



KLB-SYSTEM EPOXID

EP 799 Ableitgrund

A highly electrically conductive, low-emission two-component epoxy resin primer for creating electrically conductive floor coverings for ESD, personal safety and EX protection

Packaging units

Article no.	Packaging	Content (kg)	Units/pallet
AK2719-55	Bucket combo	10.00 kg	30



Product characteristics

Mixing ratio parts by weight	A : B = 1 : 4
Mixing ratio parts by volume	A : B = 1 : 4,2
Processing time	15 °C: 75 mins 20 °C: 60 mins 30 °C: 35 mins
Processing temperature	At least 15 °C (room and floor temperature)
Curing time (accessibility)	15 °C: 22–28 hours 20 °C: 18–24 hours 30 °C: 14–18 hours
Curing	2–3 days until the material is mechanically sound at 20 °C 7 days until the coating is chemically resistant at 20 °C
Further coatings	After 14–18 hours, but no later than 48 hours at 20 °C
Consumption	0.100 – 0.140 kg/m ²
Colours	Black
Shelf life	6 months (in original, unopened packaging) – Keep away from frost!

Product description

KLB-SYSTEM EPOXID EP 799 Ableitgrund is a composite product used to produce electrically conductive floor coatings and coverings. **KLB-SYSTEM EPOXID EP 799 Ableitgrund** is suitable for use in explosion-protected and ESD areas. The highly conductive base coat is applied as an intermediate layer onto a cured primer or scratch coat after the copper tapes have been bonded in place. The high transverse conductivity ensures good charge equalisation in the overlying coating. In combination with **KLB-SYSTEM EPOXID EP 99 EL+**, **KLB-Mischsand 3/1**, **KLB-Colorsand-CQS 47xx AS** and **KLB-SYSTEM POLYURETHAN PU 484**, electrically conductive RX floor coverings can be formulated.

KLB-SYSTEM EPOXID EP 799 Ableitgrund is certified to 'Indoor Air Comfort Gold' and meets the emission criteria for building certification under DGNB, LEED or BREEAM. 'Indoor Air Comfort Gold' sets the highest standards for the emission of volatile organic compounds and not only meets the German limit values in accordance with AgBB or ABG, but also the emission regulations of many other European countries.

KLB-SYSTEM EPOXID EP 799 Ableitgrund consists of a two-component epoxy resin emulsion that can be applied easily and economically with a roller. Its composition ensures good inter-coat adhesion. No solvents are used.

Area of application

- As a base coat in combination with the conductive coatings **EP 99 EL+**, **KLB-SYSTEM EPOXID EP 200 EL+**, **KLB-SYSTEM EPOXID EP 785 EL+**, **KLB-SYSTEM POLYURETHAN PU 413 EL+**, **KLB-SYSTEM EPOXID EP 233 EL+** and **KLB-SYSTEM EPOXID EP 231 ESD**.
- Electrically conductive, commercial-grade surfaces subject to moderate mechanical stress, e.g. production areas and storage areas in many sectors of industry.
- In areas with ESD requirements, in combination with the **EP 211 ESD**, **EP 212 ESD** and **EP 239 ESD** coatings.
- In the electrical and electronics industry, in combination with special sealants, also for ESD areas.
- In areas with explosion protection requirements to prevent static build-up.
- Electrically conductive surfaces for commercial and industrial use with enhanced slip resistance, using **EP 99 EL+**, **CQS-47-xx AS** and **PU 484** (conductive RX coverings), e.g. production and storage areas.
- Application of the recommended conductive wearing layers, **such as EP 99 EL+**, **EP 200 EL+**, **EP 202 EL+ (Clean)**, **EP 211 ESD**, **EP 212 ESD**, **EP 231 ESD**, **EP 233 EL+**, **EP 239 ESD**, **EP 785 EL+** and **PU 413 EL+** depending on requirements. Observe the relevant product information. Seek advice if necessary.

Product features

- high conductivity
- tested, low-emission quality
- Total Solid according to GISCODE
- consistent to hydrolysis and saponification
- in combination also for ESD coverings
- free of deleterious substances against varnish
- very economical
- good processing properties

Technical data

Viscosity - Component A+B	1200	mPas	DIN EN ISO 3219 (23 °C / 73.4 °F)
Solid content	> 40	%	KLB method
Density - Component A+B	1.08	kg/l	DIN EN ISO 2811-2 (20 °C / 68 °F)
Electrical resistance	< 10 ⁵	Ohm	DIN EN 61340-4-1 DIN IEC 61340-5-1/2

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

Included in systems

- [System F1 - KLB CONDUCTIVE EP EX Standard](#)
- [System F2 - KLB CONDUCTIVE EP ESD Standard](#)
- [System F3 - KLB CONDUCTIVE LOW-VOC EP ESD Exclusive](#)
- [System F5 - KLB CONDUCTIVE EP EX SIC](#)
- [System F6 - KLB CONDUCTIVE LOW-VOC PU ESD Elastic](#)
- [System F8 - KLB CONDUCTIVE CLEAN EP EX](#)
- [System F9 - KLB CONDUCTIVE DIFFUSION LOW-VOC EP EX](#)

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

Tests

External test certificates are available for the following results:

- Certified as low-emission in accordance with 'Eurofins Indoor Air Comfort Gold'. AgBB-compliant and suitable for occupied spaces.

