KLB-SYSTEM EPOXID
EP 202

AgBB-tested, low-emission 2-component epoxy resin coating and top sealer

Packaging units

Article no.	Packaging	Content (kg)	Units/pallet
AK1304-50	Bucket combo	12.00 kg	30
AK1304-30	Hobbock combo	30.00 kg	12

Product characteristics

Mixing ratio parts by weight	A : B = 5 : 1
Mixing ratio parts by volume	A : B = 100 : 35
Processing time	10 °C / 50 °F : 50 min. 20 °C / 68 °F : 30 min. 30 °C / 86 °F : 20 min.
Processing temperature	Minimum 10 °C / 50 °F (room and floor temperature)
Curing time (accessibility)	10 °C / 50 °F : 24 - 36 hrs. 20 °C / 68 °F : 14 - 18 hrs. 30 °C / 86 °F : 10 - 14 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 14 - 18 hours, but not longer than after 48 hours at 20 °C / 68 °F
Consumption	Standard coating: 1.6 kg/m² for each mm of layer Top sealer: 0.55 - 0.900 kg/m²
Layer thickness	Standard coating: 1.5 - 4.0 mm
Addition of quartz sand	15 to 20% of quartz sand 0.1/0.3 mm for scattered coatings
Colours	KLB standard colours – see chart. Other colours upon request! For scattered coatings with coloured sand KLB-Colorsand CQS-46xx, please refer to the colour chart of the coloured sand!
Shelf life	12 months (originally sealed)

Product description

KLB-SYSTEM EPOXID EP 202 is a high-quality, self-levelling, solvent-free and low-emission 2-component epoxy resin coating for robust and smooth coatings as well as for scattered floors - especially suitable for industrial areas. The material offers excellent self-levelling and smoothing properties. Due to its low viscosity, the product is also suitable as top sealer for scattered and slip-resistant coatings.

In contrast to this, **KLB-SYSTEM EPOXID EP 202 Clean** is available as 2-component epoxy resin coating designed to offer preventive protection against bacterial contamination. This assists the production of permanently hygienic surfaces, even between the necessary cleaning and disinfection cycles.

Note: the information on processing as well as the technical data of **KLB-SYSTEM EPOXID EP 202 Clean** do not deviate from the standard product **KLB-SYSTEM EPOXID EP 202**.

KLB-SYSTEM EPOXID EP 202 is certified according to “Indoor Air Comfort Gold” and EMICODE EC1 Plus; thus meets the requirements for a sustainable building certification according to DGNB, LEED or BREEAM. The “Indoor Air Comfort”

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.

The material offers excellent self-levelling and smoothing properties and cures very well. **KLB-SYSTEM EPOXID EP 202** must be filled with 15 - 20 % of normal quartz sand 0.3/0.8 mm as a base layer for scattered coatings.

KLB-SYSTEM EPOXID EP 202 has a well-balanced chemical resistance. The hardened coating is very resistant to mechanical stresses and has a good resistance to many chemicals. It is resistant to water, salts, saline solutions, alkalis and bases, greases, oils as well as diluted mineral acids like salt and sulfuric acid. Short-term resistance is given for solvents such as petrol, fuels, etc. Very short term stability exists for concentrated mineral acids, for diluted organic acids such as formic acid, acetic acid, lactic acid, etc.

KLB-SYSTEM EPOXID EP 202 is not resistant to chlorinated hydrocarbons, esters or nitric acid. For chemical resistance requirements, please ask for a separate consultation.

KLB-SYSTEM EPOXID EP 202 can be supplied in a variety of colours.

Note: slight colour alterations may be possible due to technical reasons.

Area of application

- Low-emission coating for recreation rooms, AgBB-compliant.
- Commercially used areas with medium mechanical load, e.g. production or storage areas in many economic sectors (2 mm thickness).
- Commercially used areas with high mechanical load, e.g. production or storage areas in many economic sectors (3 to 4 mm thickness).
- Base layer and plain-coloured top sealer for scattered and anti-slip coatings in thicknesses of 3 - 5 mm.

Product features

- tested, low-emission quality
- EMICODE EC 1 plus certified
- compliant with AgBB and suitable for recreation rooms
- Total Solid according to GISCODE (Test method "Deutsche Bauchemie")
- good resistance to water and chemicals
- consistent to hydrolysis and saponification
- can be filled with fire-dried quartz sand
- resistant to abrasion and wear
- coloured surface
- glossy

Technical data

Viscosity - Component A+B	1500 - 2000	mPas	DIN EN ISO 3219 (23 °C / 73.4 °F)
Solid content	100	%	KLB method
Density - Component A+B	1.60	kg/l	DIN EN ISO 2811-2 (20 °C / 68 °F)
Weight loss	0.1	weight-%	after 28 days
Water absorption	< 0.2	weight-%	DIN 53495
Bending tensile strength	60	N/mm²	DIN EN 196/1
Compressive strength	78	N/mm²	DIN EN 196/1
Shore-hardness D	80	-	DIN 53505 (after 7 days)
Abrasion (Taber Abraser)	50	mg	ASTM D4060

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

Included in systems

- System C1 - KLB LOW-VOC EP Standard
- System C2 - KLB LOW-VOC EP RX
- System C5 - KLB LOW-VOC DECOR EP RX

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 behaviour according to DIN EN 13501-01:2010-01: B_{fl}-s1.
- Certified as low-emission according to "Eurofins Indoor Air Comfort Gold“ and the EMICODE EC1 Plus label. Compliant with AgBB.
- Slip-resistance grade R9 and R10 possible, according to DIN 51130 and BGR 181.
- LABS-compliant according to PV 3.10.7. (VW test)
- Product is compliant with DIN EN 13813: 2003-01

Note:

Please ask for the tested system build-up!

