
ESKANOL VE HARDENER M50	5 kg	---
ESKANOL PO-L POWDER	25 kg	---
ESKANOL CLEANER	10 kg	---
ESKANOL CLEANER	25 kg	---

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
ESKANOL PO-L POWDER	-	Unlimited
ESKANOL CLEANER	5 - 25°C	60 Months
ESKANOL VE HARDENER M50	≤ +20°C	6 Months
ESKANOL VE SOLUTION	≤ +20°C	6 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Resistance to Ground	DIN 14879-6	Ω	≤ 10 <sup>6</sup>
Density	DIN EN ISO 2811 (ASTM D1475)	g/cm <sup>3</sup>	1.9
Compressive Strength	DIN EN ISO 604 (ASTM D695)	N/mm <sup>2</sup>	85
Adhesion Strength	-	N/mm <sup>2</sup>	≥ 2.5
Coefficient of Thermal Expansion	DIN 53752 (ASTM C531)	1/K	35 x 10 <sup>-6</sup>
Max. Operating Temperature Liquids	-	°C	+130

**Note:** The indicated temperatures are dependent on the present load and may vary

Information given in the fact sheet above corresponds to the current knowledge available to us regarding our products at the time of its drafting and is intended as a guideline for informational purposes. However, because of the multiple possibilities regarding possible applications, processing and on site conditions, any information given in the fact sheet above is not legally binding, in particular, without being limited to, such information shall not be interpreted as a warranty of merchantability or of fitness for a particular purpose. Customer therefore is advised to conduct its own testing or make an inquiry with our technical department before ordering. We reserve the right to change the product at any time, in particular, without being limited to, minor changes because of advancements in technology. If by way of exception, the information given in the fact sheet above is incorporated by reference into any contract concluded with us under German Law, such information, shall only be interpreted as determining the specific requirements of the contractual products as set out in § 434 BGB (German Civil Code) and shall not be interpreted as constituting a guarantee of condition.

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# PRODUCT INFORMATION

## ESKANOL VE-GFK

### PRODUCT DESCRIPTION

**ESKANOL VE-GFK** is a fibreglass mat reinforced; laminate lining based on vinyl ester resin. Due to the excellent mechanical properties, **ESKANOL VE-GFK** can cover cracks up to 0.3 mm according to DIBt (German Institute for Construction Technology) guidelines.

### COATING LAYERS CONSUMPTION

The laminate lining consists of the one-component primer **G4 PRIMER**, the three-component **ESKANOL VE-GFK** lamination coat reinforced with two layers of 300 g/m<sup>2</sup> ECR-fibreglass mats, and the three-component **ESKANOL VE-GFK** sealing coat. The overall dry film thickness is built up depending on the present chemical and thermal loads and can be up to approx. 3.0 - 4.0 mm.

### FIELDS OF APPLICATION

The laminate system **ESKANOL VE-GFK** is designed for the protection of concrete components, sumps, and collecting basins against organic and inorganic acids, oxidizing acids, lye and vast majority of the organic solvents.

### APPROVALS

**ESKANOL VE-GFK** is approved (**Z-59.12-138**) by the German Institute of Construction Technology (DIBt) or sumps, pits, collecting basins and reinforced concrete surfaces.

### FEATURES

- Resistance to continuous operating temperatures up to +80°C (liquids)
- Excellent chemical resistance
- Outstanding adhesion to concrete
- Excellent mechanical properties
- Good crack-bridging properties

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of concrete, screed or plaster. Components to be coated shall be designed and manufactured in accordance with EN 14879-1. In addition, DIN 1045 must also be observed.

### SURFACE PRE-TREATMENT

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup> and minimum compressive strength of 25 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%.

### ENVIRONMENTAL CONDITIONS

Throughout the coating process, the temperatures of the substrate and coating materials shall be maintained within the range specified by SKO. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### APPLICATION

During the application of the product, the application instruction must always be observed.

Immediately after **ESKANOL VE-GFK** laminate layer is rolled onto the primer applied surface, the first 300 g / m<sup>2</sup> ECR glass mat is immersed into the coating, further soaked with the resin solution and pressed onto the substrate with lamination rollers. The second 300 g / m<sup>2</sup> ECR glass mat is placed onto the uncured layer, soaked with the resin solution and also pressed with a lamination roller. Finally the **ESKANOL VE-GFK** sealing layer is blister-free rolled on the top..

**Note:** During application, the lined surface should be shaded from direct or indirect sunlight whenever possible.

### MIXING RATIO

Laminate Layer	Parts by Weight	Parts by Volume
<b>ESKANOL VE SOLUTION</b>	100	3.0
<b>ESKANOL PO HARDENER POWDER</b>	3	0.15
<b>STEWATHIX 100</b>	2	1.2

Sealing	Parts by Weight	Parts by Volume
<b>ESKANOL VE SOLUTION</b>	100	3.0
<b>ESKANOL PO HARDENER POWDER</b>	3	0.15
<b>STEWATHIX 100</b>	2	1.2

### CONSUMPTION PER COAT

Layer	Product	Coverage [g/m <sup>2</sup> ]
Primer	<b>G4 PRIMER</b>	ca. 250
Laminate layer	<b>ESKANOL VE-GFK</b> 2 x ECR-fibreglass mat 300 g/m <sup>2</sup>	ca. 2500 ca. 660
Sealing	<b>ESKANOL VE-GFK</b>	ca. 400

### POT LIFE / WORKING TIME [min]

Product	15°C	20°C	30°C
<b>G4 PRIMER</b>	ca. 30	ca. 20	ca. 15
<b>ESKANOL VE-GFK</b>	ca. 40	ca. 30	ca. 20

### RECOAT TIME (20°C)

Product	Min. [h]	Max. [Days]
<b>G4 PRIMER</b>	ca. 0.5	ca. 10
<b>ESKANOL VE-GFK</b>	ca.6	ca. 48

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# ESKANOL VE-GFK

## CLEANING

Clean all equipment with **ESKANOL CLEANER** immediately after use.

