KLB-SYSTEM EPOXID
EP 285 EL+

Chemical-resistant, electrically conductive 2-component epoxy resin coating

Packaging units

Article no.	Packaging	Content (kg)	Units/pallet
AK1402-50	Bucket combo	10.00	30
AK1402-30	Hobbock combo	30.00	12

Product characteristics

Mixing ratio parts by weight	A : B = 100 : 25
Mixing ratio parts by volume	A : B = 100 : 41
Processing time	10 °C / 50 °F : 40 min. 20 °C / 68 °F : 20 min. 30 °C / 86 °F : 10 min.
Processing temperature	Minimum 10 °C / 50 °F – Maximum 30 °C / 86 °F (room and floor temperature)
Curing time (accessibility)	10 °C / 50 °F : 24 - 36 hrs. 20 °C / 68 °F : 14 - 18 hrs. 30 °C / 86 °F : 10 - 14 hrs.
Curing	2 - 3 days until mechanical load at 20 °C / 68 °F 7 days until chemcial load at 20 °C / 68 °F
Further coatings	After 14 - 18 hours, but after 48 hours at the latest at 20 °C / 68 °F
Consumption	Approx. 2.4 - 2.6 kg/m²
Layer thickness	1.4 - 1.8 mm
Addition of quartz sand	Not permissible
Colours	KLB standard colours – see chart. Other colours upon request!
Shelf life	12 months (originally sealed)

Product description

KLB-SYSTEM EPOXID EP 285 EL+ is a pigmented, electrically conductive 2-component epoxy resin flow coating with very good resistance to different chemicals.

The cured coating is especially suitable for commercially and industrially used areas with antistatic or electrically conductive flooring and the requirement to very good chemical resistance at the same time.

Due to the special conductive fiber technology even pale colours are available.

Suitable for many different industrially used areas, e.g. rooms with flammable fluids and chemicals requiring explosion protection. The smooth coating is suitable for production areas, factories, laboratories and other areas with increased exposure to chemicals.

KLB-SYSTEM EPOXID EP 285 EL+ offers good resistance to chemicals, e.g. different solvents, acids, bases, oil, grease, salt, and solutions. Please note the chart for resistance and seek advice to make sure that the coating is suitable for the desired requirements.

Note: deviation in colour tone is possible due to the conductive adjustment of **KLB-SYSTEM EPOXID EP 285 EL+**. Chemically resistant coatings might show colour alterations due to aging and wear and tear which will not affect any other properties though.

Area of application

- For electrically conductive, commercially used areas with special requirements to chemcial resistance.
- For areas with an increased exposure to fluids and chemicals.
- For areas with special requirements to explosion protection to avoid electrostatic charging.

Product features

- Total Solid according to GISCODE (Test method "Deutsche Bauchemie")
- electrically conductive
- very chemically resistant
- good solvent resistance
- consistent to hydrolysis and saponification
- light, coloured surfaces
- free of deleterious substances against varnish

Technical data

Viscosity - Component A+B	2950	mPas	DIN EN ISO 3219 (23 °C / 73.4 °F)
Solid content	> 99	%	KLB method
Density - Component A+B	1.60	kg/l	DIN EN ISO 2811-2 (20 °C / 68 °F)
Weight loss	0.3	weight-%	after 28 days
Water absorption	< 0.2	weight-%	DIN 53515
Shore-hardness D	69	-	DIN 53505 (after 7 days)
Abrasion (Taber Abraser)	55	mg	ASTM D4060 (CS10/1000)
Electrical resistance	Approx. 10^6	Ohm	DIN EN 61340-4-1 DIN EN 1081

The values established in tests are average values. Deviations from the product specification may occur.

Tests

External test certificates are available:

- Slip resistance grade R9 possible, according to DIN 51130 and BGR 181.
- Product is compliant with DIN EN 13813: 2003-01.

Note:

Please ask for the tested system build-up!

Build-up of coats

- Apply base and scratch coat for a planar substrate.
- Glue in copper bands for discharge in an imagined grid-pattern in place into the room - every 6 - 10 m, up to 1 - 2 m. Earth connection by an electrician based on VDE regulations.
- Apply a lateral conductive layer using approx. 0.100 - 0.140 kg/m² of **EP 799 Ableitgrund**.
- Trowel-apply the conductive wear coat **EP 285 EL+** with a notched trowel (**Tooth Blade RS4** or Pajarito 48), consumption approx. 2.5 kg/m².

