

# KLB-SYSTEM EPOXID

## EP 58



Very low-emission 2-component epoxy resin primer, AgBB-tested as base and scratch coat or mortar resin, can be used universally for recreation rooms.

### Packaging units



Article no.	Packaging	Content (kg)	Units/pallet
AK1093-92	Combo can	1.00 kg	240
AK1093-50	Bucket combo	10.00 kg	30
AK1093-30	Hobbock combo	30.00 kg	12
AK1093-01	Drum combo	550.00 kg	0,5

### Product characteristics

Mixing ratio parts by weight	A : B = 100 : 37
Mixing ratio parts by volume	A : B = 100 : 40
Processing time	15 °C / 59 °F : 50 min. 20 °C / 68 °F : 40 min. 30 °C / 86 °F : 20 min.
Processing temperature	Minimum 15 °C / 59 °F (room and floor temperature)
Curing time (accessibility)	15 °C / 59 °F : 24 - 28 hrs. 20 °C / 68 °F : 14 - 18 hrs. 30 °C / 86 °F : 8 - 12 hrs.
Curing	2 - 3 days until mechanical load at 20 °C / 68 °F 7 days until chemical load at 20 °C / 68 °F
Further coatings	After 18 - 24 hours, but after 48 hours at the latest at 20 °C / 68 °F
Consumption	Base coat: approx. 0.250 - 0.400 kg/m <sup>2</sup> per application Scratch coat: approx. 0.400 - 0.600 kg/m <sup>2</sup>
Shelf life	12 months (originally sealed)

### Product description

**KLB-SYSTEM EPOXID EP 58** is a high-quality, AgBB-tested 2-component epoxy resin base coat, which is free of benzyl alcohol. Can also be used as primer or as barrier coat, e.g. before top layer installation. The product is extremely low-emission and suitable for recreation rooms according to AgBB.

**KLB-SYSTEM EPOXID EP 58** is certified according to "Indoor Air Comfort Gold" and meets the requirements for a sustainable building certification according to DGNB, LEED or BREEAM. The "Indoor Air Comfort Gold" product certification sets the highest requirements for the emission of volatile organic compounds and meets not only the German requirements of AgBB or ABG, but also the emissions regulations of many other European countries.

**KLB-SYSTEM EPOXID EP 58** is suitable as base and scratch coat, before the application of emission-free epoxy and polyurethane resins, for polyurethane coatings with intermediate scattering. With the right sand mixtures, thick-layered reactive resin levelling mortars can be produced that are also suitable for thin screeds.

Due to the high wettability of the substrate, the base coat will build a high-strength basis for subsequent coatings. **KLB-SYSTEM EPOXID EP 58** cures regularly and is available for further coatings the next day at a moderate temperature.

The base coat is mechanically very robust and offers good resistance to different chemicals. The cured base coat is resistant to water, salts, saline solutions, alkalis and bases, grease, oils, as well as diluted mineral acids like hydrochloric or sulphuric acid. Short-term resistance is given for solvents such as petrol, fuels, etc. Conditional stability exists for concentrated mineral acids, for diluted organic acids such as formic acid, acetic acid, lactic acid, etc.

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#### Area of application

- As primer and for producing scratch coats.
- Before the use of low-emission epoxy resin coatings.
- For producing low-emission barrier coats.
- As base coat for slip-resistant coverings.
- As high-build levelling coat for substrate preparation.
- For low-emission synthetic resin screeds.

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#### Product features

- EMICODE EC 1 plus certified
- very low-emission
- Total Solid according to GISCODE (Test method "Deutsche Bauchemie")
- all-purpose use
- consistent to hydrolysis and saponification
- suitable for heated floor constructions
- can be filled with fire-dried quartz sand
- free of deleterious substances against varnish
- very high adhesion
- very economical

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#### Technical data

Viscosity - Component A+B	500	mPas	DIN EN ISO 3219 (23 °C / 73.4 °F)
Solid content	> 99,8	%	KLB method
Density - Component A+B	1.10	kg/l	DIN EN ISO 2811-2 (20 °C / 68 °F)
Adhesive tensile strength	> 1.5	N/mm <sup>2</sup>	DIN EN 1542
Shore-hardness D	Ca. 80	-	DIN 53505 (after 7 days)

The values established in tests are average values. Deviations from the product specification may occur.

