KLB KÖTZTAL
Lacke + Beschichtungen GmbH

KLB-SYSTEM EPOXID
EP 724 E Haftgrund Super

Water-based, low-VOC, AgBB-compliant 2-component epoxy resin primer and binding agent for scratch coats, with a wide range of adhesion properties on various substrates (metal, ceramics, etc.) Certified according to the EMICODE EC1 Plus label.

Packaging units

Article no.	Packaging	Content (kg)	Units/pallet
AK2803-92	Combo can	0.90 kg	240
AK2803-60	Combo packaging	9.00 kg	30
AK2803-27	Combo packaging	27.00 kg	12

Product characteristics

Mixing ratio parts by weight	A : B = 1 : 8
Mixing ratio parts by volume	A : B = 21 : 100
Processing time	10 °C / 50 °F: 40 minutes 20 °C / 68 °F: 35 minutes 30 °C / 86 °F: 20 minutes
Processing temperature	Minimum 10 °C / 50 °F (room and floor temperature)
Curing time (accessibility)	10 °C / 50 °F : 12 - 16 hrs. 20 °C / 68 °F : 8 - 12 hrs. 30 °C / 86 °F : 6 - 8 hrs.
Curing	1 - 2 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	Primer: approx. 0.2 - 0.4 kg/m² Scratch coat: 0.8 - 1.0 kg/m² Mortar: 0.8 - 0.9 kg/m²
Packaging	Combo can 0.9 kg, Bucket combo 9 kg, Hobbock combo 18 kg
Colours	Milky and cloudy, opaque drying
Shelf life	12 months (originally sealed) – **Protect from frost!**

Product description

KLB-SYSTEM EPOXID EP 724 E Haftgrund Super is an adhesive, low-emission, 2-component epoxy resin emulsion primer and binding agent for multiple applications as a primer, scratch coat and mortar binding agent that is water-vapour permeable.

KLB-SYSTEM EPOXID EP 724 E Haftgrund Super is used as a primer before the application of water-vapour-permeable coatings and top-sealers. In combination with quartz sand 0.1/0.3 mm or 0.3/0.8 mm, the product can also be used as a scratch coat and together with the **KLB-SYSTEM EPOXID EP 785 HS** coating, it can be used to create water-vapour-permeable coatings. When combined with mixed sand **KLB-Mischsand 1**, it creates a mortar that can be used to repair imperfections, holes and cavities.

The primer also has very good adhesion to various metals, such as stainless steel, steel, copper, aluminium, brass and many others, as well as to tiles and other ceramic coverings, and can therefore be used as a primer underneath subsequent coatings.

KLB-SYSTEM EPOXID EP 724 E Haftgrund Super is therefore primarily used when primers impervious to water vapour are unsuitable. In particular in the case of insufficiently dry substrates or substrates that are sensitive to moisture or in contact with the soil, e.g. fresh concrete, magnesia coverings, concrete slabs that are insufficiently protected against damp and similar substrates, **KLB-SYSTEM EPOXID EP 724 E Haftgrund Super** is a suitable primer or scratch covering in combination with **KLB-SYSTEM EPOXID EP 785 HS** water-vapour-permeable coating systems.

KLB-SYSTEM EPOXID EP 724 E Haftgrund Super can also be used as a primer for vapour diffusion-proof coatings based on epoxy or polyurethane resin, provided that rising damp is excluded. A sufficient curing and drying time must be ensured before overcoating. The binder serves as a base coat for the production of slip-resistant scattered coatings for light and medium loads.

The product hardens after drying of the contained water by chemical cross-linking to a durable, robust film. This penetrating power means that the substrate wets well, which creates a base with good adhesion for subsequent coats.

The absorbency is reduced, dust is bound and the subsequent trowelling creates a smooth, closed surface, e.g. for coatings.

To achieve a consistent mass that can be processed easily, water must be added to the mixed binding agent according to the application.