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
ECR-fibreglass mat 300 g/m <sup>2</sup>	125 m <sup>2</sup>	---
<b>ESKANOL PO HARDENER POWDER</b>	0.1 kg	---
<b>ESKANOL VE SOLUTION</b>	25 kg	---
<b>G4 PRIMER</b>	10 kg	---
<b>G4 PRIMER</b>	20 kg	---
<b>STEWATHIX 100</b>	15 kg	---
<b>ESKANOL CLEANER</b>	10 kg	---
<b>ESKANOL CLEANER</b>	25 kg	---

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
<b>ESKANOL PO HARDENER POWDER</b>	5 - 20°C	6 Months
<b>ESKANOL CLEANER</b>	5 - 25°C	60 Months
<b>ESKANOL VE SOLUTION</b>	≤ +20°C	6 Months
<b>G4 PRIMER</b>	5 - 20°C	12 Months
<b>STEWATHIX 100</b>	≤ +20°C	24 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Compressive Strength (laminate layer)	EN ISO 604 (ASTM D695)	N/mm <sup>2</sup>	63 - 68
Modulus of Elasticity (Bend Test)	EN ISO 178 (ASTM D790)	N/mm <sup>2</sup>	7000
Hardness Barcol	EN 59 (ASTM D2583)	-	≥ 40
Min. Adhesion Strength Concrete	EN ISO 4624 (ASTM D7234)	N/mm <sup>2</sup>	1.5*
Viscosity (resin solution)	EN ISO 2555 (ASTM D2196)	mPa·s	ca. 300
Linear Coefficient of Thermal Expansion	DIN 53752 (ASTM C531)	1/K	27 - 30 x 10 <sup>-6</sup>
Tensile Strength	EN ISO 527 (ASTM C531)	N/mm <sup>2</sup>	ca. 50
Max. Operating Temperature Liquids	-	°C	+80

\* Depending on the concrete strength

**Note:** The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## ESKANOL VE/L

### PRODUCT DESCRIPTION

**ESKANOL VE/L** is a fibreglass mat reinforced, conductive laminate lining based on vinyl ester resin.

### COATING LAYERS CONSUMPTION

The laminate lining consists of the one-component primer **G4 PRIMER**, the three-component **ESKANOL VE/L** lamination coat reinforced with two layers of 300 g/m<sup>2</sup> ECR-fibreglass mats, the three-component **ESKANOL VE/L** sealing coat and one layer of **ESKANOL VE/L** conductive topcoat. The overall dry film thickness is built up depending on the present chemical and thermal loads and can be up to approx. 3.5 mm.

### FIELDS OF APPLICATION

The laminate system **ESKANOL VE/L** is designed for the protection of concrete components, sumps, and collecting basins against organic and inorganic acids, oxidizing acids, lye and vast majority of the organic solvents.

### APPROVALS

**ESKANOL VE/L** is approved (**Z-59.12-203**) by the German Institute of Construction Technology (DIBt) for sumps, pits, collecting basins and reinforced concrete surfaces.

### FEATURES

- Resistance to continuous operating temperatures up to +80°C (liquids)
- Excellent chemical resistance
- Outstanding adhesion to concrete
- Excellent mechanical properties
- Good crack-bridging properties
- Good conductivity

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of concrete, screed or plaster. Components to be coated shall be designed and manufactured in accordance with EN 14879-1. In addition, DIN 1045 must also be observed.

### SURFACE PRE-TREATMENT

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup> and minimum compressive strength of 25 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%.

### ENVIRONMENTAL CONDITIONS

Throughout the coating process, the temperatures of the substrate and coating materials shall be maintained within the range specified by SKO. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### APPLICATION

During the application of the product, the application instruction must always be observed.

Immediately after **ESKANOL VE/L** laminate layer is rolled onto the primer applied surface, the first 300 g / m<sup>2</sup> ECR glass mat is immersed into the coating, further soaked with the resin solution and pressed onto the substrate with lamination rollers. The second 300 g / m<sup>2</sup> ECR glass mat is placed onto the uncured layer, soaked with the resin solution and also pressed with a lamination roller.

Then the **ESKANOL VE/L** sealing layer is rolled blister-free. Finally, the conductive top layer is applied on the top.

**Note:** During application, the lined surface should be shaded from direct or indirect sunlight whenever possible.

### MIXING RATIO

Laminate Layer	Parts by Weight	Parts by Volume
<b>ESKANOL VE SOLUTION</b>	100	3.0
<b>ESKANOL PO HARDENER POWDER</b>	3	0.15
<b>STEWATHIX 100</b>	2	1.2

Sealing (dissipative)	Parts by Weight	Parts by Volume
<b>ESKANOL VE SOLUTION</b>	100	3.0
<b>ESKANOL PO HARDENER POWDER</b>	3	0.15
<b>ESKANOL GRAPHITE</b>	70	2.30
<b>ESKANOL PO POWDER</b>	40	0.65

### CONSUMPTION PER COAT

Layer	Product	Coverage [g/m <sup>2</sup> ]
Primer	<b>G4 PRIMER</b>	ca. 250
Laminate layer	<b>ESKANOL VE-GFK</b>	ca. 2500
	2 x ECR-fibreglass mat 300 g/m <sup>2</sup>	ca. 660
Sealing	<b>ESKANOL VE/L</b>	ca. 350
Topcoat	<b>ESKANOL VE/L</b>	ca. 3000

### POT LIFE / WORKING TIME [min]

Product	15°C	20°C	30°C
<b>G4 PRIMER</b>	ca. 30	ca. 20	ca. 15
<b>ESKANOL VE/L</b>	ca. 40	ca. 30	ca. 20

### RECOAT TIME (20°C)

Product	Min. [h]	Max. [Days]
<b>G4 PRIMER</b>	ca. 0.5	ca. 10
<b>ESKANOL VE/L</b>	ca. 6	ca. 48

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# ESKANOL VE/L

## CLEANING

Clean all equipment with **ESKANOL CLEANER** immediately after use.

