



KLB-SYSTEM EPOXID EP 77 Spachtel-Leitschicht

Light grey, highly electrically conductive 2-component epoxy resin base coat to be used as conductive layer and scratch coat before the application of ESD coatings

Packaging units



Article no.	Packaging	Content (kg)	Units/pallet
AK1425-50	Bucket combo	10.00 kg	30
AK1425-30	Hobbock combo	30.00 kg	12

Product characteristics

Mixing ratio parts by weight	A : B = 4 : 1
Mixing ratio parts by volume	A : B = 100 : 37
Processing time	10 °C / 59 °F : 60 min. 20 °C / 68 °F : 30 min. 30 °C / 86 °F : 15 min.
Processing temperature	Minimum 10 °C / 59 °F - Maximum 30 °C / 86 °F (room and floor temperature)
Curing time (accessibility)	10 °C / 59 °F : 12 - 16 hrs. 20 °C / 68 °F : 6 - 8 hrs. 30 °C / 86 °F : 5 - 6 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	Approx. 0.4 - 0.8 kg/m ² , depending on the roughness
Packaging	Bucket combo 10 kg, Hobbock combo 30 kg
Colours	Light gray
Shelf life	6 months (originally sealed) – Protect from frost!

Product description

KLB-SYSTEM EPOXID EP 77 Spachtel-Leitschicht is a ready-for-use, electrically conductive 2-component epoxy resin scratch coat, replacing the black conductive coat underneath ESD coatings.

This ready-for-use product is applied as a conductive scratch coat directly on the primer, after affixing the copper strips.

KLB-SYSTEM EPOXID EP 77 Spachtel-Leitschicht is certified according to "Indoor Air Comfort Gold" and meets the emission criteria for a sustainable construction certification according to DGNB, LEED or BREEAM. "Indoor 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.

With **KLB-SYSTEM EPOXID EP 77 Spachtel-Leitschicht**, the application of a conductive varnish is not necessary anymore, so that one working step can be saved. This can save up to 2 days when creating conductive coatings, also because of the fast curing.

KLB-SYSTEM EPOXID EP 77 Spachtel-Leitschicht shows a light grey colour and can be combined with different ESD conductive coatings.

Area of application

- As conductive and roughness-levelling coat in combination with the following coatings:

KLB-SYSTEM EPOXID EP 211 ESD
KLB-SYSTEM EPOXID EP 212 ESD
KLB-SYSTEM EPOXID EP 236 ESD

- Suitable for ESD coatings on surfaces in common commercial and industrial areas with medium mechanical load.
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Product features

- Total Solid according to GISCODE (Test method "Deutsche Bauchemie")
 - tested, low-emission quality
 - rapid-setting
 - high conductivity
 - balancing depth of roughness
 - no conductive layer necessary
 - very high adhesion
 - time-saving
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Technical data

Viscosity - Component A+B	approx. 1000 - 2000	mPas	DIN EN ISO 3219 (23 °C / 73.4 °F)
Solid content	> 99	%	KLB method
Density - Component A+B	1.40	kg/l	DIN EN ISO 2811-2 (20 °C / 68 °F)
Weight loss	< 0.3	weight-%	DIN 53495
Adhesive tensile strength	1.5	N/mm ²	DIN EN 1542
Shore-hardness D	70	-	DIN 53505 (after 7 days)
Electrical resistance	10 ⁶	Ohm	DIN EN 61340-4-1 DIN EN 61340-5-1

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

Included in systems

- [System F3 - KLB CONDUCTIVE LOW-VOC EP ESD Exclusive](#)
- [System F7 - KLB CONDUCTIVE EP ESD Structured](#)

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

Tests

The following external test certificates are available:

- Classification of the fire behaviour in combination with **EP 212 ESD** according to DIN EN 13501-01:2010-01: C_{fl}-s1.
- Certified as low-emission according to Eurofins "Indoor Air Comfort Gold". Compliant with AgBB for recreation rooms.
- Product is compliant with DIN EN 13813: 2003-01.

Note:

Please ask for the tested system build-up!