KLB-SYSTEM EPOXID EP 724 E Haftgrund Super cures within 8 - 12 hours for subsequent overlayering. The end of the open time is not visible. The product produces a hard film that is physiologically harmless.

The cured product is resistant to water, aqueous saline solutions, and diluted acids and bases, and relatively resistant to solvents.

KLB-SYSTEM EPOXID EP 724 E is certified according to “Indoor Air Comfort Gold" and EMICODE® EC 1^{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.

Area of application

- As a primer and scratch coat for **EP 785 HS,** also for increased damp substrates.
- Suitable for mineral substrates such as concrete, cement screed or magnesia flooring.
- As an adhesive primer for metallic substrates, such as steel, stainless steel, aluminium or copper. Not suitable for galvanized sheet metal or titanium zinc.
- As an adhesion primer for old coatings following appropriate preparation.
- As a primer and scratch coat for tiles and ceramic surfaces.
- As adhesion primer for 3-component epoxy cement levelling layer **EC 610 C** and on top of that, as primer for subsequent coating.
- As a primer for wall coatings with **PU 662**.
- As a primer/binding agent for light to medium stressed scattered coatings.
- Only on permanently dry substrates in combination with vapour-proof coatings.

Product features

- tested, low-emission quality
- EMICODE® EC 1PLUS certified
- Total Solid according to GISCODE
- easy application
- very high adhesion
- water vapour-permeable
- consistent to hydrolysis and saponification

Technical data

Viscosity - Component A+B	4500 - 6500	mPas	DIN EN ISO 2811-2 (23 °C / 73.4 °F)
Solid content	> 80	%	KLB method
Density - Component A+B	1.80	kg/l	DIN EN ISO 2811-2 (20 °C / 68 °F)
Adhesive tensile strength	> 1.5	N/mm²	DIN EN 1542
Shore-hardness D	78	-	DIN 53505 (after 7 days)
Flashpoint	Non combustible	-	DIN 51755

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

Tests

The following test certificates are available:

- Certified according to the EMICODE® EC 1^{PLUS} label. Compliant with AgBB for recreation rooms.
- Product is compliant with DIN EN 13813: 2003-01.

Build-up of coats

Smooth coating of EP 785 HS on concrete

- Shot blast the substrate and vacuum thoroughly.
- Prime with **EP 724 E** to which 10 - 15 % water has been added; consumption approx. 0.200 - 0.400 kg/m².
- Apply a scratch coat of **EP 724 E** with a smoothing trowel to which 5 % water and 20 % quartz sand 0.1/0.3 mm + optional 5 % of supporting grain quartz sand 0.3/0.8 mm have been added; consumption approx. 0.6 - 0.8 kg/m² (mixture). In the case of highly porous and rough substrates, a further trowel coat may have to be applied.
- Coating with **EP 785 HS** or conductive coating build-up of **EP 799 Ableitgrund** and **EP 785 EL+**.

Adhesion primer for EC 610 C

- Prepare the surfaces of raw, worn and contaminated substrates by milling and subsequent shot-blasting.
- Other sufficiently stable substrates can be prepared by shot-blasting or diamond grinding; then vacuum thoroughly.
- For screeds, it is important to ensure that the compound does not run into the edge joints. Edge insulation strips are to be applied, also to built-in elements.
- Prime with **EP 724 E Haftgrund Super** special primer to which 10 - 15 % water has been added; consumption approx. 0.200 - 0.400 kg/m² on typically absorbent substrates. The substrate must no longer be absorbent; if it is, give it several more coats of primer.
- Once it is accessible, apply **EC 610 C** with the pin screed scraper in a layer thickness of at least 3 mm; consumption approx. 6 kg/m² at 3 mm and approx. 2 kg/m² for every additional 1 mm of layer thickness. Promptly ventilate with the spiked roller.
- Once it is accessible, or after 15 - 24 hours, **EC 610 C** must be primed with **EP 724 E Haftgrund Super** while adding 10 - 15% of water, for the subsequent use of reactive resin coatings, consumption approx. 0.200 - 0.300 kg/m². In case of pores in the surface, an alternative scratch coat is applied with a smoothing trowel using **EP 724 E**, to which 5 % water and 20% quartz sand 0.1/0.3 mm + optional 5% of supporting grain quartz sand 0.3/0.8 mm have been added, consumption approx. 0.6 - 0.8 kg/m² (mixture).
- Once cured, a top coating of e.g. **EP 216 Universal, PU 420** or **PU 410** can be applied within three days. At this point, observe the notes provided in the respectie product information.
- Alternatively, with reduced loads, it is also possible to use sealers such as **EP 742 E**. After 15 - 24 hours, these can be applied directly onto a pore-free coating made of **EC 610 C**.
- PMMA coverings cannot be directly applied! Please ask for advice if required!