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
ECR-fibreglass mat 300 g/m <sup>2</sup>	125 m <sup>2</sup>	---
<b>ESKANOL GRAPHITE</b>	25 kg	---
<b>ESKANOL PO HARDENER POWDER</b>	0.1 kg	---
<b>ESKANOL PO POWDER</b>	25 kg	---
<b>ESKANOL VE SOLUTION</b>	25 kg	---
<b>G4 PRIMER</b>	10 kg	---
<b>G4 PRIMER</b>	20 kg	---
<b>STEWATHIX 100</b>	15 kg	---
<b>ESKANOL CLEANER</b>	10 kg	---
<b>ESKANOL CLEANER</b>	25 kg	---

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
<b>ESKANOL GRAPHITE</b>	-	24 Months
<b>ESKANOL PO HARDENER POWDER</b>	5 - 20°C	6 Months
<b>ESKANOL PO POWDER</b>	-	Unlimited
<b>ESKANOL CLEANER</b>	5 - 25°C	60 Months
<b>ESKANOL VE SOLUTION</b>	≤ +20°C	6 Months
<b>G4 PRIMER</b>	5 - 20°C	12 Months
<b>STEWATHIX 100</b>	≤ +20°C	24 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Compressive Strength (laminated layer)	EN ISO 604 (ASTM D695)	N/mm <sup>2</sup>	63 - 68
Modulus of Elasticity (Bend Test)	EN ISO 178 (ASTM D790)	N/mm <sup>2</sup>	7000
Hardness Barcol	EN 59 (ASTM D2583)	-	≥ 40
Min. Adhesion Strength Concrete	EN ISO 4624 (ASTM D7234)	N/mm <sup>2</sup>	1.5*
Viscosity (resin solution)	EN ISO 2555 (ASTM D2196)	mPa·s	ca. 300
Linear Coefficient of Thermal Expansion	DIN 53752 (ASTM C531)	1/K	27 - 30 x 10 <sup>-6</sup>
Tensile Strength	EN ISO 527 (ASTM C531)	N/mm <sup>2</sup>	ca. 50
Max. Operating Temperature Liquids	-	°C	+80

\* Depending on the concrete strength

**Note:** The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## ESKANOL VE TOPCOAT

### PRODUCT DESCRIPTION

**ESKANOL VE TOPCOAT** is a two-component polymer coating based on an Bisphenol-A vinyl ester resin with mineral fillers.

### COATING LAYERS CONSUMPTION

The coating system consists of the two-component **ESKANOL VE TOPCOAT**. The total applied DFT is approx. 500 -700 µm.

### FIELDS OF APPLICATION

**ESKANOL VE TOPCOAT** is applied to achieve a tack-free, and chemically resistant surface either in smooth or anti-skid form.

### FEATURES

- Excellent chemical resistance to inorganic acids, lye and organic solvents
- Outstanding adhesion onto polymer coatings based on Bisphenol-A vinyl ester resins
- Easily cleaned
- Application by rolling or trowelling

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are coatings based on Bisphenol-A vinyl ester resins. Components to be coated shall be constructed and manufactured in accordance with EN 14879-1.

### SURFACE PRE-TREATMENT

The subsequent layer of coating can be applied onto the previously applied layer straightforward without surface preparation. But the time interval between the consecutive coatings should not exceed a maximum of 72 hours. If this condition is not met, the surface of the previous layer needs to be roughened by abrasive blasting.

### ENVIRONMENTAL CONDITIONS

Throughout the coating process, the temperatures of the substrate and coating materials shall be maintained within the range specified by SKO. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### APPLICATION

During the application of the product, the application instruction must always be observed.

**ESKANOL VE TOPCOAT** is applied using a roller or trowel.

**Note:** During application, the lined surface should be shaded from direct or indirect sunlight whenever possible.

### MIXING RATIO

Coating	Parts by Weight	Parts by Volume
<b>ESKANOL VE TOPCOAT</b>	100	3.00
<b>ESKANOL VE HARDENER M50</b>	2	0.06

### CONSUMPTION

Product	Thickness [µm]	Coverage [g/m <sup>2</sup> ]
<b>ESKANOL VE TOPCOAT</b>	ca. 500 - 700	ca. 800 - 1000

### POT LIFE / WORKING TIME [min]

Product	15°C	20°C	30°C
<b>ESKANOL VE TOPCOAT</b>	ca. 40	ca. 30	ca. 20

### CLEANING

Clean all equipment with **ESKANOL CLEANER** immediately after use.

