



## KLB-SYSTEM EPOXID

### EP 53 Spezialgrund-AgBB

Low-emission, AgBB-tested 2-component epoxy resin special primer with high moisture tolerance for fresh, increasingly damp and weak substrates for new buildings or renovations

#### Packaging units



Article no.	Packaging	Content (kg)	Units/pallet
AK2120-91	Combo can	1.00	240
AK2120-50	Bucket combo	10.00	30
AK2120-30	Hobbock combo	30.00	12
AK2120-01	Drum combo	600.00	0,5

#### Product characteristics

Mixing ratio parts by weight	A : B = 100 : 50
Mixing ratio parts by volume	A : B = 100 : 55
Processing time	10 °C / 50 °F : 60 - 70 min. 20 °C / 68 °F : 40 - 50 min. 30 °C / 86 °F : 20 - 25 min.
Processing temperature	Minimum 10 °C / 50 °F (room and floor temperature)
Curing time (accessibility)	10 °C / 50 °F : 24 - 28 hrs. 20 °C / 68 °F : 12 - 15 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 curing, but after 48 hours at the latest at 20 °C / 68 °F
Consumption	Base coat: approx. 0.3 - 0.4 kg/m <sup>2</sup> Scratch coat: approx. 0.4 - 0.6 kg/m <sup>2</sup> Barrier coat: approx. 0.8 - 1.0 kg/m <sup>2</sup> in 2 layers
Shelf life	12 months (originally sealed)

#### Product description

**KLB-SYSTEM EPOXID EP 53 Spezialgrund-AgBB** is a new, low-emission, 2-component epoxy resin special primer. The product is modelled after our trusted **KLB-SYSTEM EPOXID EP 52 Spezialgrund** primer. Like **KLB-SYSTEM EPOXID EP 52 Spezialgrund**, **KLB-SYSTEM EPOXID EP 53 Spezialgrund-AgBB** has an excellent wetting behaviour and penetrating power on the most diverse substrates. Due to its high humidity tolerance, the primer is particularly suitable for fresh substrates with an high humidity.

**KLB-SYSTEM EPOXID EP 53 Spezialgrund-AgBB** corresponds to the latest generation of low-emission epoxy resins, and it is free of solvents, benzyl alcohol, and alkylphenols. The testing shows that the limit values are below the AgBB test scheme and the primer can therefore be classified as low-emission.

The Primer 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 Air 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.

**KLB-SYSTEM EPOXID EP 53 Spezialgrund-AgBB** can be used as primer and scratch coat before the installation of other coatings. As an highly adhesive primer, it is particularly suitable also in the renovation of substrates. The adhesion strength can often be improved by the primer.

The primer can be used as osmotic braking and vapour barrier primer for the preparation of coatings as well as with other coverings. If necessary, the installation has to be carried out in two times. The primer can be used on fresh concrete up to a max. 6 CM-%, so that the special requirements can be met. If necessary, seek advice!

**KLB-SYSTEM EPOXID EP 53 Spezialgrund-AgBB**, used in combination with other layers, serves a low-emission barrier.

In combination with the degreasing agent **KLB-SYSTEM Reiniger PS 22 Ölentferner**, oil contaminated substrate are first cleaned, and subsequently primed with **KLB-SYSTEM EPOXID EP 53 Spezialgrund-AgBB**.

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#### Area of application

- As a low-emission and AgBB-compliant primer before the installation of polyurethane and epoxy coatings.
- Suitable on substrates with and increased moisture, and substrates with specific requirements.
- Priming of slightly damp and wet chemically cleaned substrates.
- Consolidation of not sufficiently firm substrates, preferably for renovations.
- As a barrier against raising damp with trowelled compounds and other coatings.
- Priming of blasted steel.
- Scratch coat to seal the pores and equalize.

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#### Product features

- Total Solid according to GISCODE (Test method "Deutsche Bauchemie")
- low-emission according to AgBB
- free of alkylphenols and benzyl alcohol
- universal and reliable
- increased durability to osmosis
- high penetration
- good wetting properties
- all-purpose use
- consistent to hydrolysis and saponification
- moisture-blocking
- hardening on pale-damp surfaces

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#### Technical data

Viscosity - Component A+B	Approx. 550	mPas	DIN EN ISO 3219 (23 °C / 73.4 °F)
Density - Component A+B	1.08	kg/l	DIN EN ISO 2811-2 (20 °C / 68 °F)
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
Adhesive tensile strength	> 1.5	N/mm <sup>2</sup>	DIN EN 1542
Shore-hardness D	79	-	DIN 53505 (after 7 days)
Flashpoint	> 100	°C	DIN 51755

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

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## Included in systems

- System H2 KLB KITCHEN LOW-VOC PU

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

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## Tests

External test certificates are available:

- Certified low-emission according to „Eurofins Indoor Air Comfort Gold“. Compliant with AgBB and suitable for recreation rooms.
- Classification of the fire behaviour in System H2 according to DIN EN 13501-01:2010-01: B<sub>fl</sub>-s1.