- For producing scattered coatings, please refer to the product information of **EC 610 C**.

Adhesion primer for EC 633 C

- Prepare the surfaces of raw, worn and contaminated substrates by milling and subsequent shot-blasting.
- Other sufficiently stable substrates can be prepared by shot-blasting or diamond grinding; then vacuum thoroughly.
- For screeds, it is important to ensure that the compound does not run into the edge joints. Edge insulation strips are to be applied, also to built-in elements.
- Prime with the appropriate system primer **EC 940 Grund.** Consumption approx. 0.180 - 0.250 kg/m² for typically absorbent substrates.
- The substrate must no longer be absorbent; if it is, give it another coat of primer. The drying time until accessibility is approx. 1 hour depending on the absorption characteristics, temperature and relative humidity.
- Alternatively (especially with floor slabs in contact with the ground): prime with **EP 52 Spezialgrund** or **EP 53 Spezialgrund AgBB**; consumption approx. 0.3 - 0.4 kg/m², and scatter fully with quartz sand 0.7/1.2 mm; consumption approx. 2 - 3 kg/m². In case of highly porous and rough substrates, it may be necessary to apply another layer of primer, which is scattered with quartz sand 0.7/1.2 mm; consumption approx. 2 - 3 kg/m².
- **Important note: EP 724 E Haftgrund Super** must not be used as adhesion primer/primer underneath **EC 633 C**.
- When the primer is sufficiently dry, apply the flow mortar **EC 633 C** with a pin screed scraper within the desired layer thickness. Consumption: approx. 6.5 kg/m² (fresh mortar) at a layer thickness of 3 mm; for thicker layers, the volume of material required will increase.
- After 8 - 16 hours, prime with **EP 724 E Haftgrund Super** to which 10 - 15% water has been added; consumption approx. 0.200 - 0.400 kg/m².
- Optional: if the surface cannot be made pore-free, a pore-closing scratch coat can be applied with a smoothing trowel using **EP 724 E** to which 5% water and 20% quartz sand 0.1/0.3 mm + optional 5% of supporting grain quartz sand 0.3/0.8 mm have been added, consumption approx. 0.6 - 0.8 kg/m² (mixture).
- After curing for 8 to 16 hours, subsequent coatings can be applied onto the surface, which has been primed or treated with a scratch coat.
- **EP 202, EP 216 Universal, EP 785 HS** and **PU 420** are suitable for this.
- Areas subject to light loads (e.g. with fire class $A2_{fl}$) can alternatively be sealed by rolling **EP 742 E** in two layers. Consumption: approx. 0.18 - 0.25 kg/m² per sealing layer.
- For producing scattered coatings, please refer to the product information of **EC 633 C**.

Adhesion primer for tiles and ceramic coverings

- Clean the substrate and remove any grease with a basic cleaning agent.
- Grind (diamond) the substrate until the surface is matt.
- Apply the **EP 724 E** primer to which 10 - 15 % water has been added; consumption approx. 0.2 - 0.4 kg/m².
- Once this has cured, a coating based on **EP 785 HS** or **EP 216 Universal** can be applied.