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# ESKANOL VE TOPCOAT

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
ESKANOL VE TOPCOAT	25 kg	---
ESKANOL VE HARDENER M50	5 kg	---
ESKANOL CLEANER	10 kg	---
ESKANOL CLEANER	25 kg	---

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
ESKANOL CLEANER	5 - 25°C	60 Months
ESKANOL VE HARDENER M50	≤ +20°C	6 Months
ESKANOL VE TOPCOAT	≤ +20°C	6 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Density (Mixture)	EN ISO 2811 (ASTM D1475)	g/cm <sup>3</sup>	1.1 ± 0.03
Hardness Shore D	DIN ISO 7619 (ASTM D2240)	-	≥ 70
Min. Adhesion Strength Steel	EN ISO 4624 (ASTM D4541)	N/mm <sup>2</sup>	> 5
Linear Coefficient of Thermal Expansion	ISO 11359-2 (ASTM C531)	1/K	25-30 x 10 <sup>-6</sup>
Max. Operating Temperature Liquids	-	°C	+60
Max. Operating Temperature Dry (Flue Gas)	-	°C	+100

**Note:** The indicated temperatures are dependent on the present load and may vary

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## DESCRIPTION

### SPECIAL MATERIALS

Product	Product Description
<b>COROFLOOR 682</b>	<b>COROFLOOR 682</b> is a glass mat reinforced and a self-levelling floor coating, based on a high quality epoxy resin. Due to its excellent mechanical properties <b>COROFLOOR 682</b> can bridge the cracks on the concrete up to 0.4 mm in accordance with the DIBt construction and testing guidelines, and is therefore especially suitable for concrete structures.
<b>COROGARD 615</b>	<b>COROGARD 615</b> is a two-component inert flakes filled polymer coating based on a high quality epoxy resin. The epoxy resin contains anticorrosive pigments which ensure an excellent adhesion even when applied on manually derusted surfaces.
<b>REMAFIX C</b>	<b>REMAFIX C</b> is a four-component, grey-black coloured, conductive synthetic resin coating based on high quality epoxy resin. The specially formulated hardening system allows the filler to be moisture-tolerated and enables the curing even at low ambient temperatures down to +3°C. <b>REMAFIX C</b> guarantees optimal adhesion performances to the <b>CHEMOLINE</b> range of rubber grades, which are to be applied thereafter onto the concrete substrates.
<b>REMAFIX L</b>	<b>REMAFIX L</b> is a two-component, grey-black coloured, conductive screed material based on high quality epoxy resin.
<b>REMAFLON G</b>	<b>REMAFLON G</b> is a single side etched thermoplastic sheet based on polytetrafluoroethylene (PTFE) with a film thickness of 0.25 or 0.5 mm. <b>REMAFLON G</b> is bonded onto a soft rubber lining by means of special TIP TOP contact adhesives.
<b>TOPCOAT LSE</b>	<b>TOPCOAT LSE</b> is an atmospheric hardening coating based on polyisocyanate pre-polymers. The product exhibits a very low surface energy in its dried condition.

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# PRODUCT INFORMATION

## COROFLOOR 682

### PRODUCT DESCRIPTION

**COROFLOOR 682** is a glass mat reinforced and a self-levelling floor coating, based on a high quality epoxy resin. Due to its excellent mechanical properties **COROFLOOR 682** can bridge the cracks on the concrete up to 0.4 mm in accordance with the DIBt construction and testing guidelines, and is therefore especially suitable for concrete structures.

### COATING LAYERS CONSUMPTION

The glass mat reinforced floor coating system consists of a two-component primer, two-component **COROFLOOR 682** laminate layer reinforced with a 300 g/m<sup>2</sup> ECR-glass fibre mat, and a two-component top coat. A final anti-skid sealing layer can be applied onto the top coat as an option. The total dry film thickness of the coating is approximately 3.0 mm.

### FIELDS OF APPLICATION

**COROFLOOR 682** is used mainly in the chemical and pharmaceutical industries as well as in the food industry for the protection of concrete and cement screed floors.

### FEATURES

- Good chemical resistance against bases and acids
- Temperature resistance up to +75°C (Wet)
- Very good adhesion on concrete
- Excellent crack bridging
- Excellent mechanical properties

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of concrete, screed or plaster. Components to be coated shall be designed and manufactured in accordance with EN 14879-1. In addition, DIN 1045 must also be observed.

### SURFACE PRE-TREATMENT

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup> and minimum compressive strength of 25 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%.

### ENVIRONMENTAL CONDITIONS

Throughout the coating process, the temperatures of the substrate and coating materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### APPLICATION

During the application of the product, the application instruction must always be observed.

The primer **COROFLAKE 68 PRIMER** is applied to the substrate using paint rollers. Following the primer application a second primer coat - approx. 1 mm thick - is applied onto the primer applied surface using a smoothing trowel

and covered immediately with the glass fibre mat which is pressed into the resin by rollers avoiding the formation of air pockets. Following the hardening of the laminate layer, **COROFLOOR 682** top coat is applied. This application is performed uniformly with notched trowels, and afterwards the topcoat is rolled with spiked rollers to release any trapped air. In case that an anti-skid sealing layer is required, an additional layer of **COROFLOOR 682** is applied by paint rollers onto the top coat.

**Note:** During application, the lined surface should be shaded from direct or indirect sunlight whenever possible. In atmospheric exposure coatings based on epoxy resins have the tendency to chalking with time.

### MIXING RATIO

The primer and coating components are supplied in pre-measured units so that weighing or measuring of the components is kept to a minimum. After the unit has been mixed it shall be used within the specified pot life.

