KLB-SYSTEM EPOXID
EP 236 ESD

Low-emission, electrically conductive, coloured 2-component epoxy resin structured coating for economical solutions. Suitable for structured floor coatings with ESD and explosion protection.

Packaging units

Article no.	Packaging	Content (kg)	Units/pallet
AK1416-50	Bucket combo	10.00	30
AK1416-25	Hobbock combo	25.00	12

Product characteristics

Mixing ratio parts by weight	A : B = 5 : 1
Mixing ratio parts by volume	A : B = 100 : 31
Processing time	10 °C / 50 °F : 60 min. 20 °C / 68 °F : 40 min. 30 °C / 86 °F : 20 min.
Processing temperature	Minimum 10 °C (room and floor temperature)
Curing time (accessibility)	10 °C / 50 °F : 24 - 36 hrs. 20 °C / 68 °F : 18 - 24 hrs. 30 °C / 86 °F : 14 - 18 hrs.
Curing	2 - 3 days for mechanical load at 20 °C / 68 °F 7 days for chemical resistance at 20 °C / 68 °F
Consumption	Approx. 0.500 - 0.650 kg/m²
Colours	KLB-Standard Colours – see chart. Other colours upon request!
Shelf life	6 months (originally sealed)

Product description

KLB-SYSTEM EPOXID EP 236 ESD is a low-emission, electrically conductive 2-components epoxy resin coating for the installation of thin structured coatings.

With **KLB-SYSTEM EPOXID EP 236 ESD** it is possible to create jointless floors, that can be utilized immediately in explosion proof areas. The coating construction will be, like other electrical conductive coatings, on a conductive layer base, **KLB-SYSTEM EPOXID EP 799 Ableitgrund**. Instead of applying two layers of scratch coat and **EP 799 Ableitgrund**, the conductive and transversely conductive scratch coat **KLB-SYSTEM EPOXID EP 77 Spachtel-Leitschicht** can be used as an alternative especially for light colours. The consistency is adjusted in a way that the surface can be easily laid with a textured roller. The result is an optically pleasant, textured surface.

Apply the ready-to-use mixture with a notched trowel onto the substrate. Texture evenly with a structured roller. With this method of working, it is possible to reach high levels of ground coverage.

The product is suitable for coating floor and wall surfaces.

KLB-SYSTEM EPOXID EP 236 ESD results in an optically pleasant wall and floor coating with a structured, glossy and imporous surface.

The coating is resistant to abrasion and to light mechanical load. By adding 10 - 15 % of silicium carbide, the abrasion and slip resistance can be considerably increased.

The coating offers good resistance to chemicals, especially to aqueous saline solutions, acids and alkaline as well as to oil and benzin. Conditional resistance is given to diluted organic acids.

KLB-SYSTEM EPOXID EP 236 ESD shows good colour tone stability, but like all other epoxy resins, it is not resistant to yellowing. Due to the conductive setting, colour tone deviations are possible, especially with light colour shades.

Area of application

- For textured, plain-coloured thin coatings with non-porous surfaces.
- Suitable for explosion proof areas.
- For increased demand on ESD-protection.
- Complies with demand human-shoe-floor.
- For wall and floor coatings.
- For craft, work and storage rooms with light mechanical load.

Product features

- Total Solid according to GISCODE (test method «Deutsche Bauchemie»)
- low-emission according to AgBB
- also suitable for vertical surfaces
- abrasion-resistant
- high laying performance
- surfaces with burling structure
- good cleanability
- electrically conductive for explosion protection
- suitable for ESD-applications
- jointless coating
- structured
- good resistance range

Technical data

Viscosity - Component A+B	thixotropic	-	
Density - Component A+B	1.45	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	45	N/mm²	DIN EN 196/1
Compressive strength	63	N/mm²	DIN EN 196/1
Shore-hardness D	80	-	DIN 53505 (after 7 days)
Abrasion (Taber Abraser)	50	mg	ASTM D4060 (CS10/1000)
Electrical resistance to ground	10^6	Ohm	DIN EN 61340-5-1
Walking Body Model	< 100	V	DIN EN 61340-5-1
Person/footwear/flooring system	< 10^9	Ohm	DIN EN 61340-5-1

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

Included in systems

- System F7 KLB CONDUCTIVE EP ESD Structured

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

Tests

- Product is compliant with DIN EN 13813: 2003-01.

Build-up of coats

- Apply a base coat using the recommended KLB base coats e.g. **EP 55**, **EP 57** or **EP 53** Spezialgrund. Consumption approx. 0.3 - 0.4 kg/m² depending on the substrate.
- Scratch coat to obtain a smooth surface, e.g. with **EP 55**, **EP 57** or **EP 53 Spezialgrund-AgBB** and mixed sand **KLB-Mischsand 2/1**. Mixing ratio 1 : 0.8 parts by weight. Consumption approx. 1.0 kg/m².
- Glue in copper bands **KLB-Kupferbänder** for discharge in an imagined grid-pattern in place into the room - every 6 - 10 m, up to 1 - 2 m. Earth connection by an electrician based on VDE regulations.
- Apply a cross-conductible coat with **EP 799 Ableitgrund**, consumption approx. 0.100 - 0.140 kg/m².
- Alternatively, instead of the combination of scratch coat and **EP 799 Ableitgrund**, apply the electrically conductive scratch coat **EP 77 Spachtel-Leitschicht** with a surface spatula, a trowel or a hard rubber wiper to form an even substrate. Consumption, approx. 0,6 - 0,8 kg/m², depending on roughness.
- Apply **EP 236 ESD** with a trowel (**Toothed blade A2** or Pajarito TKB-A2), consumption approx. 0.500 - 0.650 kg/m². Use a medium-porous textured roller. For an even structure, apply in crosswise motion.
- Add 10 - 15 % silicon carbide, grain size 0.3/0.8 mm for areas with increased slip and wear resistance. Consumption of the mixture approx. 0.750 - 0.850 kg/m².

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. Please refer to the advice issued by the trade associations, e.g. the current edition of the KH-0/U and KH-0/S BEB worksheets as well as the product information for the recommended base coats, like **EP 58, EP 57** or **EP 53 Spezialgrund-AgBB**. The surface strength must then be at least 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. 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. 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. Old substrates must be cleaned before any mechanical preparation. If old synthetic resin surfaces are being sealed, it is necessary to check that sufficient adhesion is achieved. If in doubt, we recommend processing a sample area.

Reconstruction beyond the regular requirements demands further substrate testing, e.g. by conducting a tensile bonding test. Conductive coatings must be applied in the required thickness, it is thus mandatory to prepare the substrate thoroughly.

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, to ensure complete homogenisation.

Use the material immediately!

Processing

Apply the fresh material partially onto the surface, then distribute it evenly with the notched trowel. Watch for an even application. Always work “fresh-in-fresh”. For structuring, use a medium-pored texture roller in a crosswise motion. Run the roller over the surface several times with even pressure until the desired uniform structure is achieved. The surface can be entered with edgeless nail shoes. The amount of material applied must be carefully measured out. Roller marks may show when too much material has been applied. Do not use the structured roller for application.

Floor and air temperature must not fall below 10 °C / 50 °F and humidity should not be below 30% and above 75%. The difference in floor and room temperature must remain less than 3 °C / 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 end product's technical properties may deviate from the description.

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 at frost-free conditions. Ideal storage temperature is between 10 °C - 20 °C / 50 °F - 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
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EP236ESD-V1-032017
DIN EN 13813:2003-01
Synthetic resin screed mortar DIN EN 13813: SR-B1,5-AR0,5-IR8

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 8

Please consider the latest version of this product information on our website.