

KLB-SYSTEM EPOXID

EP 5100 Plus

Extra rapid-curing 2-component epoxy resin for construction and repair work

Packaging units



Article no.	Packaging	Content (kg)	Units/pallet
AK1069-95	Combi can	1.00	120
AK1069-70	Bucket combo	5.00	45

Product characteristics

Mixing ratio parts by weight	A : B = 100 : 70
Mixing ratio parts by volume	A : B = 100 : 65
Processing time	10 °C / 50 °F : 10 - 15 min. 20 °C / 68 °F : 6 - 8 min. 30 °C / 86 °F : 4 - 6 min.
Processing temperature	Minimum 10 °C / 50 °F (room and floor temperature) Curing up to 0 °C / 32 °F (room and floor temperature)
Curing time (accessibility)	10 °C / 50 °F : 80 - 110 min. 20 °C / 68 °F : 50 - 70 min. 30 °C / 86 °F : 30 - 40 min.
Curing	1 - 2 days at 20 °C / 68 °F for mechanical load at 20 °C / 68 °F 7 days for chemical resistance at 20 °C / 68 °F
Further coatings	While still wet or after curing (50 - 70 min.), but not longer than 18 hours at 20 °C / 68 °F
Consumption	Grouting : Approx. 1.1 kg per 1 liter Mortar : Approx. 0.150 - 0.300 kg/m ² for each mm of layer
Shelf life	12 months (originally sealed)

Product description

KLB-SYSTEM EPOXID EP 5100 Plus is a rapid-setting 2-component epoxy resin for repair and construction work.

The resin can be used in a variety of ways for small-area assemblies, repair and adhesive works. This is why the material is designed for a rapid, force-fit grouting of joints and cracks prior to coating. The resin is only suitable to a limited extent for primers due to its rapid reaction and therefore, the small penetrating power. Primers should only be used on small repair areas between 1 to 2 m².

KLB-SYSTEM EPOXID EP 5100 Plus can be filled with e.g. **KLB-Mischsand 1**, as well as **KLB-Mischsand 2/1** to fill holes, cracks, etc. In addition, bonding and assembly works, e.g. of profiles, tracks, grooves, etc. can also be carried out combination with suspending agents or fillers. Approximate processing time is 5 - 8 minutes. Blend only the amount of material that can be processed in the respective time window. Depending on the application, a force-fit pretension or curing and the associated reworkability may be achieved already after 30 - 60 minutes. The product can be used in combination with other epoxy resins.

KLB-SYSTEM EPOXID EP 5100 Plus can be used wherever rapid-curing and recoatability are required.

Area of application

- All-purpose, rapid-setting repair and construction resin.
- Suitable for repairing dents, cracks, and holes when used in combination with filling sands.
- Use as force-fit construction resin to bond profiles, connecting brackets, coverings, etc.
- For force-fit adhesion of mineral construction parts and rapid-curing repair works prior to coating.

Product features

- Total Solid according to GISCODE (test method «Deutsche Bauchemie»)
- all-purpose use
- rapid-setting
- can be loaded quickly
- fast curing for further reworking
- time-saving
- good interlayer adhesion
- good filling capacity
- consistent to hydrolysis and saponification
- low shrinkage
- free of deleterious substances against varnish

Technical data

Viscosity - Component A+B	1800	mPas	DIN EN ISO 3219 (23 °C / 73.4 °F)
Solid content	100	%	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 at 20 °C / 68 °F
Water absorption	< 0.2	weight-%	DIN 53495
Bending tensile strength	> 30	N/mm ²	DIN EN 196/1
Compressive strength	> 75	N/mm ²	DIN EN 196/1
Adhesive tensile strength	> 1.5	N/mm ²	DIN EN 1542
Shore-hardness D	75	-	DIN 53505 (after 7 days)

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

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. Remove any loose dirt by sweeping, vacuuming, or machine cleaning. Materials impairing adhesion such as grease, oil, and paint residues should be removed with suitable measures. The substrate has to have adequately high strength for the intended occupational use. Coating of mastic asphalt with epoxy resin is not recommended. 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. 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. Please refer to the advice issued by the trade associations, e.g. the current edition of BEB-worksheets KH-0/U and KH-0/S.

When applying on priming resins, the adhesion of the product combination has to be tested. Obtain technical advice!

Mixing

Do not mix more of the rapid-curing reactive resin than can be processed within the pot life. Process immediately after mixing. Combo-packaging will be supplied in the correctly measured mixing ratio. The package of Component A has sufficient volume

for the entire packaging unit. Empty all of the hardener compound B into the resin. Partial quantities need to be weighed out in the right mixing ratio. For larger containers, the processing quantities must be adapted to the pot life. To do this, weigh out the material in portions that can be processed. Blend with a slow speed mixer (200 - 400 r/pm) for at least 1 - 2 minutes until a homogeneous, streak-free compound forms. Then add filling compounds and suspending agent and stir in. To prevent mixing errors, empty ("repot") the entire resin/hardener mixture into a clean container and mix it once again briefly, to ensure complete homogenisation.

Mortar production

Mortar:

1.0 kg **KLB-SYSTEM EPOXID EP 5100 Plus**
4.0 - 6.0 kg mixed sand **KLB-Mischsand 1**

Adhesive Mortar:

1.0 kg **KLB-SYSTEM EPOXID EP 5100 Plus**
30 - 50 gram suspending agent **KLB-Stellmittel 3 Super**

Premix the resin before adding any additives. The amount of mixed sand depends on the necessary consistency and stability. Processing rapid-setting mortars is quite difficult. Our recommendation is for small area repairs only.

Processing

Process the material immediately after mixing. Depending on the kind of material and consistency, use a coating knife, trowel, or nylon roller. Apply an evenly closed sealing coat on the surface. Scatter the fresh coating with quartz sand (grain size 0.3/0.8 mm) for an optimum adhesion. This is mandatory if the subsequent coating will be applied later than 18 hours after the primer.

Epoxy resin mortar: Mortars can be produced for repair work. Process immediately after mixing. Pull over a lath, then compact and smooth with a trowel. Clean tools with little amounts of **VR 24**.

Floor and air temperature must not fall below 10 °C / 50 °F and humidity should not exceed 75 %. The difference in floor and room temperature must remain less than 3 °C / 3 K / 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. 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 thinner **VR 24** immediately. Hardened material can only be removed mechanically.

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 containers 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

	
KLB Kötztal Lacke + Beschichtungen GmbH Günztalstraße 25 FRG-89335 Ichenhausen	
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EP5100-V1-022013	
DIN EN 13813:2003-01	
Synthetic resin screed mortar DIN EN 13813: SR-B1.5-AR0.5-IR4	
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 4



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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. With appearance of this new KLB product information, all prior information loses validity. The updated version is available on our website www.klb-koetztal.com. In addition, our "General Terms and Conditions" apply.