Adhesion primer on metallic substrates

- Clean the substrate and remove any grease with a basic cleaning agent.
- Blast or grind (diamond) the substrate until the surface is matt.
- Apply the **EP 724 E** primer to which 10 - 15 % water has been added; consumption approx. 0.15 - 0.3 kg/m².
- Once this has cured, a coating based on **PU 405, PU 410, PU 420** or **PU 421** can be applied directly.

Important note: with the primer **EP 724 E**, a coating of **PU 405, PU 410, PU 420** or **PU 421** can be applied directly after a curing time of at least 16 and up to a maximum of 48 hours (at 20 °C / 68 °F), without scattering. Higher humidity and poor air exchange may require longer waiting times.

Slip-resistant scattered coating

- Shot-blast the substrate and vacuum thoroughly.
- Apply the primer **EP 724 E** to which 10 - 15 % water has been added, consumption approx. 0.200 - 0.400 kg/m².
- Apply a scratch coat of **EP 724 E** with a smoothing trowel to which 5 % water and 20 % quartz sand 0.1/0.3 mm + optional 5 % of supporting grain quartz sand 0.3/0.8 mm has been added; consumption approx. 0.6 - 0.8 kg/m² (mixture). In the case of highly porous and rough substrates, a further trowel coat may have to be applied.
- Apply the base coat with **EP 724 E** to which 5 % water and 15 % quartz sand 0.3/0.8 mm or 0.7/1.2 mm have been added; application is done with a trowel by scraping over grain; consumption for R11 approx. 1.3 - 1.5 kg/m² and for R12 approx. 1.6 - 1.8 kg/m².
- Scatter the whole surface with quartz sand 0.3/0.8 mm, consumption approx. 4.0 - 6.0 kg/m².
- After curing, sweep off excess sand, chip off or vacuum thoroughly until no more grain or sand is being released.
- Application of the top sealer **EP 216 Universal**, alternatively with **EP 5570** or **PU 5580** using a rubber squeegee, then distribute evenly in crosswise motion. Consumption approx. 0.55 - 0.75 kg/m².
- Optional: apply **EP 742 E/EP 752 E** as vapour-permeable version. Consumption approx. 0.5 - 0.7 kg/m². Application is done with a rubber squeegee, distribute homogeneously using a velours roller.

Build-up for dense epoxy and polyurethane resin coatings

- Suitable substrates are concrete, cement screed, ceramic coverings (without moisture penetration on the back).
- Shot-blast the substrate and vacuum thoroughly.
- Apply the primer **EP 724 E** to which 10 - 15 % water has been added, consumption approx. 0.200 - 0.400 kg/m².
- Apply a scratch coat of **EP 724 E** with a smoothing trowel to which 5 % water and 20 % quartz sand 0.1/0.3 mm + optional 5 % of supporting grain quartz sand 0.3/0.8 mm have been added; consumption approx. 0.6 - 0.8 kg/m² (mixture). In the case of highly porous and rough substrates, a further trowel coat may have to be applied.
- Alternatively, for further PU build-up, a scratch coat of **PU 421** is applied after the appropriate curing time, adding approx. 20 - 30 % quartz sand 0.1/0.3 mm, consumption approx. 0.8 - 1.0 kg/m².
- Application of the coating **EP 216 Universal** or **EP 202,** alternatively **PU 405, PU 410, PU 420** or **PU 421.**

After applying the scratch coat with **EP 724 E** and after a curing time of at least 16 to max. 48 hours (at 20 °C), the above mentioned coatings can be recoated without scattering. Ensure sufficient ventilation during curing.

Substrate

The substrate to be coated must be even, surface 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. The substrates to be coated should be prepared mechanically, preferably by shot-blasting. The surface strength must then be at least 1,5 N/mm². The prepared area must be primed carefully. It is often difficult to judge the necessary pore-free condition of substrates. It is therefore recommended that a primer and subsequent scratch coat be generally applied before working with self-levelling coatings. 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 intensively before any mechanical preparation. In case of doubt, we recommend testing on a trial surface.

Grease must be removed from metallic substrates using a basic cleaning agent or suitable solvent. The surfaces are then ground and immediately primed.

