

Technical Data Sheet

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® KERAPLAN EW 110

Synthetic resin coating for the protection of concrete areas

Description

KERAPLAN EW 110 is a jointless synthetic resin coating based on aqueous epoxy resin with mineral fillers. Depending on the requirements, the applied layer thickness may range between 0.4 and 3 mm.

KERAPLAN EW 110 is a modular coating design, which may be applied as any one of the following systems by keeping the ratio of resin to hardener constant and by adding water and/or powder:

- Primer
- Scratch Coat
- Self-spreading floor coating
- Roller-applied coating
- Non-skid Top Coat
- Scattered coating

Solvent free in acc. with **ibh** – recommendation

Typical uses

KERAPLAN EW 110 is recommended as a multi-purpose surface protection system for concrete and screed surfaces.

Because of its excellent water vapour permeability it is also suitable for the sealing and coating of magnesite as well as anhydrite floors. As an additional option, the coating may be provided with a non-skid surface. This system is suitable for use in private, industrial as well as commercial sectors, such as workshops, warehouses, service areas, exhibition halls and depots.

Properties

KERAPLAN EW 110 is a floor coating with average chemical resistance properties that is fit for traffic and that may be exposed to mechanical stress. The coating hardens with very little shrinkage, has a satin-dull finish and may be applied without joints. The surface may be jet cleaned with a hot water at a temperature up to 80 °C.

A particularly noteworthy feature of KERAPLAN EW 110 is that it can be applied in all areas where conventional systems containing solvents may not be utilised in view of the potential resultant hazards. Newly prepared concrete substrates may be coated with KERAPLAN EW 110 already after 7 days interval time.

- FDA-Approval (Institut Fresenius)

Chemical resistance

KERAPLAN EW 110 is resistant to diluted acids and alkaline solutions, oils and fats, hot water, aqueous salt solutions and various organic solvents.

Additional chemical resistance data are available upon request.

Substrate

The concrete structural components shall comply with the specifications contained in DIN EN 14879-1.

Surface pre-treatment

If required, concrete surfaces 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.

Succeeding concrete, the coating shall be applied after an interval time of 7 days at the earliest.

Application

KERAPLAN EW 110 is a modular system. The desired system formulation is obtained by adding specific amounts of powder and/or water to a pre-measured, constant resin/hardener mixture. **Direct sunshine and draught must be avoided during application works.** The appropriate top coat is then applied to the primer.

Mixing ratios KERAPLAN EW 110	Packing size (kg)	Parts by weight (kg)	Parts by volume (l)
<u>Primer</u>			
EW 110 compon. A	10.00	100	2.00
EW 110 compon. B	1.30	13	0.39
Water	1.00	10	0.36
<u>Self-spreading flooring</u>			
EW 110 compon. A	22.00	100	2.00
EW 110 compon. B	2.90	13	0.39

Add component B to component A and mix thoroughly until the compound reaches a homogenous consistency. Then add tap water and apply by means of a roller.

Pour the Top Coat compound onto the hardened primer and spread evenly using a smoothing tool or doctor blade. After 5 - 10 minutes, deaerate the coating thoroughly with a spiked roller. The thickness of the Top Coat should measure 2 – 3 mm at the most.

Scratch coat for cavity levelling (optional)

Mixing ratios KERAPLAN EW 110	Packing size (kg)	Parts by weight (kg)	Parts by volume (l)
<u>Scratch Coat</u>			
EW 110 compon. A	10.00	100	2.00
EW 110 compon. B	1.30	13	0.39
KCH powder 17	4.30	30	1.64

Stir KERAPLAN EW 110 component B into the packing receptacle containing KERAPLAN EW 110 component A. Add KCH Powder 17 to this compound, mixing thoroughly until a homogenous, stiff compound is obtained. Cavities of up to max. 5 mm may be levelled by means of this compound.

Roller-applied coating (multiple sealing coat)

Mixing ratios KERAPLAN EW 110	Packing size (kg)	Parts by weight (kg)	Parts by volume (l)
<u>Scratch Coat</u>			
EW 110 compon. A	10.00	100	2.00
EW 110 compon. B	1.30	13	0.39
Water	0.27	2.7	0.12

Apply the Primer and allow to harden. Add component B to component A and mix thoroughly until a homogenous compound is obtained. Then add tap water and apply individual coats in a layer thickness measuring 0.3 mm and in alternating colours using the lambskin roller. The total coating thickness depends on the number of applied coats.

Non-skid Top Coat (R9 – R10)

Mixing Ratio KERAPLAN EW 110	Packing size (kg)	Parts by weight (kg)	Parts by volume (l)
<u>Non-skid Top Coat</u>			
EW 110 compon. A	10.00	100	2.00
EW 110 compon. B	1.30	13	0.39
Water	1.00	10	0.36
KCH powder 7	1.50	15	0.47

Add component B to component A and mix thoroughly until a homogeneous compound is obtained. Then mix in tap water and KCH-Powder 7 uniformly and apply with the lambskin roller.

Scattered coating (approx. R 11-R13)

Mixing ratio KERAPLAN EW 110	Packing size (kg)	Parts by weight (kg)	Parts by volume (l)
<u>Scattered coating</u>			
EW 110 compon. A	22.00	100	2.00
EW 110 compon. B	2.90	13	0.39

Add component B to component A and mix thoroughly until a homogenous compound is obtained. Distribute the compound evenly using a smoothing tool or a doctor blade to obtain a thickness of approx. 1 mm. Strew an excess amount of KCH-Powder 5 onto the wet primer. Apply the sealing onto the hardened coat and spread it evenly over the quartz grains using a rubber smoothing tool. The film thickness should measure approx. 2 mm. A higher non-skid grade may be obtained by using other scatter materials (e.g. SiC).

Pot life

Temperature	KERAPLAN EW 110 – coating materials
15°C	~ 35 min.
20°C	~ 25 min.
30°C	~ 15 min.

Coverage

Primer: approx. 0.4 – 0.5 kg/m²
 Scratch Coat: approx. 2.5 kg/m² per mm thickness
 Top coat: approx. 1.6 kg/m² per mm thickness
 Roller-applied coating: approx. 0.4 kg/m²
 Non-skid Top Coat: approx. 0.4 kg/m²
 Scattered coat: approx. 2.0 kg/m²

Packing

The following standard quantities are available:

KERAPLAN EW 110 Component A	10; 22 kg
KERAPLAN EW 110 Component B	1.30; 2.90 kg
KCH-Powder 17	25 kg
KCH-Powder 7	25 kg
KCH-Powder 5	25 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:

KERAPLAN EW 110 Component A	12 months
KERAPLAN EW 110 Component B	12 months
KCH-Powder 17	24 months
KCH- Powder 7	24 months
KCH- Powder 5	24 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	1.6
Top coat colour			various colours
Compressive strength	DIN EN ISO 604	MPa	50
Adhesion to concrete/screed ^{*)}	DIN ISO 4624	MPa	> inherent strength of substrate
Hardness	DIN 53505	Shore D	80
Dissipation Resistivity (to earth)	DIN 51953	Ω	> 10 ⁹
Abrasion resistance	ASTM D 4060	mg/1,000 R	130
Linear thermal expansion coefficient	DIN 53752	K ⁻¹	20 · 10 ⁻⁶
Maximum service temperature		°C	80

^{*)} 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 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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