

KLB-SYSTEM EPOXID

EP 220

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

Packaging units



Article no.	Packaging	Content (kg)	Units/pallet
AK1242-47	Bucket combo	12.00 kg	30
AK1242-30	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 / 50 °F : 55 min. 20 °C / 68 °F : 30 min. 30 °C / 86 °F : 15 min.
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 until mechanical load at 20 °C / 68 °F 7 days until chemical load at 20 °C / 68 °F
Further coatings	After 18 - 24 hours, but after 48 hours at the latest at 20 °C / 68 °F
Consumption	Approx. 1.4 - 1.6 kg/m ² for each mm of layer
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 combo 12 kg, Hobbock combo 30 kg
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 and self-levelling 2-component epoxy resin coating for smooth and scattered surface finishes.

KLB-SYSTEM EPOXID EP 220 offers good flow and levelling properties and results in smooth, glossy surfaces.

Due to the adjusted surface tension, **KLB-SYSTEM EPOXID EP 220** is especially suitable for saturated or open scatterings with delustering agents, silicon carbide, and pigmented **partiColor®-chips** (flakes).

KLB-SYSTEM EPOXID EP 220 offers good resistance to mechanical load and is resistant to water, saline solutions, bases, different acids, as well as mineral oil, fuel, and different solvents. For chemical resistance requirements, please ask for a separate consultation.

Area of application

- Commercially used areas with mechanical load, minor exposure to chemicals and permanent exposure to water.
- Smooth and slightly scattered wear layer (scattering with delustering agent or SIC).
- Pigmented supporting layers for decorative, flake scattered coatings with subsequent sealing coats, e.g. with **EP 705 E**, **PU 805 E**, **PU 882**, **PU 880** for surfaces under light mechanical load.

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/mm ²	DIN EN 196/1
Compressive strength	55	N/mm ²	DIN EN 196/1
Adhesive tensile strength	> 1.5	N/mm ²	DIN EN 1542
Shore-hardness D	80	-	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

The following 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 to 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 one of the recommended KLB base coats, like **EP 50**, **EP 51 RAPID S**, **EP 52 Spezialgrund**, or **EP 52 RAPID**, consumption approx. 0.3 - 0.4 kg/m², depending on the substrate.
- Apply a scratch coat for an even substrate, e.g. with **EP 50**, **EP 51 RAPID S**, **EP 52 Spezialgrund**, or **EP 52 RAPID** and mixed sand **KLB-Mischsand 2/1**. Mixing ratio approx. 1 : 0.8 parts by weight, consumption approx. 0,8 - 1,3 kg/m².
- Apply the coating **EP 220** with a toothed trowel (**Toothed blade RS4** or Pajarito 48), consumption approx. 2.6 - 3.0 kg/m² for 2 mm layer thickness.
- Optional: scatter with silicium carbide, delustering agent, or decorative chips (flakes).

- Seal the surface with a suitable silk or matt sealer, such as **EP 705 E**, **PU 805 E**, **PU 880**, or **PU 882**.

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

After mixing, process the material immediately with a squeegee or toothed trowel (e.g. **Toothed blade RS4** or Pajarito 48) by pulling out an even layer on the prepared substrate. The product is adjusted for optimum deaeration, however, rolling with a spiked roller is recommended to improve the wetting of the substrate, to optimise levelling and to remove remaining air bubbles. This should be carried out time-delayed after approx. 10 - 20 minutes. In order to work seamlessly, always work "fresh-in-fresh" and define work areas before starting. For reasons of deaeration, do not scatter too early; the optimum time is at 20 °C / 68 °F after 20 - 30 minutes.

Floor and air temperature must not fall below 10 °C / 50 °F and humidity must not exceed 75 %. The difference in floor and room temperature must remain less than 3 °C / 3 K / 5.4 °F so as not to impede the curing process. If a dew-point situation arises, regular curing will not be possible with hardening problems and spotting to occur. Exposure to water should be avoided during the first 7 days. The specified hardening times apply for 20 °C / 68 °F; temperatures below this require longer processing and curing times, while higher temperatures require shorter times.

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 if possible, at 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: RE55

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

	
KLB Kötztal Lacke + Beschichtungen GmbH Günztalstraße 25 89335 Ichenhausen, GERMANY	
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EP220-V1-102025	
DIN EN 13813:2003-01	
Synthetic resin screed mortar DIN EN 13813: SR-B1,5-AR0,5-IR6	
Fire behaviour	E _{ff} -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.

All stated information is based on our experience and technical preparation. We guarantee the correct and proper quality of our products. We do not assume any responsibility for the work not carried out by us, since we have no influence on the processing or processing conditions. We recommend on-site trials to be conducted in individual cases. With the publication of this new KLB product information, all prior information loses validity. The latest version is available electronically on our website www.klb-koetzal.com. In addition, our "General Terms and Conditions" apply.