KLB KÖTZTAL
Lacke+Beschichtungen GmbH

KLB-SYSTEM EPOXID
EP 290 Flex

Elastic coating, grouting and sealing compound on the basis of a 2-component epoxy resin

Packaging units

Artikelnummer	Verpackung	Inhalt	VE/Palette
AL1237-51	Bucket combo	10.00 kg	30
AL1237-31	Hobbock combo	30.00 kg	12

Product characteristics

Mixing ratio parts by weight	A : B = 2 : 1
Mixing ratio parts by volume	A : B = 100 : 80
Processing time	10 °C / 50 °F : 70 min. 20 °C / 68 °F : 45 min. 30 °C / 86 °F : 25 min.
Processing temperature	Minimum 10 °C / 50 °F (room and floor temperature)
Curing time (accessibility)	10 °C / 50 °F : 24 - 36 hrs. 20 °C / 68 °F : 14 - 18 hrs. 30 °C / 86 °F : 10 - 14 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 14 - 18 hours, but after 48 hours at the latest at 20 °C / 68 °F
Consumption	Approx. 1.3 kg/m² per 1 mm of thickness
Layer thickness	1.5 - 2.0 mm
Colours	KLB standard colours – see chart. Other colours upon request!
Shelf life	12 months (originally sealed)

Product description

KLB-SYSTEM EPOXID EP 290 Flex is a self-levelling 2-component epoxy resin coating for flexible sealing, grouting and coating works.

KLB-SYSTEM EPOXID EP 290 Flex is a high-quality, polyurethane-modified coating compound with a high binding agent content. The product offers good flexibility, crack-bridging adjustment and cold flexibility.

Due to its excellent properties, **KLB-SYSTEM EPOXID EP 290 Flex** is used for the production of sealing layers under wet coverings (kitchen coverings), crack-bridging intermediate layers under industrial coverings and sealings under ceramic coverings. Furthermore, the material is suitable as grout for joints with little movement, such as cut joints in concrete, etc. The grout can be used to produce joints with a high degree of robustness, which are suitable, for example, for air cushion coverings and many other applications.

The material offers good flow and smoothing properties and cures very well. The coating is resistant to water, salts, saline solutions, alkalis and bases, as well as diluted mineral acids. The material offers limited resistance to solvents such as petrol, fuel, grease, oil, etc. **KLB-SYSTEM EPOXID EP 290 Flex** can be supplied in many different colours.

Note:

On visible surfaces, colour deviations and differences are possible.

Area of application

- Sealer for commercially used kitchen floors and other wet coatings in the food processing industry.
- For special crack-bridging requirements.
- As floating layer and electric charge compensating interlayer for special requirements due to the substrate.
- As two-layer sealing coat underneath ceramic coatings.
- Sealer underneath decorative sand coatings.

Product features

- Total Solid according to GISCODE (Test method "Deutsche Bauchemie")
- flexible at low temperatures
- crack-bridging
- consistent to hydrolysis and saponification
- impervious to fluids
- viscoplastic

Technical data

Viscosity - Component A+B	3000	mPas	DIN EN ISO 3219 (23 °C / 73.4 °F)
Solid content	> 99	%	KLB method
Density - Component A+B	1.20	kg/l	DIN EN ISO 2811-2 (20 °C / 68 °F)
Weight loss	0.3	weight-%	after 28 days
Water absorption	< 0.2	weight-%	DIN 53495
Compressive strength	70	N/mm²	DIN EN 196/1
Shore-hardness D	45	-	DIN 53505 (after 7 days)
Abrasion (Taber Abraser)	60	mg	ASTM D4060 (CS10/1000)

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

Included in systems

- System H1KLB KITCHEN EP Standard

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

Tests

External test certificates are available:

- Static crack-bridging.
- With proof of usability as industrial kitchen coating if used within the system.
- Product is compliant with DIN EN 13813: 2003-01.

Note:

Please ask for the tested system build-up!

Build-up of coats

Build-up of coats as elastic sealing layer

- Apply one of the recommended KLB base coats, e.g. **EP 50**, **EP 51 RAPID S**, **EP 52 Spezialgrund**, **EP 52 RAPID**.

- Apply a levelling coat using e.g. **EP 50** and mixed sand **KLB-Mischsand 2/1** depending on the roughness of the substrate.
- Apply a sealing coat using **EP 290 Flex**. Consumption: approx. 2.0 - 2.6 kg/m²; apply with the notched trowel **Toothed Blade S3** or **RS4**.
- After curing, apply a covering layer with KLB epoxy resin. Information on consumption and on the quantities of quartz sand in case of an optional scattering can be found in the product information of the individual coating products. For load distribution, the thickness of the finished wearing layer must be at least 2.5 times the thickness of the sealing layer.

Slip-resistant scattered coating for permenantely wet areas (kitchens floors)

- For priming and levelling the surface see “Build-up of coats as elastic sealing layer“ or the product information of the individual primers. **EP 52** is a tested and approved primer for industrial kitchens.
- Apply a sealing coat using **EP 290 Flex** in layers of approx. 1.5 - 2.0 mm.
- Apply a base coat with **EP 216 Universal** in layers of minimum 2 mm and subsequent complete scattering with colour sand, grain size 0.3/0.8 or 0.7/1.2 mm. The primer coat thickness will then depend on the following loading. For load distribution, the thickness of the finished wearing layer must be at least 2.5 times the thickness of the sealing layer. When needed, please contact your KLB adviser. Remove any excess after 24 hours by sweeping, grinding and vacuuming if applicable.
- Resinate the surface with **EP 175 Spezial** using a rubber coating knife and subsequently re-roll with a velour roller for the required slip-resistance. Control consumption to achieve the required slip resistance level.
- Top finish sealer with **EP 860**. Use a solvent-resistant velour roller. Apply in crosswise motion.

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 as well as the notes provided in the product information for the recommended base coats, like **EP 50, EP 51 RAPID S** or **EP 52 Spezialgrund.** The substrates to be coated should be prepared mechanically, preferably by shot-blasting. The prepared area must be saturated, pore-free and primed carefully. 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. 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 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. The addition of quartz sands is generally possible, but is not recommended, as the mechanical properties and especially the elasticity are changed or reduced.

Processing

Process the material immediately after mixing with a squeegee or notched trowel (e.g. **Toothed Blade RS4** or Pajarito 48) by pulling out an even layer on the prepared substrate. Compared to ready-to-use coatings, the material has to be processed more rapidly to avoid any deposits on the bottom. The product is adjusted for optimum deaeration, however, rolling with a spiked roller is recommended to improve the wetting of the substrate, to optimise levelling and to remove remaining

air bubbles. This should be carried out time-delayed after approx. 10 - 20 minutes. To work seamlessly, always work “fresh-in-fresh” and define work areas before starting. For reasons of deaeration, do not scatter too early; the optimum time is at 20 °C / 68 °F after 20 - 30 minutes.

Floor and air temperature must not fall below 10 °C / 50 °F and humidity must not exceed 75 %. 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.

Cleaning

To remove fresh contamination and to clean tools, use **VR 28** 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 frost-free conditions. Ideal storage temperature is between 10 - 20 °C / 50 - 68 °F. Bring to a suitable processing temperature before application. Process only complete units!

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! For the floor installation works, we invite to comply with the current norms and guidelines and to employ professional workers.

GISCODE: RE30

Kennzeichnung VOC-Gehalt:
(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

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EP290Flex-V1-022013	
DIN EN 13813:2003-01	
Synthetic resin screed mortar DIN EN 13813: SR-B1.5	
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

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

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