KLB KÖTZTAL
Lacke+Beschichtungen GmbH

KLB-SYSTEM EPOXID
EP 740 E

Silk-matt, coloured 2-component epoxy resin emulsion sealer, certified as surface protection system OS 4 in accordance with DAfStb directive

Packaging units

Article no.	Packaging	Content (kg)	Units/pallet
AK2718-50	Bucket combo	10.00 kg	30
AK2718-25	Hobbock combo	25.00 kg	12

Product characteristics

Mixing ratio parts by weight	A : B = 1 : 5
Mixing ratio parts by volume	A : B = 1 : 4,15
Processing time	15 °C / 59 °F : 50 min. 20 °C / 68 °F : 40 min. 30 °C / 86 °F : 30 min.
Processing temperature	Minimum 15 °C / 59 °F (room and floor temperature)
Curing time (accessibility)	15 °C / 59 °F : 24 - 36 hrs. 20 °C / 68 °F : 18 - 24 hrs. 30 °C / 86 °F : 14 - 18 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 18 - 24 hours, but after 48 hours at the latest at 20 °C / 68 °F
Consumption	Top sealer: approx. 0.200 - 0.250 kg/m² per application OS 4 scratch coat: approx. 0.500 - 0.700 kg/m² per application OS 4 top sealer: approx. 0.150 - 0.200 kg/m² per application
Layers	Usually 2 layers
Layer thickness	when applied in 2 layers: 0.2 - 0.4 mm
Packaging	Bucket combo 10 kg, Hobbock combo 25 kg
Colours	From 10 kg quantity: approx. RAL 7030, approx. RAL 7032, approx. RAL 7035 and approx. RAL 7040. From 300 kg: colours upon request!
Shelf life	12 months (originally sealed) – **Protect from frost!**

Product description

KLB-SYSTEM EPOXID EP 740 E is a water-emulsified and pigmented 2-component epoxy resin sealer.

KLB-SYSTEM EPOXID EP 740 E is mainly used as sealer for concrete, cement screed, magnesia screed and mastic asphalt, as well as for reconstructing older surfaces because of its very good adhesion on different, even older substrates. To be applied with a velours roller, the material is easy to work with, has high coverage and is convenient and environmentally friendly due to its solvent-free properties. When applied in 2 layers, it results in a very durable and optically appealing floor sealer. The product hardens by drying and chemical cross-linking to form a a durable and tough coat with good adhesion.

KLB-SYSTEM EPOXID EP 740 E results in a hard, to a large extent abrasion-resistant coat that is physiologically harmless and has a good resistance to aqueous solutions, diluted acids, and alkalis, as well as motor and heating oil. The water

vapour permeability enables the sealing of water-sensitive and also excessively damp substrates. **KLB-SYSTEM EPOXID EP 740 E** results in silk-matt surfaces.

KLB-SYSTEM EPOXID EP 740 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.

The product is suitable for the production of tested OS 4 coatings in accordance with the DAfStB guideline "Protection and maintenance of concrete components”.

Area of application

- **EP 740 E** is used as a sealer for concrete, cement, anhydrite, and mastic asphalt screeds, as well as magnesia screeds.
- As sealer on vapour-permeable coatings like **EP 785 HS**.
- As sealer and thin coat for interior areas, like commercially and industrially used areas, basements, garages, storage rooms, etc.
- Renovation of older epoxy resin substrates.
- Vertical areas and walls.
- As wall coating in accordance with OS 4

Product features

- tested, low-emission quality
- EMICODE® EC 1PLUS certified
- Total Solid according to GISCODE
- odorless
- even surface
- water vapour-permeable
- environmentally friendly
- very high adhesion
- easy application
- high covering power

