

TI 702K

Technical Information Surface Protection Linings
Issue 04.07.2023

KERACID ES 110

Crack-bridging, self-levelling sealing system for concrete surfaces

Base

Epoxy resin

Material Group

Sealing layers

Floor coatings - Levelling coatings

Description

Seamless, self-levelling synthetic resin coating based on epoxy resin with mineral fillers. Layer thickness approx. 2 – 3 mm.

Application

Sealing system for concrete and screed surfaces in a wide variety of applications, particularly in such cases where crack-bridging properties of the substrate is required.

Its primary application spectrum is the coating of storage rooms, production facilities, collecting basins. Usually such plants are operated in the chemical industry or other industrial branches.

The system is also highly suitable as a crack-bridging layer underneath synthetic resin coatings and ceramic coverings.

Properties

- Self-levelling
- Hardens with low shrinkage
- Jointless
- Crack-bridging up to 0.4 mm
- Temperature resistant up to 60 °C

Physical Data

Property [unit], Test method	Value
Adhesive strength to concrete / screed [MPa], DIN EN ISO 4624	> 1.5
Density [g/cm ³], DIN EN ISO 1183-1, ASTM D 792	1.6
Dissipation resistance [Ohm] to DIN EN 14879-3 at a relative humidity of > 70 %, ASTM F 150/98	> 10 ⁹
Shore D hardness, DIN ISO 7619, ASTM D 2240	50
The thermal coefficient of linear expansion [1/K], ISO 11359-2, ASTM C 531	95 x 10 ⁻⁶

Data are mean values

Chemical Resistance

Resistant to solvents, fats, oils, salts and salt solutions, acids and alkalis.

For detailed information about the chemical resistance, please refer to the national technical approval.

Substrate

Requirements

Application temperature	approx. 10–30 °C
Dew point distance	> 3 K
Dew point distance from 70 % air humidity	> 5 K

Optimal temperature is 20 °C. Higher and lower temperatures influence the pot life and consistency of the mixtures.

Avoid draughts and solar radiation.

Concrete / screed

Refer to DIN EN 14879-1 as well as to STEULER-KCH-Formsheet 010.

To achieve sufficient adhesive tensile strength, the substrate must generally be pre-treated in such a way that it is free of cement slurry, cement skin, loose and friable parts, structural defects and separating substances.

The residual moisture of cementitious substrates must not exceed 4 %.

The condition of the substrate must be documented by STEULER-KCH-Test-Record 006 (concrete) resp. STEULER-KCH-Test-Record 007 (screed).

Moisture

During application, the substrate must be kept dry. No moisture (condensate, mist, etc.) must get onto the material.

System Design

- If necessary levelling with Kerapox EP 210
- KCH-EP-primer 13 (epoxy resin primer for concrete/screed surfaces)
- KCH-ES-Top Coat 1 (levelling coat based on EP/T for floor surfaces)
- KCH-ES-Top Coat 2 (filling based on EP/T for wall surfaces)

Packaging / Shelf life

All components must be stored and transported dry. The minimum shelf life applies to a storage temperature of 20 °C, unless otherwise specified. Higher temperatures reduce, lower temperatures increase the minimum shelf life.

Component	Item number	Package	Content	Shelf life
KCH-EP-Solution 2	5035002001	Hobbock	25 kg	24 Months
KCH-EP-Hardener 6	5035206001	Hobbock	25 kg	24 Months
KCH-ES-Solution 1	5035088001	Hobbock	25 kg	12 Months
KCH-ES-Paste 1 RAL 7032 ^[1]	5035888001	Hobbock	25 kg	12 Months
KCH-EP-Hardener 7	5035207149	Bottle	1.75 kg	24 Months
KCH-Powder 17	5011045002	Bag	20 kg	24 Months
KCH-Thixotropic Agent 2	5035186007	Pouch	1 kg	24 Months
KCH-Cleaner 1	5040016068	Canister	8.5 kg	24 Months

For handling, transport and storage observe the relevant safety data sheets.

^[1] The colours may differ slightly from the RAL colour template. Other colours on request.

Mixing Ratio / Consumption

If necessary levelling with Kerapox EP 210

	Part by weight	Part by volume
KCH-EP-Solution 2	5.00	2.00
KCH-EP-Hardener 6	3.00	1.30
KCH-Powder 17	13.00	6.50
Consumption per 1 mm	approx. 2.000 kg/m ²	
Application steps	1	

KCH-EP-Primer 13

	Part by weight	Part by volume
KCH-EP-Solution 2	5.00	2.00
KCH-EP-Hardener 6	3.00	1.30
Consumption per application step	0.400 kg/m ²	
Application steps	1	

KCH-ES-Top Coat 1

	Part by weight	Part by volume
KCH-ES-Solution 1	25.00	pre-dosed
KCH-EP-Hardener 7	1.75	1.63
Consumption	approx. 4.000 kg/m ² (2.5 mm layer thickness)	
Application steps	1	

KCH-ES-Top Coat 2

	Part by weight	Part by volume
KCH-ES-Paste 1	25.00	pre-dosed
KCH-EP-Hardener 7	1.75	1.63
Consumption	approx. 4.000 kg/m ² (2.5 mm layer thickness)	
Application steps	1	

Waiting Times

The waiting times between the individual applications depend on temperature:

Kerapox EP 210

Temperature	Min. Time	Max. Time
20 °C	12 h	5 days

KCH-EP-Primer 13

Temperature	Min. Time	Max. Time
20 °C	12 h	3 days

Waiting time for application of bedding joint (with FU mortars) and / or primer (with UP and VE mortars): at least 24 hours at 20 °C.

Pot Life

Pot life depends on temperature:

	Kerapox EP 210	KCH-EP-Primer 13	KCH-ES-Top Coat 1 / 2
20 °C	approx. 45 min	approx. 30 min	approx. 40 min

Curing times

Up to walkability at 20 °C approx. 12 h.

After 3 days at 20 °C, the finished coating is fully resistant to mechanical and chemical stress.

Safety and Disposal

The following points should be observed:

- Sufficient ventilation and venting (especially in pits and tanks)
- No smoking and no fire
- Safety Data Sheets
- Observe hazard warnings and safety instructions on labels
- Wear required personal protective equipment (avoid skin contact with materials)
- Clean and protect hands with skin protection soap (no solvents!) and skin protection cream
- Wear a dust mask when grinding (e.g. for repairs)
- Operating instructions as per § 14 of GefahrstoffV (Toxic Substances Act) and TRGS 507 (Technical regulations for Hazardous Substances - Germany)
- Accident prevention regulations by the Liability Insurance Association for the Chemical Industries (Germany)
- Avoid direct contact of the materials with the flame, especially during welding work (welding beads) on site

Preferably consume residual quantities. Do not pour into a spout or dustbin! Collect separately for disposal in durable, lockable and labelled containers.

GISCODE

Product	GISCODE
Kerapox EP 210	RE55
KCH-EP-Primer 13	RE55
KCH-ES-Top Coat 1 / 2	RE90

Cleaning of Equipment

Tools soiled with uncured materials can be cleaned with KCH-Cleaner 1. Only clean in well ventilated areas.

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This issue replaces all previous versions.