

KLB-SYSTEM EPOXID

EP 50

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

Mixing ratio	Parts by weight	A : B	=	2 : 1
	Parts by volume	A : B	=	100 : 54
Processing time	Temperature	10 °C / 50 °F	20 °C / 68 °F	30 °C / 86 °F
	Time	60 minutes	30 minutes	15 minutes
Processing temperature		Minimum 10 °C / 50 °F (room- and floor-temperature)		
Curing time (Accessibility)	Temperature	10 °C / 50 °F	20 °C / 68 °F	30 °C / 86 °F
	Time	12 - 14 hrs.	6 - 8 hrs.	5 - 6 hrs.
Curing		2 - 3 days for mechanical load at 20 °C / 68 °F		
		7 days for chemical resistance at 20 °C / 68 °F		
Further coatings		After curing, but not longer than 48 hours at 20 °C / 68 °F		
Consumption	Base coat	Approx. 0.3 - 0.4 kg/m ²		
	Scratch coat	Approx. 0.4 - 0.6 kg/m ²		
Packaging		Can-Combi 1 kg, Bucket-Combi 5 kg, Bucket-Combi 10 kg, Hobbock-Combi 30 kg, Drum-Combi 600 kg		
Shelf life		12 months (originally sealed)		

Usage and Properties

KLB-SYSTEM EPOXID EP 50 is a high-quality, solvent-free, all-purpose usable, 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.

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

Product Features

- "total solid" according to Giscode (test method of the Deutsche Bauchemie, German construction chemistry association)
- approved, high-quality base coat
- safe and reliable
- good interlayer adhesion
- all-purpose
- resistant to hydrolysis and saponification
- free of deleterious substances against varnish

Area of Application

- Base coat and scratch coats.
- Priming filler.
- Levelling coat and epoxy resin mortar.

Substrate

The substrate to be coated has to be levelled, dry, free of dust, has to have adequate tensile and compressive strength, and be free from weakly-bonded components or surfaces. Materials impairing adhesion, such as grease, oil, and paint residues must be removed using suitable methods. Suitable surfaces are concrete C20/25 (B 25), cement screed CT-C35-F5 (ZE 30), as well as other adequately sound surfaces. The substrate has to have adequately high strength for the proposed occupational use. Coating of mastic asphalt with epoxy resin is not recommended. The surface to be coated should be prepared mechanically, preferably by shot-blasting. The surface strength must then be a minimum of 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. Please refer to the advice issued by the trade associations, e.g. the current edition of BEB-worksheets KH-0/U and KH-0/S. Reconstructing floors may need special procedures. Obtain technical advice.

Mixing

Single packages of the components need to be measured in the precise mixing ratio. Combi-trading units will be supplied in the correctly measured mixing ratio. Component A has sufficient volume for the entire trading unit. Decant the hardener completely into the resin. Blend with a slow speed mixer (200 - 400 r/pm) for at least 2 - 3 minutes, for a material that is homogeneous and free of streaks. To avoid mixing errors it is recommended to empty the resin/hardener-mixture into a clean container and mix briefly once again ("to repot").

Producing scratch coats and mortar:

Scratch coats:

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

Epoxy resin mortar:

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

Before adding additives, premix the binding agent. Then add the additive. The amount of the sand blend to be added depends on the desired texture and consistency.

Processing / Handling

Base coat: Processing the material as a base coat takes place immediately after mixing, using a coating knife, trowel, or nylon roller. Apply an evenly closed coat on the substrate. On highly absorbent surfaces a second coat or a saturated scratch coat is recommended to achieve a compact surface. For optimum adhesion scatter the fresh surface with quartz sand (grain size 0.3/0.8 mm). This is mandatory if the subsequent coatings will be applied later than 48 hours after base coat application.

Scratch coat: For smoothing the substrate, as well as pore sealing apply a scratch coat. Use a trowel, metal-, or rubber coating knife. The consistency has to be adjusted according to the absorbency of the substrate, and set so the material may run true.

Priming filler: Base coat and the smoothing coat may be applied simultaneously. It just has to be assured that a sufficient sealing coat for subsequent coatings is achieved. Usually prime filling coats may be filled with 0.5 kg of **KLB-Mischsand 2/1** for 1 kg of binding agent. Apply with a rubber coating knife, 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. Use the special resin **EP 150** for industrial mortar coatings. Process immediately after mixing. Pull off with a lath, compact and smooth with a smoothing trowel.

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 be less than 3 °C / 37.4 °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. Curing time applies to 20 °C / 68 °F. Lower temperature may increase, higher temperature may decrease the curing and processing time.

Special remarks: We advise against the „gumming“ of screed joints/flat joints with pure or with thixotropic agent filled epoxy resin. In the course of time, these areas will begin to show on the surface. For the application, use always the KLB-Primer resin in combination with quartz sand e.g. **KLB-Mischsand 1** or **KLB-Mischsand 2/1**. For this, we recommend to add at least 1 - 3 parts by weight of filler.

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

Special Remarks

The product is subject to the hazardous material-, operational safety-, and transport-regulations for hazardous goods. Refer to the DIN-Safety Data Sheet and the information on the labelled containers!

GISCODE: (05/2018 modification): RE 30

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.

	
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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 _{fi} -s1
Emission of corrosive substances	SR
Wear resistance BCA	AR 0.5
Adhesive tensile strength	B 1.5
Impact resistance	IR 5

Technical Data*

Viscosity	Components A + B	800	mPas	DIN EN ISO 3219 (23 °C / 73.4 °F)
Solid content		> 99	weight-%	KLB-Method
Density	Components A + B	1.10	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
Bending tensile strength		35	N/mm ²	DIN EN 196/1
Compressive strength		80	N/mm ²	DIN EN 196/1
Shore-hardness D		80	-	DIN 53505 (after 7 days)
Adhesive tensile strength		> 1.5	N/mm ²	DIN EN ISO 1542

(* Values achieved in sampling are average values. Variation in product specification is possible.)

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. With appearance of this new KLB product information all prior information loses validity. The updated version is available on our website www.klb-koetztal.com. In addition, our „General Terms and Conditions“ apply.



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to ISO 9001.