Technical data

Viscosity - Component A+B	Approx. 1000	mPas	DIN EN ISO 3219 (23 °C / 73.4 °F)
Solid content	> 63	%	KLB method
Density - Component A+B	1.32	kg/l	DIN EN ISO 2811-2 (20 °C / 68 °F)
Abrasion (Taber Abraser)	< 70	mg	ASTM D4060 (CS10/1000)
Flashpoint	Non combustible	-	DIN 51755
Gloss level	20 - 30 (85°)	-	DIN 67530
Diffusion resistance rate	3100	-	DIN EN ISO 12572
Water vapour diffusion-equivalent air layer thickness	(0.5 mm) 1.6	m	DIN EN ISO 7783-2

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

Included in systems

- System E1 - KLB INDUSTRIAL DIFFUSION LOW-VOC EP Color
- System E2 - KLB INDUSTRIAL DIFFUSION LOW-VOC EP Standard
- System E3 - KLB INDUSTRIAL DIFFUSION LOW-VOC EP RX

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

Suitable coatings

The following self-levelling coatings can be sealed with **EP 740 E**:

EP 200 VF, EP 202, EP 213, EP 213 RAPID, EP 216 Universal, EP 216 RAPID, EP 220, PU 405, PU 410, PU 420, PU 421, PU 425 Comfort.

With other coatings, adhesion must be tested. The adhesion can anyway be improved by grinding the surface.

Tests

The following external test certificates are available:

- Slip-resistance grade R10 possible, according to DIN 51130 and BGR 181.
- Slip-resistant scattered coating in R12 V4 possible, according to DIN EN 16165 and DIN 51130.
- Certified as low-emission according to "Eurofins Indoor Air Comfort Gold“ and EMICODE with the EC 1^{PLUS} label. Compliant with AgBB for recreation rooms.
- Water vapour permeability according to DIN EN ISO 7783-2.
- Classification of the fire behaviour according to DIN EN 13501-01: 2010-01: B_{fl}-S1.
- Performance characteristics test for the use as a surface protection product/ system OS 4 for concrete following DIN EN 1504-2 in consideration of DIN V 18026, “Surface protection systems for concrete from products following DIN EN 1.5.2004-2” and in accordance with the DAfStb guidelines “Protection and maintenance of concrete components”.

Note:

Please ask for the tested system build-up!

Build-up of coats

Top coat

- Grind the substrate and vacuum it off thoroughly.
- Highly absorbent substrates require an additional base coat with **EP 727 E**, consumption approx. 0.140 - 0.160 kg/m².
- Apply the first sealing coat **EP 740 E**, diluted with 5 - 10 % of water, with a nylon roller.
- Apply the second sealing coat **EP 740 E** with a rubber blade (toothing 2 mm) or a nylon roller in crosswise motion.

Wall coating in accordance with RILI SIB OS 4

- Grind the substrate and vacuum it off thoroughly.
- Where necessary, moisten the surface with a brush to improve the processing conditions on highly absorbing substrates.
- To obtain an even substrate, apply a scratch coat with **EP 740 E** and mixed sand **KLB-Mischsand 2/1**, mixing ratio 1 : 2, consumption approx. 0.5 - 0.7 kg/ m².
- In the case of big cement voids or cracks, double filling may be necessary and, if necessary, a higher degree of filling with mixed sand **KLB-Mischsand 2/1.**
- Apply the first sealing coat **EP 740 E** with a nylon roller, consumption approx. 0.15 - 0.20 kg/m².
- Apply the second sealing coat **EP 740 E** with a rubber blade (toothing 1 mm) or a nylon roller in crosswise motion, consumption approx. 0.15 - 0.20 kg/m².

Important remarks:

- For OS 4 systems, minimum top sealer layer thickness of 80 µm has to be complied with in accordance with RILI SIB.
- Please observe the maintenance guidelines for further requirements.

