

KLB-SYSTEM EPOXID EP 52

Moisture-tolerant Special Primer

Mixing Ratio	Parts by weight:	A : B = 100 : 60		
	Parts by volume:	A : B = 100 : 66		
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	24-28 hrs.	12-15 hrs.	8-12 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. 0.3 – 0.4 kg/m ²		
	Scratch-coat	approx. 0.4 – 0.6 kg/m ²		
	Mortar	approx. 0.15 – 0.3 kg/m ² per 1 mm of thickness		
Packaging		Combi-can 1 kg, Combi-can 10 kg, Combi-Hobbock 30 kg, Combi-Drum 200/180 kg		
Shelf life		12 months (in original, sealed packaging)		

Description and Properties

EP 52 is a solvent-free, 2-component epoxy resin that is formulated to have high resistance to moisture. **EP 52** will bond to surface-dry damp substrates, suppresses the water content and achieves an exceptional bond. In combination with the degreasing agent, PS 22, oil-contaminated surfaces can be cleaned and then primed. Due to its especially good penetration and bonding properties, the product is proven to be effective on poor quality substrates. In particular, on substrates with inadequate strength, the bond-strength achieved can be significantly improved. Its medium viscosity makes the product suitable for use as a scratch-coat and also for use as a wet bonding agent for bonded screeds. The best adhesion is achieved on shot-blasted surfaces.

Product Features

- solvent-free
- excellent adhesion
- surface strengthening
- universal applications
- resistant to hydrolysis and saponification
- cures even on damp substrates
- increases resistance to osmosis
- high penetration capacity

Areas of Use

- primer prior to applying coatings on surface-dry substrates and those cleaned with wet chemical systems
- primer on green screeds and concrete
- primer on sand-blasted steel
- case-hardening of substrates with inadequate strength
- scratch-coat for sealing and smoothing

Testing

KLB-SYSTEM EPOXID EP 52, in combination with EP 220, was successfully tested in a bonded system in accordance with the regulation "Protection and Restoration of Concrete Structures" issued by the German Commission for Reinforced Concrete (DAfStb), Part 2 – construction products and their applications, and Part 4 – test methods. Test certificate available on request.

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. After degreasing with PS 22, EP 52 can be used as a bonding agent on surface-dry substrates. 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.

Due to its high strengthening effect, bond-strength can be significantly improved, even in substrates with deficient structural strength.

The surface to be coated must be mechanically prepared, preferably by shot-blasting. The surface strength must then be at least 1.5 N/mm².

The moisture content for concrete must not exceed 4.5 CM-%. Subsequent moisture ingress must be permanently excluded. Given certain prerequisites, EP 52 can be used on damp substrates and those that have inadequate density. Suitability under the prescribed conditions must be clarified. Refer to the notes issued by the trade associations, e.g. the current versions of BEB worksheets KH-0/U and KH-0/S.

Refurbishment of floor surfaces outside of normal specifications requires monitoring of the results achieved, e.g. by bond testing.

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 52
0.5 – 0.8 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 and, as required, leave and then roll again. 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 36 hours after priming. If the primer should give increased resistance to osmosis, two primer coats, or one primer- and one scratch- coat should be applied. Do not grit-blind the first primer coat and work within the recommended timing.

Scratch-coat: to smooth and to fully seal the surface, before applying the coating, application of a scratch-coat is recommended. 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. 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

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Technical Data*

Viscosity	Comp. A	900	mPas	DIN EN ISO 3219 (23°C)
	Comp. B	1100	mPas	DIN EN ISO 3219 (23°C)
	Comp. A+B	950	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	1.02	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		> 25	N/mm ²	DIN EN 196/1
Compressive strength		> 70	N/mm ²	DIN EN 196/1
Shore-hardness D		82	-	DIN 53505 (after 7 days)
Adhesive tensile strength		> 1,5	N/mm ²	DIN EN 1542

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



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