

Technical Data Sheet

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® KERAPLAN VE 122

Self-leveling top coat with electrical discharge capacity for floorings exposed to severe chemical attack

Description

KERAPLAN VE 122 is a jointless, self-leveling top coat based on vinylester resins with mineral fillers. 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 film thickness is approx. 1 – max. 2mm.

Typical use

KERAPLAN VE 122 is recommended as a surface protection system for concrete and screed surfaces and primarily used as a colored, conductive finish coat for vinylester resin laminate coatings

This product is primarily applied as a flooring system in chemical process plants, on storage areas for liquids that are hazardous to water, in production halls, workshops, loading and handling areas as well as traffic areas. On account of its electrically discharging properties, this lining system is also recommended for application in areas where sparking must be prevented because of possible explosion hazards.

Properties

KERAPLAN VE 122 is a top coating that is fit for vehicular traffic and that has a very high chemical resistance to acids, alkaline solutions, substances having an oxidizing effect and solvents. This coating system is particularly recommended for areas that are temporarily exposed to flammable liquids (solvents such as alcohols, hydrocarbons, ketones or esters) and that must therefore have an electrical discharge capacity. The coating may be applied without joints.

Chemical resistance

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

Substrate

Concrete components must meet the requirements specified in DIN EN 14879-1. KERAPLAN VE 122 can also be applied onto vinylester resin laminate coatings.

Surface Pretreatment

If required, the concrete surface must be prepared by abrasive blasting or other suitable mechanical methods to remove cement slurries, cement skin, loose or brittle particles, defects and parting compounds. The residual moisture of the concrete surface must be less than 4%.

VE- Laminate coating – The surface of the vinylester resin coating to be coated must be free from parting compounds as well as from impurities. If KERAPLAN VE 122 is applied within the allowed overcoat interval no further treatment is required. Coatings that have already been exposed to stress must be mechanically roughened (grinding, sandblasting) prior to application of the coating.

Application

Primer for concrete surfaces

The primer is composed of 3 components.

Primer	Parts by weight (kg)	Parts by volume (l)
KCH UP solution 1	100	2.00
KCH UP solution 3	10	0.17
KCH UP hardener 2	3	1 bag (60 g)

Premix Solution 1 and 3, then add the hardener and mix thoroughly until the hardener has dissolved completely. Apply the mixed compound to the substrate and broadcast a scant amount of KCH powder 6 (particle size 0.4 to 0.7) evenly over the surface. It is important to ensure that no puddles form, that all pores are sealed and that a uniform surface is achieved.

Coverage: approx. 0.4 kg / m² (compound)
KCH powder 6 approx. 0.1 kg / m²

Coverage will depend on the temperature, absorbency and roughness of the substrate.

Conductive primer

For non-conductive substrates, self-adhesive copper strips must be installed on the surface to be coated prior to application of the conductive primer. The primer should be applied and rolled out using a lambswool roller.

Conductive primer	Parts by weight (kg)	Parts by volume (l)
KCH VE solution 38L	100	2.00
KCH UP hardener 1	2	0.05

Coverage: approx. 0.3 kg / m²

Self-leveling top coat

Pour the top coat compound over the substrate, spread it out with a smoothing tool and deaerate with a spiked roller. **Do not use a rake or a notched trowel.** The film thickness should be approx. 1 mm – max. 2 mm.

Top coat	Parts by weight (kg)	Parts by volume (l)
KCH VE sol. 23L RAL	100	2.00
KCH UP hardener 1	2	0.05

Coverage: approx. 1.5 kg / m² / mm (compound)

Pot life

Temperature	Primer	Top coat
15°C	approx. 45 min.	approx. 40 min.
20°C	approx. 35 min.	approx. 30 min.
30°C	approx. 15 min.	approx. 13 min.

Packing

The products are shipped in the following standard packing units:

KCH VE solution 23L RAL	20 kg
KCH VE solution 38L RAL	7 kg
KCH UP solution 1	5 kg
KCH UP solution 3	5 kg
KCH UP hardener 1	0.4 kg
KCH UP hardener 2	bag 60 g
KCH thixotropic agent 1	1 kg
KCH powder 6	25 kg
KCH finish	0.9 kg

Storage

Store the products in a cool and dry location.

The minimum shelf life for each component at a storage temperature of 23°C is as follows:

KCH VE solution 23L RAL	3 months
KCH VE solution 23L RAL < 15 °C	6 months
KCH VE solution 38L RAL	3 months
KCH VE solution 38L RAL < 15 °C	6 months
KCH UP solution 1	6 months
KCH UP solution 1 < 15 °C	9 months
KCH UP solution 3	6 months
KCH UP solution 3 < 15 °C	9 months
KCH UP hardener 1	6 months
KCH UP hardener 2	6 months
KCH thixotropic agent 1	24 months
KCH powder 6	24 months
KCH finish	24 months

Higher temperatures will shorten the shelf life of these products. Keep the packing units tightly sealed and reseal 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	1.47
Compressive strength	DIN EN ISO 604	MPa	107
Tensile strength	DIN EN ISO 527	MPa	31
Elongation at break	DIN EN ISO 527	%	0.6
Flexural strength	DIN EN ISO 178	MPa	55
Modulus of elasticity (flexural test)	DIN EN ISO 178	MPa	6,000
Adhesive strength to coatings	DIN EN ISO 4624	MPa	> inherent strength of substrate
Hardness	DIN 53505	Shore D	80
Leakage resistance to earth	DIN EN ISO 1081	Ω	< 10 ⁶
Coefficient of linear thermal expansion	DIN 53752	K ⁻¹	60 · 10 ⁻⁶
Maximum service temperature		°C	100

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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