Primer	Parts by Weight	Parts by Volume
<b>COROFLAKE 68 PRIMER</b>	100	100
<b>HARDENER No. 4</b>	30	33.69

Laminate Layer	Parts by Weight	Parts by Volume
<b>COROFLAKE 68 PRIMER</b>	100	100
<b>HARDENER No. 4</b>	30	33.69

Topcoat / Sealing	Parts by Weight	Parts by Volume
<b>COROFLOOR 682 BC-A</b>	100	100
<b>COROFLOOR 682 BC-B</b>	15,16	25,09
<b>COROFLOOR 682 TC-A</b>	100	100
<b>COROFLOOR 682 TC-B</b>	37.5	54,51

### CONSUMPTION

Layer	Product	Coverage [g/m <sup>2</sup> ]
Primer	<b>COROFLAKE 68 PRIMER</b>	ca. 300
Laminate Layer	<b>COROFLAKE 68 PRIMER</b>	ca. 500
	1 x ECR-fibreglass mat 300 g/m <sup>2</sup>	ca. 330
Topcoat	<b>COROFLOOR 682 BC-A / COROFLOOR 682 BC-B</b>	ca. 2500
Sealing	<b>COROFLOOR 682 TC-A / COROFLOOR 682 TC-B</b>	ca. 250

### POT LIFE / WORKING TIME [min]

Product	15°C	20°C	30°C
<b>COROFLOOR 682 TC</b>	ca. 75	ca. 40	ca. 20

### RECOAT TIME (20°C)

Product	Min. [h]	Max. [Days]
<b>COROFLAKE 68 PRIMER</b>	ca. 12	ca. 7
<b>COROFLOOR 682 BC</b>	ca. 16	-
<b>COROFLOOR 682 TC</b>	ca. 12	-

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# COROFLOOR 682

## CLEANING

Clean all equipment with **SOLVENT T-100** immediately after use.

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
<b>COROFLAKE 68 PRIMER</b>	12 kg	590 0851
<b>COROFLOOR 682 BC-A</b>	12 kg	590 1269
<b>COROFLOOR 682 BC-B</b>	1.82 kg	590 1252
<b>COROFLOOR 682 TC-A</b>	12 kg	590 1245
<b>COROFLOOR 682 TC-B</b>	4,5 kg	590 1252
ECR-fibreglass mats 300 g/m <sup>2</sup>	20 m <sup>2</sup>	590 0239
ECR-fibreglass mats 300 g/m <sup>2</sup>	50 m <sup>2</sup>	590 0246
<b>HARDENER No. 4</b>	3.6 kg	590 0875
<b>SOLVENT T-100</b>	4 kg	590 0617
<b>SOLVENT T-100</b>	8 kg	590 0600

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
<b>COROFLAKE 68 PRIMER</b>	5 - 25°C	12 Months
<b>COROFLOOR 682 BC-A</b>	5 - 25°C	12 Months
<b>COROFLOOR 682 BC-B</b>	5 - 25°C	12 Months
<b>COROFLOOR 682 TC-A</b>	5 - 25°C	12 Months
<b>COROFLOOR 682 TC-B</b>	5 - 25°C	12 Months
<b>HARDENER No. 4</b>	5 - 25°C	12 Months
<b>SOLVENT T-100</b>	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Abrasion	ASTM D4060	mg	37
Compressive Strength (Laminate Layer)	EN ISO 604 (ASTM D695)	N/mm <sup>2</sup>	40
Min. Adhesion Strength Concrete	EN ISO 4624 (ASTM D7234)	N/mm <sup>2</sup>	1.5***
Test Voltage (earliest after 24 hours)	EN 14879-2	kV / 100µm DFT	0.5
Viscosity	EN ISO 2555 (ASTM D2196)	mPa·s	COMP. A: 18000 ± 2000* / COMP. B: 675 ± 75* // COMP. A: 2700 ± 300** / COMP. B: 100 ± 50**
Linear Coefficient of Thermal Expansion	ISO 11359-2 (ASTM C531)	1/K	25-30 x 10 <sup>-6</sup>
Tensile Strength	EN ISO 527 (ASTM D638)	N/mm <sup>2</sup>	30
Max. Operating Temperature Liquids	-	°C	+75

\* BC \*\* TC \*\*\* Depending on the concrete strength

**Note:** The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## COROGARD 615

### PRODUCT DESCRIPTION

**COROGARD 615** is a two-component inert flakes filled polymer coating based on a high quality epoxy resin. The epoxy resin contains anticorrosive pigments which ensure an excellent adhesion even when applied on manually derusted surfaces.

### COATING LAYERS CONSUMPTION

The coating consists of at least one coat of the two-component **COROGARD 615** system with an approximate dry film thickness of 200 - 250 µm per layer.

### FIELDS OF APPLICATION

**COROGARD 615** is used especially as corrosion protection of steel surfaces where a normal abrasive blasting is not possible. The coating can also be applied on concrete, on galvanised metal sheets and on existing and firmly adhering paint coatings. Exceptions are chlorinated rubber and vinyl coatings.

### FEATURES

- Versatile application
- Applicable on manual derusted steel surfaces
- Fast and easy application
- High layer thickness in one work step
- Excellent adhesion on various substrates

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of steel, concrete, screed or plaster. Components to be coated shall be designed and manufactured in accordance with EN 14879-1. For components made of concrete, screed or plaster DIN 1045 must also be observed.

### SURFACE PRE-TREATMENT

#### C-STEEL

Surfaces to be coated must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht # 28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 70 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate.

#### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup> and minimum compressive strength of 25 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%.

### ENVIRONMENTAL CONDITIONS

Throughout the coating process, the temperatures of the substrate and coating materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### APPLICATION

During the application of the product, the application instruction must always be observed.

**COROGARD 615** is applied to the substrate using an airless air spray system or by rolling or brushing. In case **COROGARD 615** is applied by brushing or rolling, additional coats may be required to achieve the required total DFT.

**Note:** During application, the lined surface should be shaded from direct or indirect sunlight whenever possible. In atmospheric exposure coatings based on epoxy resins have the tendency to chalking with time.

### MIXING RATIO

The primer and coating components are supplied in pre-measured units so that weighing or measuring of the components is kept to a minimum. After the unit has been mixed it shall be used within the specified pot life.

