



KLB-SYSTEM EPOXID EP 172

Low-emission, non-pigmented 2-component epoxy resin binding agent for decorative quartz, scattered and coloured terrazzo coatings, tested and accredited according to AgBB.

Packaging units



Article no.	Packaging	Content (kg)	Units/pallet
AK1080-70	Bucket combo	5.00 kg	45
AK1080-50	Bucket combo	10.00 kg	30
AK1080-30	Hobbock combo	30.00 kg	12
AK1080-01	Drum combo	600.00 kg	0,5

Product characteristics

Mixing ratio parts by weight	A : B = 2 : 1
Mixing ratio parts by volume	A : B = 100 : 58
Processing time	10 °C / 50 °F : 90 min. 20 °C / 68 °F : 50 min. 30 °C / 86 °F : 25 min.
Processing temperature	Minimum 10 °C / 50 °F (room and floor temperature)
Curing time (accessibility)	10 °C / 50 °F : 24 - 26 hrs. 20 °C / 68 °F : 12 - 15 hrs. 30 °C / 86 °F : 10 - 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 curing, but after 48 hours at the latest at 20 °C / 68 °F
Consumption	Decorative pebble coatings: approx. 1.0 kg/m ² for grain size 3 mm Decorative pebble coatings: approx. 1.5 kg/m ² for grain size 4 mm Clear resin layers: approx. 0.4 - 0.8 kg/m ² Trowelling layers: approx. 0.3 - 0.5 kg/m ² Resination: approx. 0.6 - 0.8 kg/m ²
Packaging	Bucket combo 5 kg, Bucket combo 10 kg, Hobbock combo 30 kg, Drum combo 600 kg
Shelf life	12 months (originally sealed)

Product description

KLB-SYSTEM EPOXID EP 172 is a newly formulated, solvent-free and low-emission 2-component epoxy resin binding agent. Tested according to AgBB and accredited by the DIBt® (German Institute for Structural Engineering) for coatings in recreation rooms.

KLB-SYSTEM EPOXID EP 172 is certified according to the „Indoor Air Comfort Gold“, and meets the emissions criteria for the building certification according to DGNB (Germany), LEED (United States) or BREEAM (Great Britain). „Indoor Air Comfort Gold“ sets the highest requirements for the emission of volatile organic compounds, and it does not only fulfill the German standards of AgBB or ABG, but also the emission standards of many other European Countries.

Due to its innovative consistency the binding agent is free of emission and suitable for decorative coatings made of decorative and coloured sand. Especially suitable for open porous decorative pebble coatings complying with the legal German requirements for recreation rooms.

The high-quality binding agent may be used for decorative quartz coatings. It results in a rigid, strong bond that is higher than the values of the binders still used today. The product consists of a medium-visco, pale, high-quality epoxy resin and a newly created polyamine hardener. Free of any benzyl alcohol and alcyphenol.

The resin is used for binding coloured and natural quartz sand and thus, for producing decorative pebble floor coatings. Decorative quartz mortar will usually be bound with 8 - 10 % of binding agent depending on the mortar composition. The viscosity of the resin is adjusted so that even larger grain size is sufficiently surrounded.

Furthermore, **KLB-SYSTEM EPOXID EP 172** is used for levelling and closing the pores of fine-grained decorative and mortar coatings (terrazzo) as well as for top sealing scattered coatings. **KLB-SYSTEM EPOXID EP 172** may be used as base coat as well.

The resin cures to a colourless, tough synthetic with a glossy surface. For epoxy resin, **KLB-SYSTEM EPOXID EP 172** has very low yellowing, but is not non-yellowing, which can become visible with light-coloured coverings.

Area of application

- **EP 172** is suitable for open porous, decorative natural and coloured pebble coatings for interior areas and recreation rooms.
- Low-emission terrazzo coatings: use in combination with a non-pigmented matt sealer such as **PU 805 E** for binding coloured sand and as pore-closing levelling compound for finely-grained coloured sand coatings.
- Use as base and top coat for scattered coatings and slip-resistant surfaces.
- Also suitable as primer.

Product features

- Total Solid according to GISCODE (Test method "Deutsche Bauchemie")
- tested, low-emission quality
- all-purpose use
- non-pigmented, glossy
- free of deleterious substances against varnish
- good interlayer adhesion
- consistent to hydrolysis and saponification
- good resistance to water and chemicals
- low-grade yellowing

Technical data

Viscosity - Component A+B	1000	mpas	DIN EN ISO 3219 (23 °C / 73.4 °F)
Solid content	100	%	KLB method
Density - Component A+B	1.08	kg/l	DIN EN ISO 2811-2 (20 °C / 68 °F)
Water absorption	< 0.2	weight-%	DIN 53495
Flexural strength	> 25	N/mm ²	DIN EN 196/1
Compressive strength	> 70	N/mm ²	DIN EN 196/1
Shore-hardness D	80	-	DIN 53505 (after 7 days)

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

Included in systems

- [System C4 - KLB LOW-VOC PHARMA EP Screed](#)
- [System L2 - KLB DECOR STONE-CARPET LOW-VOC EP Indoor](#)

Please visit our website to get more information about our KLB systems: www.klb-koetztal.com

Tests

The following external test certificates are available:

- Classification of the fire behavior in combination with **EP 202** according to DIN EN 13501-01:2010-01: B_{fl}-s1.
- Certified low emission according to "Eurofins Indoor Air Comfort Gold". Compliant with AgBB and suitable for recreation rooms.