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#### Included in systems

- [System A10 - KLB TECH EP Anti-Radon](#)

Please visit our website to get more information about our KLB systems: [www.klb-koetzal.com](http://www.klb-koetzal.com)

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#### Tests

The following external test certificates are available:

- Certified low-emission according to "Eurofins Indoor Air Comfort Gold" and Ecode EC1plus-label. Compliant with AgBB.
- Examining the imperviousness to radon as combination between primer and levelling or barrier layer: > 1.8 mm impervious to radon.

#### **Note:**

Please ask for the tested system build-up!

## Build-up of coats

### Producing a levelling or barrier layer impervious to radon

- Apply the **EP 58** base coat, consumption approx. 0.6 kg/m<sup>2</sup>.
- Levelling or barrier layer with **EP 58** and mixed sand **KLB-Mischsand 3/1**. Mixing ratio 1 : 2 parts by weight, consumption of the mixture approx. 2.8 - 3.0 kg/m<sup>2</sup>.
- After curing, further EP coatings can be applied as needed.

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## Substrate

The substrate to be coated must be even, dry, free of dust, sufficiently resistant to tension and compression as well as be free from weakly-bonded components or surfaces. Materials impairing adhesion such as grease, oil, and paint residues should be removed with suitable measures. Surfaces suitable for coating are concrete C20/25, cement screed CT-C35-F5, as well as other sufficiently solid substrates. The substrate has to have adequately high strength for the intended occupational use. Coating mastic asphalt with epoxy resin is not recommended. The substrates to be coated should be prepared mechanically, preferably by shot blasting.

The surface strength must then be at least 1.5 N/mm<sup>2</sup>. 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. Observe the information issued by the trade associations, e.g. the most recent versions of BEB worksheets KH-0/U and KH-0/S. Reconstructing floors may require special procedures. Obtain technical advice!

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## Mixing

If the components are packed individually, they should be weighed out exactly in the specified mixing ratio. Combo-packaging will be supplied in the correctly measured mixing ratio. The package of Component A has sufficient volume to contain the entire packaging unit. Empty all of the hardener compound B into the resin. Blend with a slow speed mixer (200 - 400 r/pm) for at least 2 - 3 minutes until a homogeneous, streak-free compound forms. To prevent mixing errors, empty ("repot") the resin/hardener mixture into a clean container and mix it once again briefly.

### Producing scratch coats and mortar:

#### **Scratch coats:**

1.0 kg **KLB-SYSTEM EPOXID EP 58**  
0.5 - 0.8 kg mixed sand **KLB-Mischsand 2/1**

#### **Epoxy resin mortar:**

1.0 kg **KLB-SYSTEM EPOXID EP 58**  
8.0 - 12.0 kg mixed sand **KLB-Mischsand 1**

Before adding any additives, the binding agent must be premixed, only then is added the supplement. The amount of mixed sand depends on the necessary consistency and stability. If larger quantities of mortar are required, a compulsory mixer should be used to avoid mixing errors.

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## Processing

**Base coat:** process the material as a base coat immediately after mixing with a squeegee, trowel, or nylon roller. Apply an evenly sealed coat on the substrate. To achieve a dense surface, apply a second layer or a saturated scratch coat if the substrate is highly absorbent. Scatter the fresh coating with quartz sand (grain size 0.3/0.8 mm) for optimum adhesion. This is mandatory if the subsequent coating will be applied later than 48 hours after the primer.

**Scratch coat:** apply a scratch coat before any further coatings to level the substrate - but also for full pore-closure. Use a trowel, metal, or rubber squeegee. The

consistency of the filling compound has to be adjusted according to the substrate absorbency, for a material that runs true.

