KLB-SYSTEM EPOXID
EP 50

All-purpose 2-component epoxy resin for base and scratch coats or as repair mortar

Packaging units

Article no.	Packaging	Content (kg)	Units/pallet
AK1010-83	Combo can	1.00 kg	240
AK1010-70	Bucket combo	5.00 kg	45
AK1010-50	Bucket combo	10.00 kg	30
AK1010-30	Hobbock combo	30.00 kg	12
AK1010-01	Drum combo	600.00 kg	0,5

Product characteristics

Mixing ratio parts by weight	A : B = 2 : 1
Mixing ratio parts by volume	A : B = 100 : 54
Processing time	10 °C / 50 °F : 60 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 : 12 - 14 hrs. 20 °C / 68 °F : 6 - 8 hrs. 30 °C / 86 °F : 5 - 6 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 curing, but after 48 hours at the latest at 20 °C / 68 °F
Consumption	Base coat: approx. 0.3 - 0.4 kg/m² Scratch coat: approx. 0.4 - 0.6 kg/m²
Packaging	Combo can 1 kg, Bucket combo 5 kg, Bucket combo 10 kg, Hobbock combo 30 kg, Drum combo 600 kg
Shelf life	12 months (originally sealed)

Product description

KLB-SYSTEM EPOXID EP 50 is a high-quality, solvent-free, all-purpose 2-component epoxy resin.

KLB-SYSTEM EPOXID EP 50 is suitable as base coat, for scratch coats, or as levelling mortar for new construction sites, as well as for reconstruction work. Due to its low viscosity and good wettability properties, the resin penetrates in the substrate and results in a high-strength foundation for subsequent coatings.

Already for years now, **KLB-SYSTEM EPOXID EP 50** has been our first recommendation for substrate preparation. The material is very reliable under various construction site conditions.

Area of application

- Base and scratch coats.
- Priming fillers.
- Levelling layers and epoxy resin mortar.

Product features

- proven quality
- Total Solid according to GISCODE (Test method "Deutsche Bauchemie")
- good interlayer adhesion
- all-purpose use
- consistent to hydrolysis and saponification
- free of deleterious substances against varnish

Technical data

Viscosity - Component A+B	800	mPas	DIN EN ISO 3219 (23 °C / 73.4 °F)
Solid content	> 99	%	KLB method
Density - Component A+B	1.10	kg/l	DIN EN ISO 2811-2 (23 °C / 73.4 °F)
Weight loss	0.3	weight-%	after 28 days
Water absorption	< 0.2	weight-%	DIN 53495
Bending tensile strength	35	N/mm²	DIN EN 196/1
Compressive strength	80	N/mm²	DIN EN 196/1
Adhesive tensile strength	> 1.5	N/mm²	DIN EN 1542
Shore-hardness D	80	-	DIN 53505 (after 7 days)

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

Included in systems

- System A1 - KLB INDUSTRIAL EP Standard
- System A3 - KLB INDUSTRIAL EP RX
- System A6 - KLB INDUSTRIAL EP Screed
- System F1 - KLB CONDUCTIVE EP EX Standard
- System G5 - KLB INDUSTRIAL PU RX

Please visit our website to get more information about our KLB systems: www.klb-koetztal.com

Tests

The following external test certificates are available:

- Classification of the fire behaviour in combination with **EP 99**, **EP 211 ESD**, **EP 212 ESD** or **EP 216** according to DIN EN 13501-01:2010-01: B_{fl}-s1 or C_{fl}-s1.

Note:

Please ask for the tested system build-up!

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. Surfaces suitable for coating are concrete C20/25 (B 25), cement screed CT-C35-F5 (ZE 30), as well as other sufficiently solid substrates. The substrate has to have adequately high strength for the intended occupational use. Coating mastic asphalt with epoxy resin is not recommended. The substrates to be coated should be prepared mechanically, preferably by shot-blasting. The surface strength must then be at least 1.5 N/mm². For concrete, moisture content must not exceed 4.5 CM-%, remaining residual humidity. The possibility of moisture ingress from the rear must be permanently excluded. Observe the information issued by the trade associations, e.g. the most recent versions of BEB worksheets KH-0/U and KH-0/S. Reconstructing floors may require special procedures. Obtain technical advice.

Mixing

If the components are packed individually, they should be weighed out exactly in the specified mixing ratio.

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.

Producing scratch coats and mortar:

Scratch coats:

1.0 kg **KLB-SYSTEM EPOXID EP 50**
0.5 - 0.8 kg mixed sand **KLB-Mischsand 2/1**

Epoxy resin mortar:

1.0 kg **KLB-SYSTEM EPOXID EP 50**
8.0 - 12.0 kg mixed sand **KLB-Mischsand 1**

Before adding any additives, the binding agent must be premixed, only then is added the supplement. The amount of mixed sand depends on the necessary consistency and stability.

Processing

Base coat: process the material as a base coat immediately after mixing with a squeegee, trowel, or nylon roller. Apply an evenly sealed coat on the substrate. To achieve a dense surface, apply a second layer or a saturated scratch coat if the substrate is highly absorbent. Scatter the fresh coating with quartz sand (grain size 0.3/0.8 mm). This is mandatory if the subsequent coating will be applied later than 48 hours after the primer.

Scratch coat: apply a scratch coat before any further coatings to level the substrate - but also for full pore-closure. Use a trowel, metal, or rubber squeegee. The consistency has to be adjusted according to the substrate absorbency, for a material that runs true.

Priming filler: base coats can be applied as smoothing filler at the same time if it is ensured that a sufficient sealing is achieved in one coat for subsequent coatings. Usually, prime filling coats may be filled with 0.5 kg of mixed sand **KLB-Mischsand 2/1** for 1 kg of binding agent. Apply with a rubber squeegee, with a consumption of 0.7 - 1.0 kg/m², depending on the depth of roughness of the substrate.

Epoxy resin mortar: EP 50 may be used as mortar for repair work. The special resin **EP 150** is recommended for industrial mortar coatings. Process immediately after mixing. Pull over a lath, then compact and smooth with a trowel.

Floor and air temperature must not fall below 10 °C / 50 °F and humidity should 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. 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.

Special remarks: we advise against the "resinification“ of screed/flat joints and break-outs in the screed or concrete with pure epoxy resin or set with suspending agent. For the application, always use the KLB primer resin in combination with quartz sand e.g. **KLB-Mischsand 1** or **KLB-Mischsand 2/1**. For this, we recommend adding at least 1 - 3 parts by weight of filler to 1 parts by weight of primer; if necessary, 0.2 - 2 % of suspending agent can be added to adjust the consistency. Intermediate grinding should be carried out to improve adhesion to subsequent coats.

Cleaning	To remove fresh contamination and to clean tools, use thinner **VR 24** or **VR 33** immediately. Hardened material can only be removed mechanically.
Storage	Store in dry and if possible, 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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EP50-V1-022013
DIN EN 13813:2003-01
Synthetic resin screed mortar DIN EN 13813: SR-B1.5-AR0.5-IR5

Fire behaviour	B_{fl}-s1
Emission of corrosive substances	SR
Wear resistance BCA	AR 0.5
Adhesive tensile strength	B 1.5
Impact resistance	IR 5

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