

# KLB-SYSTEM EPOXID EP 50

## Primer and Construction Resin

Mixing Ratio	Parts by weight:	A : B = 2 : 1		
	Parts by volume:	A : B = 100 : 54		
Application	Temperature	10°C	20°C	30°C
	Time	60 mins.	40 mins.	20 mins.
Working temperature		minimum 10°C (room- and floor- temperature)		
Setting	Temperature	10°C	20°C	30°C
	Time	12-14 hrs.	6-8 hrs.	5-6 hrs.
Hardening	Mechanical	2 -3 days for exposure to mechanical forces at 20°C		
	Chemical	7 days for exposure to chemicals at 20°C		
Further coatings		after the setting time, but not later than 48 hours at 20° C		
Consumption	Primer	approx. 0.25 – 0.35 kg/m <sup>2</sup>		
	Scratch-coat	approx. 0.45 – 0.60 kg/m <sup>2</sup>		
Packaging		Combi-can 1 kg, Combi-can 5 kg, Combi-can 10 kg, Combi-Hobbock 30 kg, Combi-Drum 200 kg (600 kg delivered quantity)		
Shelf life		12 months (in original, sealed packaging)		

### Description and Properties

**EP 50** is a high quality, solvent-free, 2-component epoxy resin for universal application. **EP 50** can be used as a primer, scratch-coat or levelling mortar in renovation and new-build work. Due to its low viscosity and good surface wetting properties, the resin penetrates well into the substrate and provides a high strength base for subsequent coating materials.

**EP 50** has, for many years, been our first recommendation for substrate preparation as it works reliably under all the various construction conditions

### Product Features

- proven, high quality primer
- solvent-free
- secure and reliable
- excellent bond
- universal applications
- resistant to hydrolysis and saponification

### Areas of Use

- primer and scratch-coat
- primer for trowel application
- epoxy resin levelling compound and mortar

### Substrate

The surface to be coated must be flat, dry, dust-free, have adequate tensile and compressive strength and be free from constituents and finishes that would impair adhesion. Remove contaminants such as grease, oil and paint residues using suitable methods. Suitable for coating applications are concrete B25, cement screeds ZE 30 and other adequately sound substrates. The substrate must demonstrate an adequately high strength for the proposed use. The coating of mastic asphalt with epoxy resin is not recommended.

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

Floor surface refurbishment can require special procedures. Obtain special advice.

### Mixing

With individual packaging of the components, they must be exactly 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. To avoid mixing errors, we recommend to pour the mixed resin into a clean drum and briefly mix again..

**Producing a scratch-coat mix:**

1.0 part by weight of KLB System EPOXID EP 50  
0.5 – 0.8 parts by weight of KLB mixing sand 2/1

**Producing a Resin mortar mix:**

1.0 part by weight of KLB System EPOXID EP 50  
8.0 – 12.0 parts by weight of KLB mixing sand 2/1

When adding aggregates, the resin should be mixed first and then the aggregate added. The quantity of mixing sand is according to the desired consistency and strength.

**Application**

**Primer:** application as a primer is carried out immediately after mixing and using a rake, trowel or nylon roller. Apply the material as an even, fully sealed coat over the surface. On highly absorbent surfaces, a second coat, or a full scratch-coat are recommended to ensure a dense surface finish.

For maximum adhesion, broadcast the fresh surface with approx. 0.8 kg quartz sand (0.3 / 0.8 grain size). This must be carried out if the subsequent coating will be applied more than 24 hours after priming.

**Scratch-coat:** to smooth and to fully seal the surface, before applying the coating, apply a scratch-coat. This can be applied with a trowel, metal- or rubber- rake. The consistency should be according to surface absorbency and must be such that the material flows and is free from trowel marks.

**Trowel-applied primer:** priming and smoothing can be carried out at the same time, if it can be guaranteed that, in one coat, an adequately sealed surface finish can be achieved for the subsequent coating materials. Normally, trowel-applied primers can be filled with 0.5 kg KLB mixing sand 2/1 per 1 kg resin. Application is with a rubber squeegee rake and with a consumption of 0.7–1.0 kg/m<sup>2</sup>, dependent on the roughness of the surface.

**Epoxy resin mortar:** for repair work, mortars can be made from EP 50. To produce industrial mortars, special resins EP 150 and EP 157 are recommended. Apply immediately after mixing. Pull out the mortar with a screeding board and then compact and smooth with a trowel.

The temperature of both floor and air must not exceed 10°C and the air humidity must not be above 75%. The quoted setting times apply at 20°C; at lower temperatures, the working- and setting- times are extended and, at higher temperatures they are shortened.

To clean equipment, Thinners **VR 24** is recommended

**Storage / Transport**

Store in dry and, if possible, 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. Refer to the DIN Safety Data Sheet and label notes on the container!

GISCODE: RE 1

**Technical Data\***

Viscosity	Comp. A	950	mPas	DIN EN ISO 3219 (23°C)
	Comp. B	650	mPas	DIN EN ISO 3219 (23°C)
	Comp. A+B	800	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	1.04	kg/litre	DIN EN ISO 2811-2 (23°C)
	Comp. A+B	1.10	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		35	N/mm <sup>2</sup>	DIN EN 196/1
Compressive strength		80	N/mm <sup>2</sup>	DIN EN 196/1
Shore-hardness D		80	-	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)

Details are based on our experience and practical testing. We guarantee the perfect quality of our products, but cannot accept responsibility for the success of your completed work as we have no influence on the application and application conditions. It is recommended, in individual cases, to prepare a test surface. In addition, our "General Conditions of Trade" apply. The publication of this, new Data Sheet invalidates all preceded information.