Tiles and ceramic coverings must be free of adhering compounds. It must be sufficiently dry under the coverings.

Mixing

Combo-packaging will be supplied in the correctly measured mixing ratio. The package of Component B has sufficient volume for the entire packaging unit. Empty all of component A into the hardener compound B. Blend with a slow speed mixer (200 - 400 r/pm) for at least 2 - 3 minutes until a homogeneous, streak-free and whitish emulsion forms. To prevent mixing errors, empty ("repot") the entire resin/ hardener mixture into a clean container and mix it once again briefly with the necessary amount of water depending on the application to ensure complete homogenisation.

Recommended mixtures:

Primer:

9.0 kg **KLB-SYSTEM EPOXID EP 724 E**
0.9 - 1.4 kg water

Scratch coat:

9.0 kg **KLB-SYSTEM EPOXID EP 724 E**
0.5 kg water
1.8 kg quartz sand **Quarzsand 0.1/0.3 mm**
0.45 kg quartz sand **Quarzsand 0.3/0.8 mm** (optionally)

Base layer for scattered coatings:

9.0 kg **KLB-SYSTEM EPOXID EP 724 E**
0.45 kg water
1.35 - 1.8 kg quartz sand **Quarzsand 0.3/0.8 mm**

Epoxy resin mortar:

9.0 kg **KLB-SYSTEM EPOXID EP 724 E**
0.8 - 1.1 kg water
40 - 45 kg mixed sand **KLB-Mischsand 1**

Before adding any additives, the binding agent must be premixed, then stirr in the water and add the additive. The amount of mixed sand depends on the necessary consistency and stability.

The processing time must not be exceeded – (see chart “Processing time”).
Note: end of pot life is not visible!

Processing

Primer: as with all reactive resin systems, processing should take place immediately after mixing. Priming should be done immediately after mixing; use a nylon roller or rubber squeegee, and then a pass with the roller. Apply an evenly thin, sealed coat on the substrate. Avoid the formation of puddles and uneven layer-thicknesses. In the case of substrates with high absorbency or porosity, applying another coat is recommended.

Scratch coat: apply a scratch coat before any further coatings to level the substrate - but also for full pore-closure. Use a trowel, metal, or rubber squeegee. The consistency of the filling compound has to be adjusted according to the substrate absorbency, for a material that runs true.

Base layer for scattered coatings: for scattered coatings, prepare a suitable base coat with **EP 724 E** after applying the scratch coat. This can be done with a trowel over grain or with a metal or rubber squeegee.

Epoxy resin mortar: a mortar can be created with **EP 724 E** to deal with repair work. Special resins **EP 150** or **EP 158** are recommended for creating industrial mortar floorings. Process as soon as mixing is complete. Skim the mortar with a batten, then compress and smooth with the smoothing trowel.

Floor and air temperature must not fall below 10 °C / 50 °F and humidity must not exceed 75 %. The recommended climatic conditions must also be maintained during curing or drying. Ensure sufficient ventilation of the surface during curing. Avoid draughts! 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 poblems and spotting to occur. Exposure to water and chemicals 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.

Cleaning

To remove fresh contamination and to clean tools, use water immediately. Hardened material can only be removed mechanically.

Storage

Store in dry and frost-free conditions. Ideal storage temperature is between 15 - 20 °C / 59 - 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: 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

CE

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EP724E-V1-062020
DIN EN 13813:2003-01
Synthetic resin screed mortar DIN EN 13813: SR-B2.0-AR0.5-IR4

Fire behaviour	E_{fl}-s1
Emission of corrosive substances	SR
Wear resistance BCA	AR 0.5
Adhesive tensile strength	B 2.0
Impact resistance	IR 4

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	2,4	g/l
DGNB - Components A + B	< 3	0,011	%
klima:aktiv – Components A + B	< 3	0,011	%
LEED - Components A + B	< 100	2,1	g/l
Minergie ECO ® - Components A + B	< 1 (< 2)	0,011	%

(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.

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