Note:

Please ask for the tested system build-up!

Build-up of coats

Low-emission, open-porous decorative coating

- Prime with the recommended KLB base coats like **EP 57**, **EP 58** or **EP 172**. Scatter openly with fire-dried quartz sand 1 - 2 mm.
- Apply and smooth the decorative coating with **EP 172**.
- For coatings subject to higher loads, an additional varnish layer with approx. 0.250 kg/m² of **EP 172** is recommended.

Industrial coating with a smooth surface

- Prime with the recommended KLB base coats like **EP 53 Spezialgrund-AgBB**, **EP 57** or **EP 58**. Scatter openly with fire-dried quartz sand 1 - 2 mm.
- Apply the decorative or industrial mortar with **EP 172**.
- The coverings are trowelled 3 times with **EP 172** until completely smooth.
- Use a non-pigmented matt sealer as finish, e.g. **PU 805 E**.

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. Observe the information issued by the trade associations, e.g. the most recent versions of BEB worksheets KH-0/U and KH-0/S as well as the notes provided in the product information for the recommended base coats. The substrates to be coated should be prepared mechanically, preferably by shot-blasting. The prepared area must be saturated, pore-free and primed carefully. To improve adhesion, scatter the surface openly with approx. 0.5 - 1.0 kg/m² quartz sand, grain size 1 - 2 mm. If the products are used to resinate mortar surfaces or to top seal coloured sand scattered coatings, ensure that the surfaces are not older than 48 hours. And it is equally important that they are not soiled or contaminated with adhesion-reducing substances.

Mixing

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. When packed in drums, weigh the components into a clean mixing container according to the specified mixing ratio. When processing the mixed resin directly, to avoid mixing errors, empty ("repot") the resin/hardener mixture into a clean container and mix it once again briefly.

Producing mortars: mixing reactive resin mortars in order to achieve a consistent mortar quality should generally be carried out with a compulsory mixer. Pre-mix additives briefly, then add the mixed resin whilst the mixer is running. Important: The mixing times must always be the same. Then process the complete mixture.

Processing

Decorative mortar: process the mortar immediately after mixing. Apply the material in small quantities on the substrate and spread evenly with a smoothing trowel until a uniform layer is achieved. Subsequently compact and smooth with pressure. Small quantities of a separating agent can be used for smoothing, although structural disturbances may appear when using too much. Smoothing requires constant testing for shoulder-free application, e.g. with a strong light source. **Note:** adjust the amount of binding agent to the used grain size! Pay attention to the demand to the surfaces. If necessary, roll them again with binder.

Scattered coatings: recommends mechanical skills. Sweep and vacuum the surface after the base coat has cured. Grind subsequently if the surface calls for less roughness. Note that the surface is not greying when grinding. Pour on the freshly mixed resin in portions and then pull it off evenly with a rubber squeegee without puddling and spread it with a lint-free nylon roller. The application can also be done with a roller, in which case a higher roughness will result.

Resinating the mortar: application has to be carried out very thoroughly. Apply the mixed binding agent directly onto the prepared surface. Use suitable trowels with which the material is drawn off as sharply as possible over grain. It is recommended that the surface is evenly drawn off by two trowel strokes in opposite directions. Always work "fresh-in-fresh" to avoid shoulders. Ensure full coverage, especially in overlapping areas. Several trowel coats may be necessary until the surface is completely saturated and smoothed. After complete resination, apply a matt sealer like **PU 805 E**.

Floor and air temperature must not fall below 10 °C / 50 °F and humidity should not exceed 75 %. The material to be processed must be at room temperature during processing. The difference in dew-point and substrate temperature must be greater than 3 °C / 3 K / 5.4 °F during installation and curing. If a dew-point situation arises, regular curing will not be possible with hardening problems and spotting to occur. Do not work in strong sunlight or on strongly heated surfaces, as the working time will be greatly reduced and bubble formation is possible. The specified hardening times apply for 20 °C / 68 °F. Lower temperature may increase; higher temperature may decrease the curing and processing times. During curing, the recommended conditions must be ensured, especially temperature changes can cause dew point precipitation. Exposure to water and chemicals should be avoided during the first 7 days. If working conditions are not complied with, the end product's technical properties may deviate from the description.

Cleaning

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

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 working temperature before application. Tightly re-seal opened containers and use the content as soon as possible.

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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EP172-V2-042015	
DIN EN 13813:2003-01	
Synthetic resin screed mortar DIN EN 13813: SR-B1.5-AR0.5-IR4	
Fire behaviour	B _{fl} -s1
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	g/l
Decopaint Directive 2004/42/EG - Component B	< 500	0	g/l
DGNB - Components A + B	< 3	0	%
klima:aktiv – Components A + B	< 3	0	%
LEED - Components A + B	< 100	0	g/l
Minergie ECO ® - Components A + B	< 1 (< 2)	0	%

(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-koetztal.com. In addition, our "General Terms and Conditions" apply.