

# KLB-SYSTEM EPOXID

## EP 174

Rapid-setting, non-pigmented 2-component epoxy resin decorative pebble binding agent

### Packaging units



Article no.	Packaging	Content (kg)	Units/pallet
AM1017-70	Bucket combo	5.00 kg	45
AM1017-50	Bucket combo	10.00 kg	30
AM1017-30	Hobbock combo	30.00 kg	12
AM1017-06	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 : 55
Processing time	10 °C / 50 °F : 60 min. 20 °C / 68 °F : 30 min. 30 °C / 86 °F : 15 min.
Processing temperature	Minimum 10 °C / 50 °F (room and floor temperature)
Curing time (accessibility)	10 °C / 50 °F : 18 - 22 hrs. 20 °C / 68 °F : 8 - 11 hrs. 30 °C / 86 °F : 6 - 8 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 <sup>2</sup> for grain size 3 mm Decorative pebble coatings: approx. 1.5 kg/m <sup>2</sup> for grain size 4 mm Clear resin layers: approx. 0.6 - 0.8 kg/m <sup>2</sup> Trowelling layers: approx. 0.3 - 0.5 kg/m <sup>2</sup> Resination: approx. 0.6 - 0.8 kg/m <sup>2</sup> (for scattered coatings)
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 174** is a reliable epoxy resin system, suitable as binding agent for decorative quartz coatings. The product consists of a pale 2-component epoxy resin with medium adjusted viscosity and a high-quality polyamine hardener.

The resin is used to bind coloured quartz sand for the production of decorative floor coatings. Decorative quartz mortar is usually bound with 8 - 12 % of binding agent. The viscosity of the resin is adjusted in a way that even larger grain sizes are sufficiently imbedded. Furthermore, the resin is suitable for sealing fine-grained decorative and mortar coatings (terrazzo).

The resin can additionally be used as non-pigmented top sealer for coloured sand scattered coatings, although **KLB-SYSTEM EPOXID EP 175 Spezial** is especially recommended as the more robust product.

The resin cures to a colourless, hard plastic and has a glossy surface. It shows very light yellowing which may, however, become visible on pale coatings and thicker layers.

Alternatively, **KLB-SYSTEM EPOXID EP 175** is available as product with the same quality; however, it has a longer processing time and slower curing.

**KLB-SYSTEM EPOXID EP 174** and **KLB-SYSTEM EPOXID EP 175** differentiate mainly in their processing and curing times. Depending on the temperature, choose the more rapid **KLB-SYSTEM EPOXID EP 174** or the slower reacting **KLB-SYSTEM EPOXID EP 175** for optimal preparation.

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#### Area of application

- **EP 174** is used for binding decorative natural and coloured pebble coatings for interior areas.
- **EP 174** is used for binding sealed decorative and natural sand mortar coatings for interior areas.
- As pore-closing levelling compound for finely-grained coatings, often in combination with **EP 177** and matt sealers **EP 705 E**, **PU 880**, etc.

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#### Product features

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

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#### Technical data

Viscosity - Component A+B	600	mPas	DIN EN ISO 3219 (23 °C / 73.4 °F)
Solid content	> 99	%	KLB method
Density - Component A+B	1.07	kg/l	DIN EN ISO 2811-2 (20 °C / 68 °F)
Water absorption	< 0.2	weight-%	DIN 53495
Bending tensile strength	> 25	N/mm <sup>2</sup>	DIN EN 196/1
Compressive strength	> 70	N/mm <sup>2</sup>	DIN EN 196/1
Shore-hardness D	75	-	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 A6 - KLB INDUSTRIAL EP Screed](#)
- [System A7 - KLB DECOR PHARMA EP Screed](#)

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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#### Build-up of coats

##### Decorative coating 3 - 6 mm

- Prime with the recommended KLB base coats, like **EP 50** and scatter openly with fire-dried quartz sand 1 - 2 mm.
- Apply the decorative coating **EP 174** with 8 - 12 kg/m<sup>2</sup> mortar.
- For coatings subject to higher loads, an additional varnish layer with approx. 0.250 kg/m<sup>2</sup> **EP 174** is recommended.
- For sealed-pore coatings, use **EP 177** (grain size 4 mm) with a consumption of 0.4 - 0.6 kg/m<sup>2</sup>. Sealing with e.g. **EP 705 E** is recommended.

##### Industrial coating with smooth surface

- Prime with the recommended KLB base coats, like **EP 50** and scatter openly with fire-dried quartz sand 1 - 2 mm.
- Apply the decorative or industrial mortar with **EP 150**.
- For smooth surfaces, apply either **EP 174 / EP 175, EP 175 Spezial** in 3 coats as pore-sealer or apply one layer of **EP 179** and **EP 174 / EP 175** or **EP 175 Spezial**, as well as a subsequent matt sealer using **EP 705 E, EP 860** or **PU 880**.

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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. 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 product information for the recommended KLB base coats like **EP 30, EP 50, EP 51 RAPID S** or **EP 52 Spezialgrund**. The substrates to be coated should be prepared mechanically, preferably by shot-blasting. The prepared surface has to be primed accurately and in a saturated and pore-free way. To improve adhesion, scatter the surface openly with approx. 0.5 - 1.0 kg/m<sup>2</sup> 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.

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## 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. To prevent mixing errors, empty ("repot") the resin/hardener mixture into a clean container and mix it once again briefly.

**Producing mortars:** mixing synthetic resin mortars in order to achieve a consistent mortar quality should generally be carried out with a compulsory mixer. For this purpose, pre-mix the additives briefly, add the mixed resin whilst the mixer is running, then pour the resin/hardener mixture into the running mixer.

**Important:** the mixing times must always be the same and adapted to the respective mixture. Then process the complete mixture.

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## Processing

**Decorative mortar:** process the mortar immediately after mixing. Apply the material in small quantities on the substrate with a smoothing trowel. 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:** sweep and vacuum off the surface after the base coat has cured. Grind subsequently if the surface calls for less roughness. Pull off the area with a rubber squeegee and avoid ponding. Re-roll with a lint free nylon roller in crosswise motion. The material may also be applied with a roller in criss-cross strokes, resulting in an increased roughness. For a very smooth surface, grind in between and apply a filling coat or matt sealer afterwards.

**Resin角度 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 when applying only **EP**

**174** until the surface is completely saturated. Using **EP 179** in combination can reduce the amount of applications. After complete resination, apply a matt sealer like **EP 705 E**.

Floor and air temperature must not fall below 10 °C / 50 °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 that curing will not be disturbed. If a dew-point situation arises, regular curing and adhesion may be disrupted with spotting to occur. Exposure to water should be avoided during the first 7 days. The specified hardening times apply for 20 °C / 68 °F. Lower temperature may increase; higher temperature may decrease the curing and processing times.

If working conditions are not complied with, the technical properties of the end product may deviate from those specified (surface and load bearing capacity).

**Special remarks:** colour changes, loss of gloss or yellowing may occur with certain light and weather influences and with prolonged and intensive use.

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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 containers 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: RE90

**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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CE marking

<b>CE</b>	
<b>KLB Kötztal Lacke + Beschichtungen GmbH</b> Günztalstraße 25 FRG-89335 Ichenhausen	
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EP174-V1-022013	
<b>DIN EN 13813:2003-01</b>	
Synthetic resin screed mortar DIN EN 13813: SR-B1.5-AR0.5-IR5	
Fire behaviour	E <sub>s</sub> -s1
Emission of corrosive substances	SR
Wear resistance BCA	AR 0.5
Adhesive tensile strength	B 1.5
Impact resistance	IR 5



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.