

Technical Data Sheet

33.06.673E – 11/06

® KERAPLAN EP 440

Anti-slip, epoxy resin-based topcoat with electrical conductivity for floor coating systems

Description

KERAPLAN EP 440 is a seamless, slip-resistant topcoat based on epoxy resin. The coating has an electrical discharge capacity in accordance with DIN EN 1081 and the Guidelines "Static Electricity ZH 1/200" issued by the German Federation of Institutions for Statutory Accident Insurance and Prevention. The applied thickness is approx. 1 mm. The anti-slip resistance is R 13.

Typical Uses

KERAPLAN EP 440 is recommended as a slip-resistant, colored topcoat for EP-based floor coating systems.

The primary application range includes floor coatings in chemical process plants, electroplating shops, storage and workshop halls, shops, loading and handling areas as well as high-traffic zones. On account of its electrically discharging properties, it is also recommended for application in areas where sparking must be prevented because of possible explosion hazards.

Properties

KERAPLAN EP 440 is a coating fit for vehicular traffic that has a high mechanical strength and a good chemical resistance to acids and alkaline solutions.

The surface of KERAPLAN EP 440 is designed to be slip-resistant. The coating can be applied seamless and hardens with a minimum of shrinkage. It is available in a wide range of colors.

- Slip-resistant (BGR 181) R 13
- Displacement area (BGR 181) V 4
- Resistance to earth $R_E < 10^6 \Omega$

Chemical Resistance

Information relative to the chemical resistance properties is available upon request.

Substrate

KERAPLAN EP 440 is applied as a topcoat onto epoxy resin flooring coatings.

Surface Pretreatment

The surface of the epoxy resin flooring to be coated must be free of parting compounds and impurities. If KERAPLAN EP 440 is applied within the allowed overcoat interval, no additional treatment is required. Floorings that have already been exposed to loads and older flooring coatings must be mechanically roughened (grinding, sandblasting) prior to application of the coating.

Application

KERAPLAN EP 440 is composed of a two-component, conductive primer, a broadcast application with SiC and a two or three-component sealing coat.

Mixing Ratios	Parts by weight (kg)	Parts by volume (l)
<u>Primer</u>		
KCH-EP-Primer 9 Comp. A	100	2.00
KCH-EP-Primer 9 Comp. A	23	0.60
KCH-Powder 32L (0.5-1 mm)	Broadcast to excess from above	
<u>Sealers</u>		
KERACID EP 1102 Comp. A	100	2.00
KERACID EP 1102 Comp. B	20.5	0.68
or		
KCH-EP-Solution 12L RAL	100	2.00
KCH-EP-Hardener 6	48	1.20
KCH Powder 51	100	1.40

Copper strips must be installed to provide a connection to ground potential. Apply the primer uniformly to the substrate using a roller. Fully broadcast an excess amount of KCH-Powder 32L over the primer while still wet.

Remove the excess broadcast material once it has hardened and apply the sealant using a roller or rubber applicator.

The type of sealant selected will depend on the application case.

Pot Life

Temp.	Primer	KCH-EP-Solution 12L	KERACID EP 1102
15°C	approx. 40 minutes	approx. 40 minutes	approx. 90 minutes
20°C	approx. 30 minutes	approx. 30 minutes	approx. 60 minutes
30°C	approx. 13 minutes	approx. 13 minutes	approx. 35 minutes

KCH-EP-Primer 9 Comp. A	12 months
KCH-EP-Primer 9 Comp. B	12 months
KCH-EP- Solution 12L RAL	12 months
KCH-EP-Hardener 6	12 months
KCH Powder 51	24 months
KERACID EP 1102 Component A	12 months
KERACID EP 1102 Component B	12 months
Copper foil	24 months
KCH-Powder 32L	24 months

Coverage

Primer:	approx. 0.5 kg/m ²
Broadcast material	approx. 3.0 – 4.0 kg/m ²
Sealant	approx. 0.3 – 0.5 kg/m ²

Higher temperatures will shorten the shelf life of these products. Keep the packing units tightly sealed and reseal each time materials have been removed.

Packing Units

The products are shipped in standard packing units:

KCH-EP-Primer 9 Comp. A	17.9 / 4.06 kg
KCH-EP-Primer 9 Comp. B	4.10 / 0.96 kg
KCH-EP-Solution 12L RAL	20 kg
KCH-EP-Hardener 6	5.20 kg
KCH-Powder 51	25 kg
KERACID EP 1102 Component A	21.60 kg
KERACID EP 1102 Component B	4.40 kg
KCH-Powder 32L	50 kg

Safety

Adequate ventilation is to be provided while work is in progress. Forced ventilation is compulsory for all work carried out in pits and enclosed areas. All vapors produced while work is in progress must be continuously suctioned off at floor or bottom level.

Only such amounts of material as required for the uninterrupted execution of the works are to be stored at the work place. All regulations relative to fire and explosion protection shall be complied with as required. Special care shall be taken to ensure that no amounts of the individual components and/or the mixed compounds are released into the drainage systems.

All regulations for the prevention of accidents stipulated by the employer's liability insurance association, the pertinent accident prevention regulations 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 packages (label) pursuant to the provisions of the Hazardous Materials Ordinance shall be adhered to. The operating instructions as specified in §14 GefStoffV (Hazardous Materials Ordinance) as well as the EC Safety Data Sheets are to be complied with.

Storage

Store the products in a cool and dry location. The minimum shelf life for each product at a storage temperature of 23°C is as follows:

Technical Data	Test specification	Unit	Parameter
Adhesive strength to coating	DIN EN 24624	MPa	> 1,5
Resistance to earth	DIN EN ISO 1081	Ω	< 10 ⁶
Maximum operating temperature		°C	80

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 information should be regarded as a guideline only, which does not guarantee any specific properties and/or suitability of these products for any particular application. Consequently, prior to placing an order for a product, we recommend that you provide us with the specific properties required for the intended application. Upon request, our technical service will immediately draw up a detailed property profile for that concrete application

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تلفن: ۰۴-۲۲۶۴۶۷۸۳ و ۰۱۰-۲۲۶۳۰۶۰۸

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