- Optional: sealing with **PU 813 EL+/ESD, PU 813 EL+/ESD-R10** or **PU 881 EL+** for producing a colour-stable top coat or for ESD suitable surfaces.

Substrate

The substrate to be coated must be even, dry, free of dust, sufficiently resistant to tension and compression as well as be free from weakly-bonded components or surfaces. Materials impairing adhesion such as grease, oil and paint residues should be removed with suitable measures. Please refer to the advice issued by the trade associations, e.g. the current edition of the KH-0/U and KH-0/S BEB worksheets as well as the product information for the recommended base coats, like **EP 50, EP 51 RAPID S** or **EP 52 Spezialgrund.** The substrates to be coated should be prepared mechanically, preferably by shot-blasting. The prepared surface has to be primed accurately and in a saturated and pore-free way. Estimating the substrate with regard to the necessary freedom from pores may be difficult, so a pigmented scratch coat is recommended for smoothing the surface. If the substrate has not been sealed completely, bubbles and pores may appear because of rising air. In case of doubt, a test surface is recommended. To improve adhesion, scatter the surface openly with approx. 0.5 to 1.0 kg/m² quartz sand 0.3/0.8 mm.

Conductive coatings have to be applied in the recommended layer thickness, therefore an accurate preparation of the substrate is imperative by applying a primer and scratch coat.

Mixing

Combo-packaging will be supplied in the correctly measured mixing ratio. the package of Component A has sufficient volume to contain the entire packaging unit. Empty all of the hardener compound B into the resin.

Blend with a slow speed mixer (200 - 400 r/pm) for at least 2 - 3 minutes until a homogeneous, streak-free compound forms. To prevent mixing errors, empty ("repot") the resin/hardener mixture into a clean container and mix it once again briefly.

Processing

Process the material immediately after mixing with a coating knife or trowel by applying an even layer on the prepared surface. The product is adjusted with an optimum of air venting. To upgrade the moistening of the substrate, optimizing the flow-properties and removing any air blows, it is recommended to roll with a spiked roller. Use the spiked roller time-delayed, after 10 - 15 minutes. Divide working areas before starting work and always work “fresh-in-fresh” to avoid any shoulders. It is not recommended to scatter electrically conductive coatings because the electrical conductivity may be reduced.

Floor and air temperature must not fall below 10 °C / 50 °F and humidity must not exceed 75 %. Material has to have room temperature for processing. The difference in dewpoint temperature and temperature of the substrate has to be more than 3 °C / 3 K / 5.4 °F so the curing will not be disturbed. If a dew-point situation occurs adhesion may malfunction, curing may be disturbed, and spotting may occur. Exposure to water and chemicals has to be avoided for the first 7 days. The specified curing times apply for 20 °C / 68 °F; temperatures below this require longer processing and curing times, while higher temperatures require shorter times. During curing, the recommended working conditions must be ensured. Otherwise, the technical properties of the end product may deviate from those specified.

Cleaning

To clean tools, use **VR 24** or **VR 33** immediately. Hardened material can only be removed mechanically.

Separate cleaning and care recommendations are available for cleaning floors produced with KLB coatings and sealers.

Storage

Store in dry and at frost-free conditions. Ideal storage temperature is between 10 °C - 20 °C / 50 °F - 68 °F. Bring to a suitable processing temperature before application. Tightly re-seal opened packages and use up the content as soon as possible.

Special remarks

The product is regulated by the German Ordinance on Hazardous Substances (GefStoffV), the German Ordinance on Industrial Safety and Health (BetrSichV), and transport regulations for hazardous goods. The necessary information is contained in the DIN Safety Data Sheet. Observe all identification information on the container label!

GISCODE: RE30

Indication of VOC-content:
(EG-Regulation 2004/42) Maximum Permissible Value 500 g/l (2010,II,j/lb): Ready-for-use product contains < 500 g/l VOC.

CE marking

CE
KLB Kötztal Lacke + Beschichtungen GmbH Günztalstraße 25 FRG-89335 Ichenhausen
13
EP285EL+-V1-022013
DIN EN 13813:2003-01
Synthetic resin screed mortar DIN EN 13813: SR-B1.5-AR0.5-IR18

Fire behaviour	E_{fl}-s1
Emission of corrosive substances	SR
Wear resistance BCA	AR 0.5
Adhesive tensile strength	B 1.5
Impact resistance	IR 18

Please consider the latest version of this product information on our website.