KLB KÖTZTAL
Lacke + Beschichtungen GmbH

KLB-SYSTEM EPOXID
EP 220

Economical, self-levelling and pigmented 2-component epoxy resin coating

Packaging units

Article no.	Packaging	Content (kg)	Units/pallet
AK1494-47	Hobbock combo	12.00 kg	30
AK1494-30	Hobbock combo	30.00 kg	12

Product characteristics

Mixing ratio parts by weight	A : B = 5 : 1
Mixing ratio parts by volume	A : B = 100 : 35
Processing time	10 °C : 55 mins 20 °C: 30 mins 30 °C: 15 mins
Processing temperature	Minimum 10 °C / 50 °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 for mechanical load at 20 °C / 68 °F 7 days for chemical load at 20 °C / 68 °F
Further coatings	After 18 - 24 hours; however at the latest after 48 hours at 20 °C / 68 °F
Consumption	Approx. 1.5 kg/m² per 1 mm of layer thickness
Layer thickness	1.0 - 3.0 mm
Addition of quartz sand	Not recommended for layers below 2 mm, above 2 mm up to 30 % depending on usage and temperature
Packaging	Bucket 12 kg, Hobbock 30 kg (combo-packaging)
Colours	KLB standard colours – see chart. Other colours upon request!
Shelf life	12 months (originally sealed)

Product description

KLB-SYSTEM EPOXID EP 220 is a ready-to-use, self-levelling two-component epoxy resin coating for smooth and scattered finishes.

KLB-SYSTEM EPOXID EP 220 has good flow properties, good smoothing properties and produces smooth, glossy surfaces.

Due to its adjusted surface tension, **KLB-SYSTEM EPOXID EP 220** is particularly well suited for finishes with a scattering of Plastorit, silicium carbide and coloured **partiColor®-Chips** in both dense and open scattering patterns. This is followed by the application of a transparent sealing coat, e.g. with **EP 705 E**, **PU 811 E**, **PU 880 or PU 882**. **KLB-SYSTEM EPOXID EP 220 is** also suitable as a base coat for a subsequent glass bead sealing treatment with **EP 175 Spezial**.

KLB-SYSTEM EPOXID EP 220 exhibits good mechanical resistance and is also resistant to water, salt solutions, alkalis, various acids, as well as mineral oils, fuels and various solvents. Please seek advice if specific resistance properties are required.

Area of application

- Commercially used areas subject to mechanical stress.
- Smooth and lightly scattered wear layers (scattered with Plastorit or SIC).
- Coloured base coats for decorative, chipped finishes with subsequent sealing coats, e.g. with **EP 705 E**, **PU 811 E**, **PU 882**, **PU 880**, subject to light mechanical stress.
- Coloured base coat for subsequent glass bead sealing with **EP 175 Special.**

Product features

- Total Solid according to GISCODE (Test method "Deutsche Bauchemie")
- for scatterings with SIC/delustering agent
- for scatterings with decorative flakes
- consistent to hydrolysis and saponification
- ready-to-use
- coloured surface
- very economical

Technical data

Viscosity - Component A+B	1650	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 53495
Flexural strength	40	N/mm²	DIN EN 196/1
Compressive strength	55	N/mm²	DIN EN 196/1
Adhesive tensile strength	> 1.5	N/mm²	DIN EN 1542
Shore-hardness D	82	-	DIN 53505 (after 7 days)
Abrasion (Taber Abraser)	40	mg	ASTM D4060 (CS10/1000)

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 and R10 possible, according to DIN 51130 and BGR 181.
- Classification of the fire behaviour according DIN EN 13501-01:2010-01: B_{fl}-s1.
- Product is compliant with DIN EN 13813: 2003-01.

Note:

Please ask for the tested system build-up!