**Priming filler:** primers can be applied as trowelling coat at the same time if it is ensured that a sufficient sealing is achieved in one coat for subsequent coatings. Usually, prime filling coats may be filled with 0.5 kg of mixed sand **KLB-Mischsand 2/1** for 1 kg of binding agent. Apply with a rubber squeegee, with a consumption of 0.7 - 1.0 kg/m<sup>2</sup>, depending on the depth of roughness of the substrate.

**Epoxy resin mortar:** for the preparation of reaction resin mortars and screeds, mix the resin according to the recommendation. Processing must take place immediately after mixing, because if waiting times occur, the resin reacts, which makes processing more difficult. Depending on the task, the material is applied, spread and smoothed. Pull off the mortar with a lath, compact and smooth with a smoothing trowel. In case of mechanical smoothing, tests are recommended beforehand. For the production of industrial mortar coatings, **EP 150** or **EP 158** are recommended as a special resin.

Floor and air temperature must not fall below 15 °C / 59 °F and humidity should not exceed 75 %. The difference in floor and room temperature must remain less than 3 °C / 3 K / 5.4 °F so as not to impede the curing process. If a dew-point situation arises, regular curing will not be possible with hardening problems and spotting to occur. The specified curing times apply for 20 °C / 68 °F; temperatures below this require longer processing and curing times, while higher temperatures require shorter times.

**Special remarks:** we advise against the "resinification" of screed/flat joints and break-outs in the screed or concrete with pure epoxy resin or set with suspending agent. For the application, always use the KLB primer resin in combination with quartz sand e.g. **KLB-Mischsand 1** or **KLB-Mischsand 2/1**. For this, we recommend adding at least 1 - 3 parts by weight of filler to 1 parts by weight of primer; if necessary, 0.2 - 2 % of suspending agent can be added to adjust the consistency. Intermediate grinding should be carried out to improve adhesion to subsequent coats.

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#### Cleaning

To remove fresh contamination and to clean tools, use thinner **VR 24** or **VR 33** immediately. Hardened material can only be removed mechanically.

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#### Storage

Store in dry and if possible, at frost-free conditions. Ideal storage temperature is between 10 - 20 °C / 50 - 68 °F. Bring to a suitable processing temperature before application. Tightly re-seal opened packages and use up the content as soon as possible.

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#### Special remarks

The product is regulated by the German Ordinance on Hazardous Substances (GefStoffV), the German Ordinance on Industrial Safety and Health (BetrSichV), and transport regulations for hazardous goods. The necessary information is contained in the DIN Safety Data Sheet. Observe all identification information on the container label!

GISCODE: RE30

#### 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.

**CE marking**

	
KLB Kötztal Lacke + Beschichtungen GmbH Günztalstraße 25 FRG-89335 Ichenhausen	
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EP58-V2-012022	
DIN EN 13813:2003-01	
Synthetic resin screed mortar DIN EN 13813: SR-B1.5-AR0.5-IR4	
Fire behaviour	B <sub>n</sub>
Emission of corrosive substances	SR
Wear resistance BCA	AR 0.5
Adhesive tensile strength	B 1.5
Impact resistance	IR 4

**VOC content**

The product complies with the high requirements to low VOC contents, as required for sustainable construction. Therefore, these values are well below the limits set by the European Union directive 2004/42/EG (Decopaint Directive).

	Limit value	Actual content	
Decopaint Directive 2004/42/EG - Component A	< 500	0,25	g/l
Decopaint Directive 2004/42/EG - Component B	< 500	0	g/l
DGNB - Components A + B	< 3	0,02	%
Klima:aktiv - Components A + B	< 3	0,02	%
LEED - Components A + B	< 100	13	g/l
Minergie ECO ® - Components A + B	< 1 (< 2)	0,02	%

(According to the Decopaint directive, single components are used for calculation. In the sustainable building rating systems, the mixture of both components in the correct mixing ratio is the determining factor.)



Please consider the latest version of this product information on our website.

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 in individual cases. With the publication of this new KLB product information, all prior information loses validity. The latest version is available electronically on our website [www.klb-koetzal.com](http://www.klb-koetzal.com). In addition, our "General Terms and Conditions" apply.