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. 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. When sealing, abrasive grinding by means of diamond grinding is particularly suitable, as this achieves a smooth surface. The shot-blasting method can be used optimally, whereby a scratch coat is then applied for smoothing with **EP 782** ou **EP 740 E** and mixed sand **KLB-Mischsand 2/1**, mixing ratio 1 : 2 parts by weight. Old substrates must be cleaned before any mechanical preparation. If old synthetic resin surfaces need to be sealed, it must be ensured that sufficient adhesion is achieved. In case of doubt, we recommend testing on a trial surface.

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 compound forms. If diluting with water, first mix components A and B completely, then add water and homogenise once again. The added water must be stirred in thoroughly. To prevent mixing errors, empty ("repot") the entire resin/ hardener mixture into a clean container and mix it once again briefly. Partial quantities need to be weighed out in the right mixing ratio after having stirred up the single components.

Processing time max. 40 minutes at 20 °C / 68 °F (see chart “Processing time”).
Note: end of pot life is not visible!

Processing

As with all reactive resin systems, processing should take place immediately after mixing using a rubber blade (toothing 1 or 2 mm) or a lint-free velours sealing roller. Typically, work areas are divided up beforehand to avoid duplicate application and haphazard overlapping. For larger areas, it is recommended that 2 or more people carry out the application. One or more persons apply the material in one direction, while another person distributes the fresh sealing material in a crosswise motion (90° angle). Use a 50 cm wide roller on larger surfaces for the final re-rolling. The distribution roller should be saturated/wetted with material and only be used for distribution, never for application. Always work “fresh-in-fresh” and ensure optimum distribution of the material. Avoid ponding, otherwise fogging may occur.

Floor and air temperature must not fall below 15 °C / 59 °F and humidity must not exceed 75 %. The recommended climatic conditions must also be maintained during curing or drying. 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. 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.

Special remarks: coloured products should always belong to the same batch and be used on the same surface, as slight colour deviations in different batches cannot be excluded due to the raw material. The batch number is indicated on the container labels. For certain colour shades - especially white, yellow and orange or pastel light shades - the recommended layer thicknesses must be observed to ensure opacity. The top sealer must always be applied in the same colour as the underlying coating. For other colour tone combinations, please consult us.

Colour changes, loss of gloss or yellowing may occur with certain light and weather influences and with prolonged and intensive use.

To prevent wear and tear, suitable chair castors or floor protection mats must be used with swivel chairs/office swivel chairs or other wheeled furniture.

Cleaning

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

Separate cleaning and care recommendations are available for cleaning floors produced with KLB coatings and sealers. To ensure intercoat adhesion, water-based sealers may be grouted with KLB products after 7 days at the earliest (at 20 °C / 68 °F).

In special cases - especially with vibrant colours - the cleaning might cause a loss of colour. This can be avoided by applying an additional transparent sealing, e.g. **EP 705 E**. If necessary, ask for a consultancy.

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: 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
KLB Kötztal Lacke + Beschichtungen GmbH Günztalstraße 25 89335 Ichenhausen, GERMANY
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EP740E-V1-022013
DIN EN 13813:2003-01
Synthetic resin screed mortar DIN EN 13813: SR-B1,5-AR0,5-IR5

Fire behaviour	B_{fl}-s1
Emission of corrosive substances	SR
Wear resistance BCA	AR 0,5
Adhesive tensile strength	B 1,5
Impact resistance	IR 5

CE
1119
KLB Kötztal Lacke + Beschichtungen GmbH Günztalstraße 25 89335 Ichenhausen, GERMANY
13
EP740E-V1-022013
DIN EN 1504-2:2004
Surface protection products-coating DIN EN 1504-2: ZA.1d,ZA.1f,ZA.1g

Abrasion resistance	complied with
CO_2-permeability	S_D > 50m
Water vapour permeability	Class II
Capillary water absorbtion and water permeability	w < 0,1 kg/m²*h0,5
Resistance to increased chemical excavation	complied with
Resistance to impact	Class I
Tear-test for adhesive strength evaluation	≥ 1,5 (1,0) N/mm²
Fire behaviour	B_{fl}-s1

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

(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.

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