

KLB-SYSTEM EPOXID EP 57

AgBB-tested, 2-component epoxy resin base coat, low-emission



Mixing ratio	Parts by weight	A : B	=	100 : 50
	Parts by volume	A : B	=	100 : 53
Processing time	Temperature	10 °C / 50 °F	20 °C / 68 °F	30 °C / 86 °F
	Time	50 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	14 - 18 hrs.	7 - 10 hrs.	5 - 7 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. 0.250 - 0.350 kg/m ²		
	Scratch coat	Approx. 0.450 - 0.600 kg/m ²		
	Mortar	Approx. 0.150 - 0.300 kg/m ²		
Packaging		Can-Combi 1 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 57 is a high-quality low-emission, and all-purpose applicable, 2-component epoxy resin based on the exceptionally established **KLB-SYSTEM EPOXID EP 50**.

KLB-SYSTEM EPOXID EP 57 is certified according to the "Indoor Air Comfort Gold" and meets the requirements for a sustainable construction certification according to DGNB (Germany), LEED (United States) or BREEAM (Great Britain). "Indoor Comfort Gold" fulfills the highest requirements in regards to the emission of Volatile Organic Compounds and respects not only the German limits of AgBB or ABG, but also of the emissions regulations of many other European Countries.

Use **KLB-SYSTEM EPOXID EP 57** as base coat, for scratch coats, or as levelling mortar for reconstruction or new constructions. Due to its low-viscosity and good wet-tability properties the resin penetrates very well into the substrate and develops a high-strength base for subsequent coatings.

Product Features

- "total solid" according to Giscode (test method of the Deutsche Bauchemie, German construction chemistry association)
- low VOC emission
- tested, low-emission quality
- with interior area accreditation (DIBt®)
- high-quality base coat
- safe and reliable
- all-purpose usage
- resistant to hydrolysis and saponification
- free of deleterious substances against varnish

Testing

External test certificates are available:

- Certified low-emission according to „Eurofins Indoor Air Comfort Gold“. AgBB-tested in combination with other coatings and DIBt®-accredited. Suitable for recreation rooms.

Note: Please ask for the tested system structure!

Area of Application

- Low-emission base coat according to the DIBt®-principles.
- As base coat, for scratch coats, and prime filling coats.
- Levelling coatings 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, cement screed CT-C35-F5, as well as other adequately sound surfaces. The substrate must have adequately high strength for the proposed occupational use. The 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. Please obtain technical advice where necessary.

Mixing

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 compound B into the resin component A completely. 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 mixed resin 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 57**
- 0.5 - 0.8 kg **KLB-Mischsand 2/1**

Epoxy resin mortar:

- 1.0 kg **KLB-SYSTEM EPOXID EP 57**
- 8.0 - 12.0 kg **KLB-Mischsand 1**

Premix the resin before adding any additives. The amount of the sand blend to be added depends on the desired texture and consistency.

Processing / Handling

Base coat: If the material is used as a base coat process immediately after mixing with a coating knife, spatula, or nylon roller. Apply an evenly closed sealing coat on the surface. On highly absorbent surfaces a second coat or a saturated scratch coat is recommended to achieve a fully sealed surface with closed pores. Scatter the surface with quartz sand (grain size 0.3/0.8 mm) for an optimum adhesion while the applied material is still fresh. This is mandatory if the subsequent coatings will be applied later than 24 hours after base coat application.

Scratch coat: For smoothing and completely sealing the substrate apply a scratch coat before the application of any subsequent coatings. This can be done with 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: The base coat may be applied as prime filling coat simultaneously. It just has to be assured that a sufficient sealing surface is applied in one coat for the subsequent coatings. Usually prime filling coats may be filled with 0.5 kg of **KLB-Mischsand 2/1** for each 1 kg of epoxy resin. Apply with a smooth rubber spatula, with a consumption of 0.7 - 1.0 kg/m², depending on the depth of roughness of the substrate.

Epoxy resin mortar: For repair work the mortar can be made of **EP 57**. It is recommended to use special resins like **EP 150** for industrial mortar coatings. Process immediately after mixing. Pull off the mortar with a lath, compact and smooth with a smoothing trowel. Clean tools with small amounts of **VR 24** if necessary.

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. If working conditions are not complied with, deviations in the described technical properties may occur in the end product.

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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EP57-V1-022013	
DIN EN 13813:2003-01	
Synthetic resin screed mortar DIN EN 13813: SR-B1.5-AR0.5-IR4	
Fire behaviour	E _{fl} -s1
Emission of corrosive substances	SR
Wear resistance BCA	AR 0.5
Adhesive tensile strength	B 1.5
Impact resistance	IR 4

Technical Data*

Viscosity	Components A + B	550	mPas	DIN EN ISO 3219 (23 °C / 73.4 °F)
Solid content		> 99.9	%	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 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.

VOC-Contents

The product complies with the high requirements to low VOC-contents, as required for sustainable construction. Therefore these values exceed by far the European Union directive 2004/42/EG (decopaint-directive).

	Reference to*	Max. Value	Actual Content	
Directive 2004/42/EG	Component A	≤ 500	0.25	g/l
Decopaint-directive	Component B	≤ 500	0	g/l
DGNB German Sustainable Building Council	Components A + B	< 3	0.17	%
climate:active Climate protection initiative of the Austrian Federal Ministry of Agriculture, Forestry, Environment and Water	Components A + B	< 3	0.17	%
LEED Leadership in Energy and Environmental Design	Components A + B	< 100	1.9	g/l
Minergie Eco® Quality standard of the "Minergie society", Switzerland	Components A + B	< 1 (< 2)	0.17	%

(* According to the decopaint-directive single components are used for the calculation. For the quality rating system for sustainable construction the mixture of both components in the correct mixing ratio is the determining factor.)