Coating	Parts by Weight	Parts by Volume
<b>COROGARD 615 COMP. A</b>	100	100
<b>COROGARD 615 COMP. B</b>	100	86,14

### CONSUMPTION PER COAT

Product	Thickness [µm]	Coverage [g/m <sup>2</sup> ]
<b>COROGARD 615</b>	ca. 200 - 250	ca. 300 (steel)
<b>COROGARD 615</b>	ca. 200	ca. 300 (concrete)

The information about coverage is an average for spray applications. Actual coverage depends on the object geometry and the method of application. It can vary.

### POT LIFE / WORKING TIME [min]

Product	15°C	20°C	30°C
<b>COROGARD 615</b>	ca. 8h	ca. 4h	ca. 2h

### CLEANING

Clean all equipment with **SOLVENT T-100** immediately after use.

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# COROGARD 615

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
<b>COROGARD 615 COMP. A</b>	5 kg	590 1049
<b>COROGARD 615 COMP. B</b>	5 kg	590 1056
<b>SOLVENT T-100</b>	4 kg	590 0617
<b>SOLVENT T-100</b>	8 kg	590 0600

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
<b>COROGARD 615 COMP. A</b>	5 - 25°C	12 Months
<b>COROGARD 615 COMP. B</b>	5 - 25°C	12 Months
<b>SOLVENT T-100</b>	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Abrasion	ASTM D 4060	mg	100
Density (Mixture)	EN ISO 2811 (ASTM D1475)	g/cm <sup>3</sup>	COMP. A: 1.20 ± 0.05 / COMP. B: 1.33 ± 0.04
Modulus of Elasticity (Bend Test)	EN ISO 178 (ASTM D790)	N/mm <sup>2</sup>	3250 ± 250
Min. Adhesion Strength Concrete	EN ISO 4624 (ASTM D7234)	N/mm <sup>2</sup>	1.5***
Min. Adhesion Strength Steel	EN ISO 4624 (ASTM D4541)	N/mm <sup>2</sup>	5
Test Voltage (earliest after 24 hours)	EN 14879-2	kV / 100µm DFT	0.5
Viscosity	EN ISO 2555 (ASTM D2196)	mPa·s	COMP. A: 8000 ± 1500 / COMP. B: 6250 ± 750
Max. Operating Temperature Dry (Flue Gas)	-	°C	+120

\*\*\* Depending on the concrete strength

**Note:** The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## REMAFIX C

### PRODUCT DESCRIPTION

**REMAFIX C** is a four-component, grey-black coloured, conductive synthetic resin coating based on high quality epoxy resin. The specially formulated hardening system allows the filler to be moisture-tolerated and enables the curing even at low ambient temperatures down to +3°C. **REMAFIX C** guarantees optimal adhesion performances to the **CHEMOLINE** range of rubber grades, which are to be applied thereafter onto the concrete substrates.

### COATING LAYERS CONSUMPTION

The coating consists of two-component primer **COROFLAKE 68 PRIMER** and four-component **REMAFIX C** screed with an approximate dry film thickness of 1 - 2 mm.

### FIELDS OF APPLICATION

**REMAFIX C** is a specially modified mastic to prepare concrete surfaces for rubber linings with TIP TOP soft rubber lining systems. The primer improves the structural performance of the concrete and increases the adhesive strength of the mastic onto the concrete substrate. The basic coat is applied to repair any faulty areas in the concrete substrate such as cracks, washouts, erosion, cavities, holes and on the other hand to form a conductive substrate for the holiday (pinhole) test.

The surfaces coated with **REMAFIX C** show excellent suitability for further rubber lining with the **CHEMOLINE** soft rubber linings. The build-up and material consumptions of the adhesive system including primers are equivalent to the application onto the steel surfaces.

### FEATURES

- High bonding strength to concrete
- Excellent workability
- Electric conductivity

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of concrete, screed or plaster. Components to be coated shall be designed and manufactured in accordance with EN 14879-1. In addition, DIN 1045 must also be observed.

### SURFACE PRE-TREATMENT

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup> and minimum compressive strength of 25 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%.

### ENVIRONMENTAL CONDITIONS

Throughout the coating process, the temperatures of the substrate and coating materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### APPLICATION

During the application of the product, the application instruction must always be observed.

The primer **COROFLAKE 68 PRIMER** is applied to the substrate using an airless spray system or by rolling. Following the primer application the **REMAFIX C** screed should be applied uniformly with a smoothing trowel.

### MIXING RATIO

The primer and coating components are supplied in pre-measured units so that weighing or measuring of the components is kept to a minimum. After the unit has been mixed it shall be used within the specified pot life.

Pour **HARDENER No. 4** in the specified mixing ratio to **COROFLAKE 68 PRIMER** and mix thoroughly (about 3 min.). For the trowel applied **REMAFIX C** the resin-hardener mixture must be filled with **CARBON FILLER** in the specified mixing ratio. The stirring of the merged components should be at least 3 minutes and must result in a homogeneous mixture. Subsequently 10 – 50 g **FILLER PE 940T** to the mixture and mix again until a homogeneous mixture has formed.

Primer	Parts by Weight	Parts by Volume
<b>COROFLAKE 68 PRIMER</b>	100	100
<b>HARDENER No. 4</b>	30	33.69

Coating	Parts by Weight	Parts by Volume
<b>COROFLAKE 68 PRIMER</b>	100	100
<b>HARDENER No. 4</b>	30	33.69
<b>CARBON FILLER</b>	140	266

### CONSUMPTION

Layer	Product	Coverage [g/m <sup>2</sup> ]
Primer	<b>COROFLAKE 68 PRIMER</b>	ca. 300
<b>REMAFIX C</b>	<b>COROFLAKE 68 PRIMER</b>	ca. 1000
	<b>CARBON FILLER</b>	ca. 1400

### POT LIFE / WORKING TIME [min]

Product	15°C	20°C	30°C
<b>COROFLAKE 68 PRIMER</b>	ca. 120	ca. 60	ca. 30
<b>REMAFIX C</b>	ca. 180	ca. 120	ca. 45

### RECOAT TIME (20°C)

Product	Min. [h]	Max. [Days]
<b>COROFLAKE 68 PRIMER</b>	ca. 12	ca. 7
<b>REMAFIX C</b>	ca. 8	ca. 7

### CLEANING

Clean all equipment with **SOLVENT T-100** immediately after use.