- Fire behaviour classification in combination with **EP 202 EL+**, **PU 413 EL+** or **EP 211 ESD**, or in the **System F4** in accordance with DIN EN 13501-01:2010-01: B_{fl}-s1
- Fire behaviour classification in combination with **EP 212 ESD** in accordance with DIN EN 13501-01:2010-01: C_{fl}-s2
- Slip-resistant loose-lay flooring can be manufactured, for example, in combination with **EP 99 EL+** in accordance with DIN 51130 and BGR 181 to meet the R11/V4 standard.
- Product complies with DIN EN 13813: 2003-01.

Note:

Please enquire about the tested system build-up!

Build-up of coats

- Primer and scratch coat to create a level substrate.
- Adhere **KLB copper strips** for connection to the earthing point at intervals of 6 to 8 m within the designated grid, extending approximately 1 to 2 m into the room. Earthing connection to be carried out by a qualified electrician in accordance with VDE regulations.
- Apply a transversely conductive layer using approx. 0.100 to 0.140 kg/m² of **EP 799 Ableitgrund**.
- Apply the conductive top coat using a trowel or squeegee, using **EP 99 EL+**, **EP 200 EL+**, **EP 785 EL+**, **PU 413 EL+**, **EP 233 EL+**, **EP 231 ESD**, **EP 211 ESD**, **EP 212 ESD**, **EP 239 ESD** or other depending on the requirements of the product and the substrate.

Substrate

The substrate to be coated must be level, dry, dust-free, sufficiently resistant to tensile and compressive stresses, and free from poorly adhering components and flaking. Substances that impair adhesion, such as grease, oil and paint residues, must be removed beforehand using appropriate measures. The guidelines issued by the relevant trade associations, e.g. BEB worksheets KH-0/U and KH-0/S, in their current versions, as well as the instructions in the product information for the recommended KLB primers, such as **EP 50**, **EP 51 RAPID S** and **EP 52 Spezial**, must be observed. The substrates to be coated must be prepared mechanically, preferably by shot blasting. The prepared surface must be primed thoroughly, evenly and without voids. Substrates are often difficult to assess in terms of the required freedom from voids; for this reason, and also to smooth the substrate, the application of a scratch coat is recommended. Conductive coatings must be applied in a uniform layer thickness; therefore, careful substrate preparation is essential. The conductive layer is applied after the copper tapes have been bonded, within the recommended working time of the primer.

Mixing

In the case of combo packaging, each work pack contains the factory-weighed material in exactly the correct mixing ratio. The container for Component B has sufficient volume to hold the entire quantity. Empty Component A completely into the hardener container (Component B). Mixing is carried out mechanically using a slow-speed mixer (200 to 400 rpm) and should take 2 to 3 minutes until a homogeneous, streak-free mass is achieved. To avoid mixing errors, it is recommended that the resin/hardener mixture is always transferred to a clean container and mixed briefly once more ('transferring to a new container'). To achieve the optimum working consistency, up to 10 per cent water may be added after mixing.

Processing

Immediately after mixing, the conductive layer is applied to the substrate using a roller, ensuring an even application. It should be applied evenly, thinly and sparingly to the prepared substrate. To prevent the walls from becoming soiled, it is recommended that the black conductive layer be applied at a distance of approximately 5 to 10 cm from the wall. Before applying the conductive coating, a

sufficiently long curing period of 12 to 24 hours must be observed. The floor and air temperature must not fall below 15 °C, and the relative humidity must not exceed 75 per cent. The temperature difference between the floor and the room temperature should be less than 3 °C to ensure that the curing process is not disrupted. If condensation occurs, normal drying cannot take place, and curing problems and staining may occur. The specified curing times are based on 20 °C; at lower temperatures, the application and curing times are extended, whilst at higher temperatures they are shortened. If the application conditions are not adhered to, deviations from the described technical properties of the end product, including electrical conductivity, may occur.

Cleaning

Use water to remove fresh residues and to clean tools immediately after use; if necessary, follow up with **VR 24** thinner. Hardened material can only be removed mechanically.

Storage

Store in a dry, frost-free place. Ideal storage temperature: 10 to 20 °C. Bring to the correct working temperature before use. Seal opened containers tightly and use up the contents as soon as possible.

Special remarks

This product is subject to the Hazardous Substances Ordinance, the Industrial Safety Ordinance and the regulations governing the transport of dangerous goods. The necessary information is contained in the DIN safety data sheet. Observe the labelling instructions on the container label!

GISCODE: RE20

Indication of VOC-content:

(EG-Regulation 2004/42) Maximum Permissible Value 140 g/l (2010,II,j/wb): Ready-for-use product contains < 140 g/l VOC.

CE marking

	
KLB Kötztal Lacke + Beschichtungen GmbH Günztalstraße 25 FRG-89335 Ichenhausen	
13	
EP799-V1-022013	
DIN EN 13813:2003-01	
Synthetic resin screed mortar DIN EN 13813: SR-B1.5-NPD-NPD	
Fire behaviour	E _{fl} -s1
Emission of corrosive substances	SR
Wear resistance BCA	NPD
Adhesive tensile strength	B 1.5
Impact resistance	NPD

NPD = No Performance Determined

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	< 140	0	g/l
Decopaint Directive 2004/42/EG - Component B	< 140	1.5	g/l
DGNB - Components A + B	< 3	0.12	%
klima:aktiv – Components A + B	< 3	0.12	%
LEED - Components A + B	< 100	1.2	g/l
Minergie ECO ® - Components A + B	< 1(<2)	0.12	%

(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.