### Note:

Please ask for the tested system build-up!

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## Build-up of coats

- **EP 53 Spezialgrund-AgBB** can be used as primer and as scratch coat. Details on the coats build-up are listed in the coating material.
- Substrates with an increased humidity can be primed with **EP 53 Spezialgrund-AgBB**. For this purpose, special measures are required. Please ask for consultancy.
- The primer can be utilized as a protection for the flooring system against rising damp and alkalinity. This kind of barrier is applied in two layers, after an appropriate preparation of the substrate. Depending on the execution, 0.8 -1.0 kg/m<sup>2</sup> will be utilized.

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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. **EP 53 Spezialgrund-AgBB** can be used as a bonding layer on pale-damp substrate after degreasing with **PS 22 Ölentferner**. Surfaces suitable for coating are concrete C20/25 (B 25), cement screed CT-C35-F5 (ZE 30), as well as other sufficiently solid substrates. The concrete has to be free of water-soluble silicates and alkali-resistant additives as well as silicate impregnating agents. Where such substances are present, special preparatory measures are necessary. The substrate has to have adequately high strength for the intended occupational use. The coating of mastic asphalt with epoxy resin is not recommended. The adhesive tensile strength can be increased on stability-lacking substrate because of the reinforcing effect of the material. The surface 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.

Under certain circumstances, **EP 53 Spezialgrund-AgBB** may be applied on damp substrates (up to about 6.0 CM- %). For application on substrates with increased dampness, a double layer of primer is required. If necessary, get advice from KLB technical support.

Observe the information issued by the trade associations, e.g. the most recent versions of BEB worksheets KH-0/U and KH-0/S. Reconstruction beyond the regular requirements demands preliminary tests, e.g. by conducting a tensile bonding test.

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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

1.0 kg **KLB-SYSTEM EPOXID EP 53 Spezialgrund-AgBB**  
0.7 - 0.8 kg mixed sand **KLB-Mischsand 2/1**

Premix the binding agent before adding any additives. The amount of mixed sand depends on the necessary consistency and stability.

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### Processing

**Base coat:** process the material as a base coat immediately after mixing with a coating knife, trowel, or nylon roller. Apply an evenly sealed coat on the substrate and possibly re-roll with a time delay. To achieve a compact surface, apply a second layer or a saturated scratch coat if the substrate is highly absorbent. Scatter the fresh coating with fire-dried quartz sand (grain size 0.3/0.8 mm) for optimum adhesion. This is mandatory if the subsequent coating will be applied later than 36 hours after the primer. For an increased resistance to osmosis, it is necessary to apply the base coat in two layers, consumption: minimum 0.4 - 0.5 kg/m<sup>2</sup> per each layer. Do not scatter the first layer of the base coat and work within the recommended time pattern.

**Scratch coat:** apply a scratch coat before any further coatings to level the substrate - but also for pore-sealing. Use a trowel, metal, or rubber coating knife. The consistency has to be adjusted according to the substrate absorbency, for a material that runs true.

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. 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.

**Special remarks:** we advise against the "gumming" of screed/flat joints with pure or with epoxy resin-filled thixotropic agent. In the course of time, these areas will begin to show on the surface. For the application, always use the KLB primer resin in combination with quartz sand e.g. **KLB-Mischsand 2/1**. For this, we recommend adding at least 1 - 3 parts by weight of filler.

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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 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.

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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.

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**CE marking**

	
KLB Kötztal Lacke + Beschichtungen GmbH Günztalstraße 25 FRG-89335 Ichenhausen	
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EP53-V1-042016	
DIN EN 13813:2003-01	
Synthetic resin screed mortar DIN EN 13813: SR-B1,5-AR0,5-IR4	
Fire behaviour	E <sub>fl</sub> -s1
Emission of corrosive substances	SR
Wear resistance BCA	AR 0.5
Adhesive tensile strength	B 1.5
Impact resistance	IR 4

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## VOC content

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).

	Limit value	Actual content	
Decopaint Directive 2004/42/EG - Component A	< 500	1,2	g/l
Decopaint Directive 2004/42/EG - Component B	< 500	0	g/l
DGNB - Components A + B	< 3	0,07	%
Klima:aktiv - Components A + B	< 3	0,07	%
LEED - Components A + B	< 100	83,5	g/l
Minergie ECO(R) - Components A + B	< 1 (< 2)	0,07	%

(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](http://www.klb-koetztal.com). In addition, our "General Terms and Conditions" apply.