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# REMAFIX C

## SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
<b>CARBON FILLER</b>	25 kg	590 9120
<b>COROFLAKE 68 PRIMER</b>	12 kg	590 0851
<b>HARDENER No. 4</b>	3.6 kg	590 0875
<b>FILLER PE 940T</b>	10 kg	590 0940
<b>SOLVENT T-100</b>	4 kg	590 0617
<b>SOLVENT T-100</b>	8 kg	590 0600

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
<b>CARBON FILLER</b>	-	24 Months
<b>COROFLAKE 68 PRIMER</b>	5 - 25°C	12 Months
<b>FILLER PE 940T</b>	-	24 Months
<b>HARDENER No. 4</b>	5 - 25°C	12 Months
<b>SOLVENT T-100</b>	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Resistance	DIN IEC 93	Ω	1 x 10 <sup>4</sup>
Hardness Shore D	DIN ISO 7619 (ASTM D2240)	-	> 60*
Min. Adhesion Strength Concrete	EN ISO 4624 (ASTM D7234)	N/mm <sup>2</sup>	1.5***
Max. Operating Temperature Liquids	-	°C	+60

\* after 2 days curing time at +20°C \*\*\* Depending on the concrete strength

**Note:** The indicated temperatures are dependent on the present load and may vary

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# PRODUCT INFORMATION

## REMAFIX L

### PRODUCT DESCRIPTION

**REMAFIX L** is a two-component, grey-black coloured, conductive screed material based on high quality epoxy resin.

### COATING LAYERS CONSUMPTION

The mastic consists of the **REMAFIX L COMP. A** and the **REMAFIX L COMP. B**.

### FIELDS OF APPLICATION

**REMAFIX L** is a specially modified mastic for the repair/refurbishing of concrete and steel component surfaces. With **REMAFIX L** mastic, levelling and smoothing out the irregularities in the surface such as grooves, cavities and cracks can be accomplished. **REMAFIX L** also forms a conductive layer over concrete surfaces which allow a holiday test in accordance with EN 14879-1.

### FEATURES

- High bonding strength to concrete and to steel
- Excellent workability
- Electric conductivity
- Solvent-free

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are components made of steel, concrete, screed or plaster. Components to be coated shall be designed and manufactured in accordance with EN 14879-1. For components made of concrete, screed or plaster DIN 1045 must also be observed.

### SURFACE PRE-TREATMENT

#### C-STEEL

Surfaces to be coated must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht # 28 and EN ISO 8502.

Ferrite steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-1 must be achieved. A minimum surface profile of Rz ≥ 60 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate.

#### CONCRETE

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm<sup>2</sup> and minimum compressive strength of 25 N/mm<sup>2</sup>. The residual moisture content must not exceed 4%.

### ENVIRONMENTAL CONDITIONS

Throughout the coating process, the temperatures of the substrate and coating materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

### APPLICATION

During the application of the product, the application instruction must always be observed.

For the application of **REMAFIX L** an ambient temperature between +15 °C and +30 °C is required. At lower temperatures curing of **REMAFIX L** will be very slow or in certain circumstances even incomplete. **REMAFIX L** needs to be applied uniformly onto the prepared surfaces using a trowel. At a temperature of +25°C, hardening will take place within approximately 24 - 30 hours. The hardening time may be significantly reduced by means of a thermal treatment (using either hot air or a radiant heater at approx. 60 °C). Once the **REMAFIX L** coating is cured, the surface of the coating can be sanded to the desired finish, if necessary.

### MIXING RATIO

**REMAFIX L** is supplied in pre-measured units so that weighing or measuring of the components is kept to a minimum. After the unit has been mixed it shall be used within the specified pot life.

Coating	Parts by Weight	Parts by Volume
REMAFIX L COMP. A	100	100
REMAFIX L COMP. B	100	118

### CONSUMPTION

Product	Thickness [mm]	Coverage [g/m <sup>2</sup> ]
REMAFIX L	1	ca. 2000

### POT LIFE / WORKING TIME [min]

Product	15°C	20°C	30°C
REMAFIX L	-	ca. 30	-

### CLEANING

Clean all equipment with **SOLVENT T-100** immediately after use.

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# REMAFIX L

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
REMAFIX L COMP. A & B	1 kg (each 0.5 kg)	528 7055
SOLVENT T-100	4 kg	590 0617
SOLVENT T-100	8 kg	590 0600

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
REMAFIX L COMP. A & B	5 - 25°C	6 Months
SOLVENT T-100	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Density	-	g/cm <sup>3</sup>	1.15
Min. Adhesion Steel	EN ISO 4624 (ASTM D4541)	N/mm <sup>2</sup>	≥ 8

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# PRODUCT INFORMATION

## REMAFLON G

### PRODUCT DESCRIPTION

**REMAFLON G** is a single side etched thermoplastic sheet based on polytetrafluoroethylene (PTFE) with a film thickness of 0.25 or 0.5 mm. **REMAFLON G** is bonded onto a soft rubber lining by means of special TIP TOP contact adhesives.

