

## 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

Surfaces must be clean, dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN TR 55684 and EN ISO 8502.

Non-alloyed steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A surface preparation degree of SA 2½ (SSPC-SP 10; NACE No. 2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-2 must be achieved. A minimum surface profile of  $R_z \geq 70 \mu\text{m}$  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 to a relative humidity of  $\leq 40\%$ .

#### 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  $1.5 \text{ N/mm}^2$ . 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	$\leq 85\%$
Surface Temperature	$\geq +10^\circ\text{C}$ up to $+35^\circ\text{C}$
Application Temperature	$+10^\circ\text{C}$ up to $+30^\circ\text{C}$
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. If the **CHEMOKITT FU SOLUTION 1** is filled from drums, the drums must be stirred up before each discharge by using a drum-rollerbuck.

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

## CHEMOKITT FU 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. 17
Tiles	240 x 115 x 40	ca. 22
Bricks	240 x 115 x 65	ca. 27
Bricks	240 x 115 x 80	ca. 30

### POT LIFE [min]

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 T-200** 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 T-200	4 kg	590 0610
SOLVENT T-200	8 kg	590 0611

### 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	5 - 25°C	12 Months
SOLVENT T-200	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 EN ISO 1081	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	DIN EN ISO 4624	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.

TIP TOP Oberflächenschutz Elbe GmbH | Heuweg 4 | 06886 Wittenberg / Germany  
Phone: +49 (0) 3491 635 50 | E-Mail: [info@tiptop-elbe.de](mailto:info@tiptop-elbe.de) | Internet: [www.tiptop-elbe.com](http://www.tiptop-elbe.com)

TIP TOP Oberflächenschutz Elbe GmbH	CHEMOKITT FU 1320	Revision 1.04 - 02.06.2021
Replaces all previous editions	PRODUCT INFORMATION	Page: 2/2