

# KLB-SYSTEM EPOXID EP 150

High-Quality 2-Component Epoxy Resin for Décor and Industrial Mortar Coatings

Mixing Ratio	Parts by weight:	A : B = 2 : 1		
	Parts by volume:	A : B = 100 : 55		
Application	Temperature	10°C	20°C	30°C
	Time	75 mins.	45 mins.	25 mins.
Working temperature		minimum 10°C (room- and floor- temperature)		
Setting	Temperature	10°C	20°C	30°C
	Time	20-24 hrs.	10-13 hrs.	8-10 hrs.
Hardening	Mechanical	2 -3 days for exposure to mechanical forces		
	Chemical	7 days for full resistance		
Further coatings		whilst wet or after setting time		
		but not later than 48 hours		
Consumption	Primer	approx. 0.25 – 0.35 kg/m <sup>2</sup>		
	Mortar Coating	mix ratio 1:8	approx. 1.35 kg/m <sup>2</sup> at 6 mm	
	Mortar Coating	mix ratio 1:10	approx. 1.10 kg/m <sup>2</sup> at 6 mm	
	Mortar Coating	mix ratio 1:12	approx. 1.00 kg/m <sup>2</sup> at 6 mm	
Packaging		Combi-can 10 kg, Combi-Hobbock 30 kg		
		Combi-Barrel 200 kg (600 kg delivered quantity)		
Shelf life		12 months (in original, sealed packaging)		

## Description and Properties

KLB-SYSTEM EPOXID **EP 150** is a low-viscosity epoxy-resin for producing decorative reaction resin coatings using coloured and natural sand. **EP 150** is an easy to apply mortar system. Due to its special composition, the resin has low yellowing properties and is especially suitable for decorative mortar coatings. In addition, it can be used to produce base-coats, levelling coats and scratch-coats.

Epoxy resin mortars can normally be mixed in the ratio 1:6 up to 1:13 with quartz sand. The mechanically mixed mortar is easy to spread and smooth. The coating installation is achieved by normal manual application but can also be carried out mechanically with a power-float (for suitable sand mixes, please contact KLB; for your own sand mix, conduct a trial). **EP 150** is a slow-setting resin and offers a sufficiently long working time for mortar applications.

With regard to setting time, **EP 150** has controlled setting speed and can, at the recommended application temperatures, still be re-worked after 1 day – it is, however, not brittle and is therefore ideal as a bonded mortar.

The resin has good resistance to chemicals, especially against liquid salt solutions, acids and alkalis, as well as solvents. It is also resistant to organic acids. It has short-

term temperature resistance, in damp heat up to 80°C, in dry heat up to 120°C. **EP 150** has good colour stability but, like all epoxy resins, is not entirely free from yellowing.

Mortar coatings must be top-coated to improve the surface finish properties. According to mortar composition and requirements, one or more coats can be required. Suitable for this are the KLB products **EP 175 Spezial, EP 1760, EP 700 E, EP 860**.

## Product Features

- high quality formulation
- solvent-free
- especially suitable for décor coatings
- good intermediate coat adhesion
- universal and reliable
- especially suitable for manual application
- low yellowing property

## Areas of Use

- Manually and mechanically smoothed mortar coatings in thickness range 5 – 10 mm
- Mortar coatings made with natural and decorative sand
- Smoothing coats, mortar underlayments and base-coats prior to installation of epoxy-resin mortars
- Base-coats under mortar coatings

## Finish construction

- shot-blast the surface and vacuum thoroughly
- prime with **EP 720 E** or **EP 725 E**, diluted 1.0 : 0.5 with water
- apply the smoothing coat of **EP 782 E Spachtelgrund** with a trowel or a smooth rubber squeegee rake
- on highly absorbent and rough surfaces, apply a further coat as necessary

## Substrate

The surface to be coated must be flat, dry, dust-free, have adequate tensile- and compressive- strength and be free from weakly bonded constituents or surface sections. Materials that would impair adhesion, such as grease, oil and paint residues, must be removed in advance using suitable methods. Suitable for coating application are concrete B 25, cement screeds ZE 30 and other substrates with suitable strength. The substrate must have an adequate strength for the proposed type of use. Coating application on mastic asphalt with epoxy-resin mortars is not recommended.