Build-up of coats

Smooth coating

- Test and prepare the substrate according to the requirements.
- Prime, e.g. with **EP 57**, consumption approx. 0.3 - 0.4 kg/m².
- Apply a scratch coat with e.g. **EP 57** and mixed sand **KLB-Mischsand 2/1** (mixing ratio 1.0 : 0.5 - 0.8 parts by weight).
- Apply coating **EP 202** e.g. with a trowel (**Toothed blade RS4** or Pajarito 48), consumption approx. 1.9 - 2.1 kg/m².
- Optionally, the surface may be scattered and sealed.

Slip-resistant coating

- Test and prepare the substrate according to the requirements.
- Prime with **EP 57**, consumption approx. 0.3 - 0.4 kg/m².
- If required: apply a scratch coat, e.g. with **EP 57** and mixed sand **KLB-Mischsand 2/1** (mixing ratio 1.0 : 0.5 - 0.8 parts by weight).
- Apply the coating **EP 202** and add 15 - 20 % of quartz sand 0.3/0.8 mm with a consumption of approx. 1.0 - 1.2 kg/m² (mixture), then scatter the whole surface with fire-dried quartz sand of a grain size of 0.3/0.8 mm or 0.7/1.2 mm, consumption approx. 2.5 - 3.5 kg/m².
- After curing, sweep off the excess sand. If necessary, lightly grind over so that the tips are slightly blunt (break grain tips). Vacuum carefully.
- Apply **EP 202** with a rubber squeegee, then distribute evenly using a velours roller in a crosswise motion. Consumption 0.550 - 0.900 kg/m². Carefully dose the consumption quantities and avoid ponding.
- Optional: additional mat sealers can be applied to improve the surface quality or chemical resistance.

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 coat **EP 57**. The substrates to be coated should be prepared mechanically, preferably by shot-blasting. The prepared area must be saturated, pore-free and primed carefully. It is often difficult to judge the necessary pore-free condition of substrates. It is therefore recommended that a scratch coat be applied to

smooth the surface. If the substrate has not been primed to be pore-free, bubbles and pores can develop in the coating due to air rising from the substrate. If in doubt, we recommend processing a sample area. To improve adhesion, scatter the surface completely with 0.5 - 1.0 kg/m² quartz sand, grain size 0.3/0.8 mm.

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.

Addition of quartz sand: add the additives only after the components have been pre-mixed. Suitable is quartz sand with a grain size of 0.1/0.3 mm. Do not use quartz flour or sand blends. The added quantities depend on layer thickness, temperature, and type of sand. **EP 202** can normally be mixed with up to 0.5 kg of quartz sand per 1 kg of coating material. For thin coats, the addition of sand is not recommended as the self-levelling properties might deteriorate in the process.

Processing

Process the material immediately after mixing with a squeegee or toothed trowel (e.g. **Toothed blade RS4** or Pajarito 48) by pulling out an even layer on the prepared substrate. The toothed trowel is to be guided in such a way that an even surface consumption is achieved. The layer thicknesses must be checked and worn tooth strips must be replaced at an early stage. The product is adjusted for optimum deaeration, however, rolling with a spiked roller is recommended to improve the wetting of the substrate, to optimise levelling and to remove remaining air bubbles. This should be carried out time-delayed after approx. 15 - 20 minutes. To work seamlessly, always work “fresh-in-fresh” and define work areas before starting. For reasons of deaeration, do not scatter too early; the optimum time is at 20 °C / 68 °F after 20 - 30 minutes.

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 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. Exposure to water should be avoided during the first 7 days. 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. If working conditions are not complied with, the technical properties of the end product may deviate from those specified (surface and load capacity).

Cleaning

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

Separate cleaning and care recommendations are available for cleaning floors produced with KLB coatings and sealers.

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.

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

CE

KLB Kötztal Lacke + Beschichtungen GmbH Günztalstraße 25 FRG-89335 Ichenhausen
15
EP202/EP202Clean-V2-022015
DIN EN 13813:2003-01
Synthetic resin screed mortar DIN EN 13813: SR-B1.5-AR0.5-IR10

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 10

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	5,8	g/l
Decopaint Directive 2004/42/EG - Component B	< 500	20	g/l
Klima:aktiv - Components A + B	< 3	0,5	%
LEED - Components A + B	< 100	8,5	g/l
Minergie ECO(R) - Components A + B	< 1 (< 2)	0.8	%

(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.

KLB KÖTZTAL Lacke+Beschichtungen GmbH
Günztalstraße 25
89335 Ichenhausen, GERMANY
Phone +49 (0) 8223-96 92-0
Fax +49 (0) 8223-96 92-100
www.klb-koetztal.com
info@klb-koetztal.com