

Technical Data Sheet

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® KERANOL UP 320

Electrically dissipating bedding and jointing mortar based on synthetic resins for tiling and brick linings exposed to severe stress

Description

KERANOL UP 320 is a three-component bedding and jointing mortar based on vinyl ester / polyester resins. The electrically dissipating mortar is free from silicate fillers.

Typical uses

KERANOL UP 320 is used as bedding and jointing material for tiling and masonry exposed to strong acids, in particular oxidising acids and hydrofluoric acid.

KERANOL UP 320 is predominantly used for tiling and masonry in pickling lines and tanks of the metal processing industry, in electroplating shops and installations of the chemical industry.

Thanks to its electrically dissipating properties KERANOL UP 320 is recommended for all areas where sparking shall be avoided due to the possible risk of explosion.

Advantages

KERANOL UP 320 has good mechanical properties and offers a high resistance to acids, especially oxidising acids and hydrofluoric acid. The black coloured mortar hardens with low shrinking.

Chemical resistance

Information on the chemical resistance properties will be provided on request.

Substrate

Sealing layers, acid-proof ceramics or carbon bricks serve as substrates.

Surface pretreatment

The surface must be free of any substances that may act as separating agents as well as any impurities.

Application

KERANOL UP 320 consists of a three-component mortar compound. With the exception of vinyl ester surfaces, all sealing layers prior to mortar application shall be primed with a three-component priming and be strewn with KCH powder 13.

Mixing ratios	Parts by weight (kg)	Parts by volume (l)
<u>Primer</u>		
KCH UP solution 2 grey	100	2.00
KCH UP Solution 3	15	0.28
KCH UP hardener 2	3	1 bag (60g)
<u>Bedding and jointing mortar</u>		
KCH UP solution 5	100	2.00
KCH UP hardener 2	5	1.5 bag (90g)
KCH powder 30L	300	6.90

Bricks or tiles may be laid when the primer is hand-dry. All carbon bricks or tiles that are not impregnated shall be primed prior to laying.

To adjust the processing time of the mortar to the temperatures mentioned in the table below, the following quantities of KCH UP inhibitor 1 have to be added to the KCH UP solution 5:

Temperature	Dosing of KCH UP inhibitor 1		
	[weight %]	[ml to 25 kg hobbock]	[ml to 2.00 l solution]
15 °C	-	-	-
20 °C	0.90	250 ml	20 ml
25 °C	1.30	360 ml	30 ml
30 °C	1.70	470 ml	40 ml
35 °C	2.10	580 ml	50 ml

Pot life

Temperature	Primer	KERANOL UP 320
15 °C	~ 30 minutes	15 - 18 minutes
20 °C	~ 20 minutes	15 - 18 minutes
30 °C	~ 10 minutes	15 - 18 minutes

Coverage

Primer: approx. 0.3 kg/m²
carbon bricks approx. 0.4 kg/m²
approx. 1.0 kg/m² of KCH powder 13

Coverage

Bedding and jointing mortar (bed joint 5mm / cross joint 7mm):

Split tiles 240 x 115 x 20	approx. 14 kg/m ²
Split tiles 240 x 115 x 40	approx. 17 kg/m ²
Bricks 240 x 115 x 65	approx. 21 kg/m ²
Bricks 240 x 115 x 80	approx. 23 kg/m ²

Packing

The following standard quantities are available:

KCH UP solution 2 grey	20 kg
KCH UP solution 3	0.5, 20 kg
KCH UP hardener 2	bag 60 g
KCH powder 13	25 kg
KCH UP solution 5	20 kg
KCH UP powder 30L	25 kg
KCH UP inhibitor 1	0.3 kg

Storage

The products shall be stored in a cool and dry place. With a storage temperature of 23°C the minimum shelf life is as follows:

KCH UP solution 2 grey	6 months
KCH UP solution 2 grey < 15 °	9 months
KCH UP solution 3	6 months
KCH UP solution 3 < 15 °C	9 months
KCH UP hardener 2	6 months
KCH powder 13	24 months
KCH UP solution 5	5 months
KCH UP solution 5 < 15 °C	9 months
KCH UP powder 30L	12 months
KCH UP inhibitor 1	12 months

Higher temperatures will shorten the shelf life of this products. The packaging drums are to be kept tightly shut and are to be resealed each time material has been removed. All liquid products must be stored frost-free.

Safety

Adequate ventilation is to be provided while work is in progress. Ventilation is compulsory for all work carried out in pits and closed rooms. All vapours that are produced while work is in progress must be continuously suctioned off at floor or bottom level.

Only the amount of material effectively required to continue work is to be stored at the working place. The instructions for the prevention of fire and explosion are to be observed if required.

Please note and ensure that even the smallest quantities of the individual components and/or prepared mixtures are not allowed to reach the sewerage.

All regulations for the prevention of accidents stipulated by the employer's liability assurance association, the regulations for the prevention of accidents prescribed at the site of application and the TRGS 507 „Surface treatment in rooms and tanks“, as well as the safety precautions listed on the packing (label) required by the provisions of the Hazardous Materials Ordinance shall be adhered to. The operating instructions pursuant to § 14 GefStoffV as well as the EC safety data sheets are to be complied with.

Technical data	Test specification	Unit	Parameter
Density	DIN EN ISO 1183-1	g/cm ³	1.8
Compressive strength	DIN EN ISO 604	MPa	95
Modulus of elasticity (bend test)	DIN EN ISO 178	MPa	3,500
Adhesive strength*)	DIN EN 24624	MPa	> 3
Hardness	DIN 53505	Shore D	80
Dissipation Resistivity (to earth)	DIN EN ISO 1081	Ω	< 10 ⁶
Coefficient of linear thermal expansion	DIN 53752	K ⁻¹	35 · 10 ⁻⁶
Maximum operating temperature		°C	100

*) on vinyl ester resin sealing layer

The technical data contained herein represents the current state of our product knowledge and is intended to furnish general information regarding our products and their application spectrum. In view of the diversity and multitude of application possibilities, this data should be regarded solely as general information, which does not guarantee any specific properties and/or suitability of these products for each concrete case of application. Consequently, when ordering a product, please contact us for detailed information relative to the properties required for a specific application. Our technical service will, upon request, furnish a profile of characteristics for the concrete application without delay.

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