### ADHESIVE SYSTEM

The lining material **REMAFLON G** is bonded onto the rubber with the adhesive system **PRIMER HG 1** in combination with **CEMENT BC 3004**.

### FIELDS OF APPLICATION

Due to its resistance to numerous chemicals and its outstanding slip and anti-adhesion properties, the lining material **REMAFLON G** is used worldwide in the chemical industry, especially in flue gas desulphurisation plants. Though chemically and thermally stressed rubber lined steel parts can be protected against solid caking. **REMAFLON G** is especially used in the suspension transmission zone in absorbers as well as in flue gas fans, where an increased risk of scaling exists.

### FEATURES

- Outstanding slip and anti-adhesion properties
- Excellent chemical surface resistance
- Remarkable tightness against diffusion of water vapour and other various substances

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are soft rubber linings.

### SURFACE PRE-TREATMENT

All surfaces must be clean, dry and free from contamination.

### APPLICATION

During the application of the product, the application instruction must always be observed.

The lining material **REMAFLON G** is brushed with **PRIMER HG 1** on the etched side and afterwards bonded onto the soft rubber lining using **CEMENT BC 3004**.

### APPLICATION METHOD UND CONSUMPTION

Coat	Product	Application Method	Coverage [g/m <sup>2</sup> ]
1. Coat <b>REMAFLON G</b> (etched brown side)	<b>PRIMER HG 1</b>	Brush	ca. 150
2. Coat <b>REMAFLON G</b>	<b>CEMENT BC 3004</b>	Brush	ca. 200
3. Coat <b>REMAFLON G</b>	<b>CEMENT BC 3004</b>	Brush	ca. 200
1. Coat soft rubber	<b>CEMENT BC 3004</b>	Brush	ca. 200
2. Coat soft rubber	<b>CEMENT BC 3004</b>	Brush	ca. 200

### CONTACT LIFE (OPEN TIME)

Coat	Minimal	Maximal
1. Coat <b>REMAFLON G</b> (etched brown side)	ca. 2 h	ca. 7 Days
2. Coat <b>REMAFLON G</b>	ca. 2 h	ca. 7 Days
3. Coat <b>REMAFLON G</b>	ca. 1 h	ca. 2 h
1. Coat soft rubber	ca. 2 h	ca. 7 Days
2. Coat soft rubber	ca. 1 h	ca. 2 h

**Note:** The Contact Life depends on the ambient temperature.

### CLEANING

Clean all equipment with **SOLVENT CF-CE** immediately after use.

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

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# REMAFLON G

## PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
CEMENT BC 3004	4.5 kg	525 4095
CEMENT BC 3004	9 kg	525 4143
CEMENT BC 3004	18 kg	525 4130
HARDENER E 40	30 g	525 1067
PRIMER HG 1	0.75 kg	525 2949
PRIMER HG 1	4.5 kg	525 3050
PRIMER HG 1	9 kg	525 2956
REMAFLON G	0.25 mm x 1200 mm x 33000 mm	---
REMAFLON G	0.5 mm x 1200 mm x 33000 mm	---
SOLVENT CF-CE	10 l	595 9163

## STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
CEMENT BC 3004	5 - 25°C	24 Months
PRIMER HG 1	5 - 20°C	12 Months
REMAFLON G	≤ +30°C	12 Months
SOLVENT CF-CE	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

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# PRODUCT INFORMATION

## TOPCOAT LSE

### PRODUCT DESCRIPTION

**TOPCOAT LSE** is an atmospheric hardening coating based on polyisocyanate pre-polymers. The product exhibits a very low surface energy in its dried condition.

### FIELDS OF APPLICATION

**TOPCOAT LSE** is used only for special applications. Due to its very low surface energy, **TOPCOAT LSE** is very suitable as a non-stick top coat on TIP TOP soft and hard rubber linings. The application can be carried out either in the workshop or on site.

### FEATURES

- High bonding strength on rubber linings
- High anti adhesion properties after hardening
- Good application by brushing
- Good thermal stability (max. +100°C)
- Good chemical resistance

### CHEMICAL RESISTANCE

Information on the chemical request is available on request.

### SUBSTRATE

Substrates are soft rubber or hard rubber linings.

### SURFACE PRE-TREATMENT

All surfaces to be coated must be clean, dry and free from contamination.

### APPLICATION

During the application of the product, the application instruction must always be observed.

Prior to the application **TOPCOAT LSE** has to be stirred well. The soft or hard rubber lining substrates need to be free of salts, grease and dust. The surface of the hard rubber linings have to be grinded. The rubber linings have to be cleaned intensively with **SOLVENT CF-CE** before application. In normal conditions 2 coats of **TOPCOAT LSE** are sufficient.

### APPLICATION METHOD UND CONSUMPTION

Coat	Product	Application Method	Coverage [g/m <sup>2</sup> ]
1. Coat rubber	<b>TOPCOAT LSE</b>	Brush / Roll	ca. 150
2. Coat rubber	<b>TOPCOAT LSE</b>	Brush / Roll	ca. 150

### CONTACT LIFE (OPEN TIME)

Coat	Minimal	Maximal
1. Coat rubber	ca. 60 min	ca. 24 Hours
2. Coat rubber	ca. 60 min	ca. 24 Hours

**Note:** The Contact Life depends on the ambient temperature.

### CLEANING

Clean all equipment with **SOLVENT CF-CE** immediately after use.

### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

### PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
<b>SOLVENT CF-CE</b>	10 l	595 9163
<b>TOPCOAT LSE</b>	1 kg	590 3490
<b>TOPCOAT LSE</b>	20 kg	590 3500

### STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
<b>SOLVENT CF-CE</b>	5 - 25 °C	60 Months
<b>TOPCOAT LSE</b>	5 - 25 °C	12 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

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