Build-up of coats

Smooth coating, medium layer thickness

- Prime with the recommended KLB primer resins such as **EP 50**, **EP 51 RAPID S**, **EP 52 Spezialgrund** or **EP 52 RAPID**. Coverage approx. 0.3 to 0.4 kg/m², depending on the resin and substrate.
- Scratch coat to create a level substrate, e.g. using **EP 50**, **EP 51 RAPID S**, **EP 52 Spezialgrund** or **EP 52 RAPID** and **KLB mixed sand 2/1** in a mixing ratio of 1 : 0.8 parts by weight. Consumption of mixture approx. 0.8 to 1.3 kg/m².
- Apply with a notched trowel and **S3 notched trowel bar**, consumption 2.2 to 2.8 kg/m², or with **an S5 notched trowel bar**, consumption 1.5 to 2.0 kg/m². The

coating can be mixed with a maximum of 30% quartz sand (0.1/0.3 mm); in this case, application with **notched trowel S3** is recommended.
- Optional: Scattering with silicon carbide, Plastorit or decorative chips.
- Seal the surface with suitable silky-gloss and matt sealers, such as **EP 705 E/EP 706 E**, **PU 811 E/PU 812 E**, **PU 880** or **PU 882**.

EP coating with glass bead sealant in R9

- Primer with the recommended KLB primer resins, e.g. **EP 50**, **EP 52**.
- Application of the **EP 220** coating.
- Application of the sealant consisting of **EP 175 Special** and 15% glass beads (grain size 0.2/0.4 mm), consumption approx. 0.220 to 0.250 kg/m², followed by rolling with a textured roller to achieve an R9 slip resistance rating.

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. Observe the information issued by the trade associations, e.g. the most recent versions of BEB worksheets KH-0/U and KH-0/S as well as the notes provided in the product information for the recommended base coats, like **EP 50, EP 51 RAPID S,** and **EP 52 Spezialgrund**. The substrates to be coated should be prepared mechanically, preferably by shot-blasting. The prepared area must be saturated, pore-free and primed carefully. It is often difficult to judge the necessary pore-free condition of substrates. It is therefore recommended that a scratch coat be applied to smooth the surface. If the substrate has not been primed to be pore-free, bubbles and pores can develop in the coating due to air rising from the substrate. In case of doubt, we recommend testing on a trial surface. To improve adhesion, scatter the surface openly with approx. 0.5 to 1.0 kg/m² of fire-dried quartz sand 0.3/0.8 mm.

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. Partial quantities need to be weighed out in the right mixing ratio after having stirred up the single components. For layers above 2 mm, add 30 % of quartz sand, grain size 0.1/0.3 mm.

Processing

Apply immediately after mixing using a squeegee or notched trowel (e.g. **S3 or** Pajarito 95, or **S5** or Pajarito 25) by spreading an even layer onto the prepared substrate. The product is formulated for optimal air release; nevertheless, rolling with a spiked roller is recommended to improve adhesion to the substrate, optimise levelling and remove air bubbles. Rolling with the spiked roller should be carried out after a delay of 10 to 20 minutes. To ensure a seamless finish, always work ‘wet on wet’ and define work areas before starting. Do not perform the scattering too early due to the need for de-airing; the optimal time at 20 °C is after 20 to 30 minutes.

The floor and air temperature must not fall below 10 °C and the relative humidity must not exceed 75%. The temperature difference between the floor and room temperature should be less than 3 °C to ensure curing is not disrupted. If a dew point situation occurs, normal curing cannot take place and curing defects and staining may occur. Exposure to water should be avoided during the first 7 days. The curing times stated refer to 20 °C; at lower temperatures, the processing and curing times are extended, whilst at higher temperatures they are shortened.

Cleaning	To remove fresh contamination and 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 frost-free conditions. Ideal storage temperature is between 10 - 20 °C / 50 - 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: RE90 **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

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DIN EN 13813:2003-01

Synthetic resin screed mortar
DIN EN 13813: SR-B1,5-AR0,5-IR6

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 6

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