



KLB-SYSTEM EPOXID EP 705 E - R10



Low-emission, transparent, matt 2-component epoxy resin emulsion sealant for slip-resistance grade R10

Packaging units

Article no.	Packaging	Content (kg)	Units/pallet
AK2794-70	Bucket combo	5.25 kg	39
AK2794-50	Bucket combo	10.50 kg	33



Product characteristics

Mixing ratio parts by weight	A : B = 4 : 6.5
Mixing ratio parts by volume	A : B = 100 : 167
Processing time	15 °C / 59 °F : 65 min. 20 °C / 68 °F : 60 min. 30 °C / 86 °F : 45 min.
Processing temperature	Minimum 15 °C / 59 °F - Maximum 30 °C / 86 °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	0.120 - 0.180 kg/m ²
Packaging	Bucket combo 5.25 kg, Bucket combo 10.5 kg
Colours	Transparent
Shelf life	12 months (originally sealed) – Protect from frost!

Product description

KLB-SYSTEM EPOXID EP 705 E - R10 is a 2-component epoxy resin sealer, low-emission according to the AgBB principles.

KLB-SYSTEM EPOXID EP 705 E - R10 is used as a non-pigmented, matt top coat for reactive resin coatings, also decorative flakes may be added.

KLB-SYSTEM EPOXID EP 705 E - R10 is a special top sealer for producing slip-resistant surfaces. It has been tested according to DIN 51130/BGR 181 and rated with slip resistance grade R10. Processing the epoxy sealer is done with a lint-free velours roller and, after curing, results in an even surface in a defined slip resistance grade of R10.

Alternatively, **KLB-SYSTEM EPOXID EP 706 E** and **KLB-SYSTEM EPOXID EP 706 E - R10** can be used as opaque and coloured sealers on epoxy resin coatings. With **KLB-SYSTEM EPOXID EP 705 E**, a standard product without slip-resistant properties is also available.

The sealing results in uniform, matt surfaces that give the floors an even, nice appearance. "Mirror effects" of glossy coatings due to light scattering from the surface are significantly reduced.

EP 705 E - R10 may replace solvent-based sealers in many areas and thus represents an alternative which is also convenient to work with. Aligned curing results in very even surfaces.

EP 705 E - R10 has good adhesion to various substrates and can therefore also be used - after adhesion testing - on old coatings.

The product cures by drying and chemical cross-linking to form durable, robust films with good adhesion. Fully cross-linked coatings are resistant to many chemicals, but especially to water, salts, diluted alkalis and bases, oils as well as many different solvents.

The sealer is certified according to the "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.

Note: sealed surfaces offer only limited resistance to mechanical load. Material handling equipment may affect or destroy them. Their use is therefore only suitable to a limited extent. In areas with high and frequent wet exposure and also with chemicals, solvent-based sealers would be more appropriate.

Area of application

- **EP 705 E - R10** is used as a non-pigmented matt sealer on high-quality decorative and industrial epoxy coatings.
- As matt sealer on vapour-permeable coatings like **EP 785 HS** with or without adding decorative flakes.
- Use as finish for tempered cement coatings or grinded concrete surfaces onto the primer **EP 727 E** (trials are urgently recommended).
- **EP 705 E - R10** may be used on old substrates.
- **EP 705 E - R10** is used in areas where slip-resistance grade R9 or R10 is required.

Product features

- decorative, appealing surface
- even surface
- tested, low-emission quality
- EMICODE® EC 1PLUS certified
- Total Solid according to GISCODE (Test method "Deutsche Bauchemie")
- odorless
- very economical
- easy application
- slip-resistant

Technical data

Viscosity - Component A+B	650 - 800	mPas	DIN EN ISO 3219 (23 °C / 73.4 °F)
Solid content	> 40	%	KLB method
Density - Component A+B	1.07	kg/l	DIN EN ISO 2811-2 (20 °C / 68 °F)
Abrasion (Taber Abraser)	< 40	mg	ASTM D4060 (CS10/1000)
Flashpoint	Non combustible	-	DIN 51755
Gloss level	10 at 85°	-	DIN 67530

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

Suitable coatings

The following self-levelling coatings can be sealed with **EP 705 E - R10**:

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

External test certificates are available:

- Slip-resistance grade R10 according to DIN 51130 and BGR 181.
- 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.

Note:

Please ask for the tested system build-up!

Substrate

The substrate to be coated must be dry and free from any dirt. The sealer is typically applied as the last layer when creating a floor covering. It is therefore necessary to ensure that the previous layer is not already soiled. The optimum time for sealing is reached when the previously applied epoxy resin layer has hardened to a sufficiently stable film, but is not yet cured completely. In standard systems, this is the case after 12 hours at the earliest and after 36 hours at the latest at 20 °C / 68 °F air and soil temperature. Please observe the instructions of the coating to be sealed. If sealers are applied later, it must be tested that sufficient adhesion is achieved. Old, hardened layers may be subsequently sealed because of the good adhesion of the material. Required is an accurate cleaning and grinding of the entire surface. If old synthetic resin substrates are being sealed, it is necessary to check that sufficient adhesion is achieved. For a change in colour, apply at least 2 coats to achieve an even coverage. Weakly covering colours like yellow and white may require further applications.

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. Partial quantities need to be weighed out in the right mixing ratio after having stirred up the single components. 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 entire resin/hardener mixture into a clean container and mix it once again briefly.

Processing time max. 60 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 mm) 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. For sealing, keep within a coordinated work rhythm – criss-

cross rolling may not be carried out too late. On large areas, this should be done directly on the surface, wearing blunt nail or football shoes. Always work "fresh-in-fresh" and ensure optimum distribution of the material. Avoid ponding, otherwise clouding or fogging may occur due to the higher layer thicknesses. Pay attention to a clean working environment. Use rollers suitable for sealing. Enter the surface with clean shoes only. Maintain the recommended drying conditions during curing!

Floor and air temperature must not fall below 15 °C / 59 °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 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:

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.

Especially in the first 7 days, the sealant must be protected from dirt (e.g. by walking on the surface with shoe covers or appropriately clean footwear) or mechanical damage from the moment it becomes accessible. Covering with a plasticizer-free fleece is recommended after 7 days at the earliest.

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).

Note: 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 - R10**. If necessary, ask for a consultancy.

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. 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

	
KLB Kötztal Lacke + Beschichtungen GmbH Günztalstraße 25 FRG-89335 Ichenhausen	
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EP705E/EP705E-R10-V2-072015	
DIN EN 13813:2003-01	
Synthetic resin screed mortar DIN EN 13813: SR-B1.5-AR0.5-IR14	
Fire behaviour	E _s -s1
Emission of corrosive substances	SR
Wear resistance BCA	AR 0.5
Adhesive tensile strength	B 1.5
Impact resistance	IR 14

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.)



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