The surface to be coated must be mechanically prepared, preferably by shot-blasting. The surface strength should then be at least 1.5 N/mm<sup>2</sup>. For concrete, the moisture content must not exceed 4.5 CM%. Recurring moisture ingress must be permanently excluded. Refer to the recommendations of the trade associations, e.g. the current issues of BEB work-sheets KH-0/U and KH-0/S.

In the refurbishment of flooring, special procedures may be required. Obtain special advice. The substrate must, with a mechanical smoothing process, be made adequately flat and then primed. For priming, EP 150 or another KLB primer-resin can be used. The primer-coat must be gritted with quartz sand, grade 1 to 2 mm.

## Mixing

With single packaging, the components must be measured out in the prescribed mixing ratio. With combi-cans, factory-measured material in the precise mixing ratio is provided in one package. The can containing Component A is large enough to accept the total mix quantity. Fully decant the hardener into the can of resin. Blend mechanically with a slow-speed mixer (200 – 400 rpm) and for 2 – 3 minutes until a homogeneous, streak-free mixture is achieved.

## Producing mortars:

Mixing synthetic resin mortars, in order to achieve a consistent mortar quality, should generally be carried out in a forced-action mixer. Put the aggregate into the mixer, briefly pre-mix and then add the mixed resin whilst the mixer is running. Important: the mixing time must always be the same. Then apply the total mix.

## Application

The mortar mix should always be applied immediately so as to keep to minimum the consistency differences that result from the reaction process. This way, the most consistent surface finish is achieved; reacted material is more difficult to apply and can lead to different surface structures and visible application marks.

The material is placed in portions over the substrate and then spread to a uniform thickness, e.g. using a gauge. Then follows compaction and smoothing, either manually or mechanically.

Always work “fresh in fresh” to avoid edges. Working bays must be separated in accordance with the installation process before work begins. The mortar installation requires an experienced and trained team.

Mortar coatings should generally be sealed. The number of coats and choice of material depends on the finish requirements and the mortar system.

The temperature of floor and air must not fall below 10°C and the air humidity must not be above 75%. The difference between floor- and room- temperature should be less than 3°C so as not to disturb the drying process. In the event of a dew-point situation, correct drying cannot take place, the setting process will be interrupted and spots will form. The stated setting times apply at 20°C; at lower temperatures, the working- and setting- times are lengthened and, at higher temperatures, they are shortened. Variation from the recommended application conditions can lead to changes in the final, technical properties.

To clean equipment, VR 24/VR 33 Thinners are recommended.

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### Storage / Transport

Store in dry and frost-free conditions. Ideal storage temperature is 10 – 20 °C. Before application, bring to a suitable working temperature. Tightly re-seal opened containers and use the contents as quickly as possible.

The product falls outside the hazardous materials, operational safety- and transport- regulations for hazardous goods. The relevant notes are in the DIN Safety Data Sheet. Refer to the label notes on the container!

GISCODE: RE 1

### Technical Data\*

Viscosity	Comp. A	1000	mPas	DIN EN ISO 3219 (23°C)
	Comp. B	100	mPas	DIN EN ISO 3219 (23°C)
	Comp. A+B	400	mPas	DIN EN ISO 3219 (23°C)
Solid state		> 99	%	(KLB factory standard)
Density	Comp. A	1.12	kg/litre	DIN EN ISO 2811-2 (23°C)
	Comp. B	1.00	kg/litre	DIN EN ISO 2811-2 (23°C)
	Comp. A+B	1.08	kg/litre	DIN EN ISO 2811-2 (23°C)
Weight loss		0.3	% by weight	(after 28 days)
Water absorption		< 0.2	% by weight	DIN 53495
Bending tensile strength		30	N/mm <sup>2</sup>	DIN EN 196/1
Compressive strength		70	N/mm <sup>2</sup>	DIN EN 196/1
Shore-hardness D		75	-	DIN 53505 (after 7 days)
Adhesive tensile strength		> 1,5	N/mm <sup>2</sup>	DIN EN 1542

(\* values achieved in sampling are average values. Variations from the product specification are possible)



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