

Technical Data Sheet

33.06.685 – 07/06

® KERAKRET EP 220

Synthetic resin coating for the protection of concrete surfaces that is electrically discharging and highly resistant to mechanical stress

Description

KERAKRET EP 220 is a decorative, seamless synthetic resin coating based on epoxy resins with modified fillers that can be applied either manually or by machine and that is highly resistant to mechanical stress. KERAKRET EP 220 is nonylphenol- and silicone-free.

KERAKRET EP 220 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, regardless of the applied film thickness.

Depending on actual requirements, the applied thickness may range between 6 and 12 mm.

Typical Uses

KERAKRET EP 220 is recommended as a surface protection system for concrete and screed surfaces in a variety of applications, particularly where exacting requirements with regard to mechanical resistance and stability combined with high aesthetic appeal are specified. It is primarily used as a flooring system in pharmaceutical and chemical manufacturing facilities or data processing rooms in the electronics industry. 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

KERAKRET EP 220 is a flooring that is fit for vehicular traffic and has a broad chemical resistance spectrum. The coating cures with almost no shrinkage and is characterized by a very low discharge resistance. As a result of the formation of conductive polymer structures in the process of curing, the required conductivity is achieved in approx. 5 days. This system has only a limited selection of color combinations. Please inquire as to the choices.

- Slip-resistant (BGR 181) R10
- Conductivity is not dependent on film thickness or humidity.
- Flammability class B1
- Impervious to liquids

Chemical Resistance

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

Substrate

Concrete structures must meet the requirements contained in DIN EN 14879-1.

Surface Pretreatment

If required, the concrete surface must be prepared by abrasive blasting to remove cement slurries, cement skin, loose or brittle particles, defects and parting compounds (e.g. oil, grease, paraffin, rubber residues, separating agents, post treatment agents, organic additives, paint residues). The residual moisture of the concrete surface must be < 4%.

Application

KERAKRET EP 220 is composed of a three-component, electrically discharging primer, a three-component, electrically discharging topcoat and a two-component discharging varnish finish coat (matt). The materials are packaged and shipped in pre-dosed units.

Mixing Ratios	Packing Unit Size (kg)	Parts by Weight (kg)
<u>EW-Primer 1</u>		
Component A	5.00	100
Component B	1.25	25
Water	1.30	25
<u>KERAKRET EP 220</u>		
Component A, RAL	7.97	100
Component B	2.52	31.6
Powder K 5	2 x 25	625

Install copper strips to provide a connection to ground potential. Apply the primer uniformly to the substrate using a roller and broadcast a scant amount of Powder 32L over the primer.

Once the primer is tack-free, apply the topcoat in the desired thickness with a spreader, then smooth and compact it by means of a mechanical trowel or using a hand-held smoothing tool.

Mixing ratios Primer	Size of Packing Unit (kg)	Parts by weight (kg)
KERAPLAN PU 421 (matt)		
Component A	7.00	100
Component B	1.19	17

Once the topcoat has completely cured, apply a very thin coat of the varnish finish using a soft roller.

Pot Life

Temp.	Primer	Topcoat	Varnish finish matt
15°C	approx. 35 min.	approx. 60 min.	
20°C	approx. 25 min.	approx. 40 min.	approx. 3 hours
30°C	approx. 15 min.	approx. 20 min.	

Coverage

Primer: approx. 0.3 kg/m²,
approx. 1.0 kg/m² KCH Powder 32L
Topcoat : approx. 2.2 kg/m² per mm thickness
Varnish finish: approx. 0.1 kg/m²

Packing Units

The products are shipped in standard packing units:

KCH-EW-Primer 1 Comp. A	5.0 kg
KCH-EW-Primer 1 Comp. B	1.25 kg
KERAKRET EP 220 Comp. A, colorless	7.97 kg
KERAKRET EP 220 Comp. B	2.52 kg
Powder K 5	25 kg
KERAPLAN PU 421 Comp. A	7.0 kg
KERAPLAN PU 421 Comp. B	1.19 kg

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:

KCH-EW-Primer 1 Comp. A	6 months
KCH-EW-Primer 1 Comp. B	12 months
KERAKRET EP 220 Comp. A, colorless	12 months
KERAKRET EP 220 Comp. B	12 months
Powder K 5	36 months
KERAPLAN PU 421 Comp. A	6 months
KERAPLAN PU 421 Comp. B	6 months

Higher temperatures will shorten the shelf life of these products. Keep the packing units tightly sealed and re-seal each time materials have been removed. Liquid products must be stored in a frost-free environment.

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.

Technical Data	Test specification	Unit	Parameter
Density	DIN EN ISO 1183-1	g/cm ³	2,15
Compressive strength	DIN EN ISO 604	MPa	55
Tensile strength	DIN EN ISO 178	MPa	20
Modulus of elasticity (flexural test)	DIN EN ISO 178	MPa	9.000
Adhesive strength to concrete/screed ^{*)}	DIN EN ISO 4624	MPa	> inherent strength of substrate
Leakage resistance to earth	DIN EN ISO 1081	Ω	< 10 ⁶
Coefficient of linear thermal expansion	DIN 53752	K ⁻¹	15 · 10 ⁻⁶
Maximum operating temperature		°C	100

^{*)} compressive strength 25 MPa

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, when ordering a product, please contact us for detailed information relative to the properties required for the specific application. Our technical service will, upon request, furnish a profile of characteristics for the concrete application without delay.

KCH GROUP GmbH

Postfach 11 63, D-56425 Siershahn

Telephone: +49 (0) 2623-600-0 / Fax: +49 (0) 2623-600-433 / eMail: info@kch-group.com

تلفن: ۰۴-۲۲۶۴۶۷۸۳ و ۰۱۰-۲۲۶۳۰۶۰۸

شرکت کسری نماینده رسمی KCH آلمان