Build-up of coats

Conductive coat under smooth coatings

- Test and prepare the substrate mechanically, preferably by shot-blasting.
- Prime with recommended KLB primers, such as **EP 50, EP 51 RAPID S, EP 52 Spezialgrund, EP 53 Spezialgrund-AgBB, EP 57**, consumption approx. 0.3 - 0.4 kg/m² depending on the substrate. The primer must be covering. When coating highly absorbent substrates, a supplementary primer application is required.
- The primer is to be scattered lightly with quartz sand grain size 0.1/0.5 mm. The use of different sand mixtures is not recommended!
- Place KLB copper strips **KLB-Kupferbänder** for discharge in an imagined grid pattern (every 8 - 10 m, up to 1 - 2 m into the room). Earth connection by an electrician according to VDE regulations.
- Apply the cross-conductible scratch coat **EP 77 Spachtel-Leitschicht** with a surface spatula, a trowel or a rubber squeegee to produce an even surface. Consumption depending on the roughness approx. 0.6 - 0.8 kg/m².
- Apply a conductive wear coat with the recommended conductive coatings in the recommended thickness with a toothed trowel.
- Please note the recommendations in the corresponding technical product sheets.

Substrate

The substrate to be coated has to be levelled, dry, free of dust, has to have adequate tensile and compressive strength, and be free from weakly-bonded components or surfaces. Materials impairing adhesion, such as grease, oil and paint residues must be removed using suitable methods. Please refer to the advice issued by the trade association, e.g. the current edition of BEB-worksheets KH-O/U and KH-O/S as well as the product information for the recommended KLB primers, like e.g. **EP 50, EP 51 RAPID S, EP 52 Spezialgrund, EP 53 Spezialgrund-AgBB, EP 57**. In case of moisture ingress from the rear apply a barrier coat with e.g. **EP 52 Spezialgrund** or **EP 53 Spezialgrund-AgBB**. If necessary seek advice.

The surface strength must then be a minimum of 1.5 N/mm². 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. Primers cannot remain without further coatings longer than 48 hours, otherwise they must be scattered with quartz sand. The substrate to be coated should be prepared mechanically, preferably by shot-blasting. The surface has to be prepared accurately, saturated and free of pores. Older substrates have to be cleaned before mechanical preparation. When sealing of old synthetic resin surfaces, test for adequate adhesion. It is recommend to conduct a trial. Reconstruction beyond the regular requirements demands further substrate testing, e.g. by conducting a tensile bonding test.

The following conductive ESD coatings have to be applied in the recommended layer thickness, therefore an accurate preparation of the substrate is imperative, in particular the primer must cover the substrate entirely.

Mixing

Combo-packaging will be supplied in the correctly measured mixing ratio. Component A has sufficient volume for the entire trading unit. Decant the hardener compound B into the resin. Blend with a slow speed mixer (200 - 400 r/pm) for at least 2 - 3 minutes, for a material that is homogeneous and free of streaks. Weigh in single components exactly for partial withdrawals. To avoid mixing errors it is recommended to empty the resin/hardenermixture into a clean container and mix briefly once again ("to repot").

Processing

Process the mixed material immediately after mixing with a trowel, a surface spatula or a hard rubber squeegee on the primed substrate. The product's self-levelling properties are not as distinctive as in the case of the common scratch coating compounds. The ready-to-use conductive coat has to be applied as a scratch coat and pulled off on a sufficient thickness to cover the charge like on a scattered primer.

As in case of a roughness-levelling scratch coat, the quantity of material must be sufficient. The product is ready-to-use and must not be further charged, otherwise the conductivity may be compromised.

The application of the upper coating can be carried out immediately after accessibility.

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, also the conductivity.

Cleaning

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

Storage

Store in dry and 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: 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.

CE marking

	
KLB Kötztal Lacke + Beschichtungen GmbH Günztalstraße 25 FRG-89335 Ichenhausen	
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EP77-V1-072017	
DIN EN 13813:2003-01	
Synthetic resin screed mortar DIN EN 13813: SR-B1,5-AR0,5-IR6	
Fire behaviour	E _{fl} -s1
Emission of corrosive substances	SR
Wear resistance BCA	AR 0.5
Adhesive tensile strength	B 1.5
Impact resistance	IR 6

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	6,1	g/l
Decopaint Directive 2004/42/EG - Component B	< 500	0	g/l
DGNB - Components A + B	< 3	0,34	%
Klima:aktiv - Components A + B	< 3	0,34	%
Minergie ECO ® - Components A + B	< 1(<2)	0,34	%

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