

KLB-SYSTEM POLYURETHAN PU 805 E - R10



Slip-resistant, environmentally friendly and light-stable 2-component polyurethane matt sealer, tested within the system for low emissions and compliant with AgBB

Packaging units

Article no.	Packaging	Content (kg)	Units/pallet
PU6519-69	Combo packaging	5.25 kg	90
PU6519-50	Combo packaging	10.50 kg	60



Product characteristics

Mixing ratio parts by weight	A : B = 100 : 13
Mixing ratio parts by volume	A : B = 100 : 12,4
Reifezeit	After mixing, wait at least 10 minutes, then blend once again for 1 minute (we urgently recommend complying to this)
Processing time	10 °C / 50 °F : 180 min. 20 °C / 68 °F : 120 min. 30 °C / 86 °F : 50 min.
Processing temperature	Minimum 10 °C / 50 °F (room and floor temperature)
Curing time (accessibility)	10 °C / 50 °F : 14 - 18 hrs. 20 °C / 68 °F : 12 - 14 hrs. 30 °C / 86 °F : 8 - 12 hrs.
Curing	After 2 - 3 hours dust-dry at 20 °C / 68 °F 2 - 3 days until mechanical load at 20 °C / 68 °F 7 days until chemical load at 20 °C / 68 °F
Further coatings	After 12 - 18 hours, but after 48 hours at the latest at 20 °C / 68 °F
Consumption	approx. 0.120 - 0.160 kg/m ²
Packaging	Combo packaging 5.25 kg, combo packaging 10.5 kg
Shelf life	12 months (originally sealed) – Protect from frost!

Product description

KLB-SYSTEM POLYURETHAN PU 805 E - R10 is a low-emission, non-pigmented 2-component polyurethane sealer that is used for matt top sealing of certain recommended epoxy or polyurethane resin coatings on commercial and industrial surfaces with light to medium traffic and no industrial trucks, where a defined slip resistance of R10 according to BGR 181 is required. The slightly non-slip, easy-to-clean surface naturally also meets the requirements for R9 slip resistance.

KLB-SYSTEM POLYURETHAN PU 805 E - R10 is based on a new environmentally friendly technology. The product is an excellent alternative to solvent-based sealers and can replace them in many aspects.

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 so that the product's main area of application is primarily to be seen in visually more demanding surfaces.

KLB-SYSTEM POLYURETHAN PU 805 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.

Note: the processing information and the technical data of the slip-resistant sealer do not differ from the standard product **KLB-SYSTEM POLYURETHAN PU 805 E**.

KLB-SYSTEM POLYURETHAN PU 805 E - R10 cures by drying and chemical cross-linking to form durable, robust films – additionally being tough, abrasion-resistant, light-stable with low soiling tendency and good cleanability.

KLB-SYSTEM POLYURETHAN PU 805 E - R10 has a good resistance to aqueous solutions, diluted alkalis and bases as well as to motor and heating oil. Furthermore, it is characterised by a low tendency to stain against household chemicals or strongly staining food and beverages such as beer, red wine or cola. Due to the water vapour diffusible setting, it can also be used to seal breathable coatings such as **KLB-SYSTEM EPOXID EP 785 HS**.

The sealer belongs to the KLB product family **KLB-SYSTEM POLYURETHAN PU 805 E/PU 806 E** and, like them, is low-emission and resistant to yellowing.

The product is certified according to the “Indoor Air Comfort Gold” and 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 in which certain chemicals are used, solvent-based sealers would be more appropriate.

Area of application

- **PU 805 E - R10** is used as a slip-resistant, non-pigmented matt sealer for certain recommended epoxy and polyurethane resin coatings, such as **EP 202, PU 405, PU 410, PU 420, PU 421, PU 425 Comfort** and **PU 426**.
- Decorative commercial areas with or without decorative scatterings like showrooms, exhibition areas, shops, offices, etc. but also as finish sealer on decorative Terrazzo floorings. Usually suitable for floors without or with little traffic of industrial trucks.
- Suitable as finish for high-quality, light-stable and elastic **PU 410** decorative coatings in interior areas.
- As matt sealer on vapour-permeable coatings like **EP 785 HS** with or without adding decorative flakes.

Product features

- even surface
 - matt
 - good processing properties
 - tested, low-emission quality
 - environmentally friendly
 - Total Solid according to GISCODE
 - odorless
 - water vapour-permeable
 - very high adhesion
 - resistant to abrasion and wear
 - slip-resistant
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Technical data

Viscosity - Component A+B	Approx. 250 - 400	mPas	DIN EN ISO 3219 (23 °C / 73.4 °F)
Solid content	> 40	%	KLB method
Density - Component A+B	1.06	kg/l	DIN EN ISO 2811-2 (20 °C / 68 °F)
Abrasion (Taber Abraser)	< 13	mg	ASTM D4060
Flashpoint	Non combustible	-	DIN 51755
Gloss level	25 (85 °)	-	DIN 67530
Diffusion resistance rate	7500	-	DIN EN ISO 12572
Water vapour diffusion-equivalent air layer thickness	(0.1 mm) 0.75	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 G7 - KLB DECOR LOW-VOC PU Light Sealed

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

Suitable coatings

The following self-levelling coatings can be sealed with **PU 805 E - R10**:

EP 202, PU 405, PU 410, PU 420, PU 421, PU 425 Comfort and PU 426.

Recoating with the top sealer depends on the curing time (accessibility) of the underlying coating; please refer to the product information of the respective coating. With other coatings, such as old coverings made of polyurethane or epoxy resin, a trial surface must be applied to check adhesion. The substrates must be sufficiently clean and lightly ground with a diamond pad.

Tests

The following 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". Compliant with AgBB for recreation rooms.

Note:

Please ask for the tested system build-up!

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 trade associations, e.g. the most recent versions of BEB worksheets KH-0/U, KH-0/S and KH-2. 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 18 hours at the earliest and after 72 hours at the latest at 20 °C / 68 °F air and soil temperature. If sealers are applied later, a trial surface must be applied and tested to check that sufficient adhesion is achieved. Old surfaces must be cleaned and mechanically prepared if necessary. If old synthetic resin substrates are being sealed, it is necessary to check that sufficient adhesion is achieved. If in doubt, we recommend processing a sample area.

Mixing

Combo-packaging will be supplied in the correctly measured mixing ratio. Before use, bring component A to processing temperature and shake well, then empty the contents into a clean, oval bucket. Empty all of the hardener compound B and mix immediately. 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.

Maturing time

Important to improve results: wait at least 10 minutes (for pre-reaction), then blend once again.

To obtain optimum technical properties, **PU 805 E - R10** must be mixed 10 minutes before processing. Mix again briefly to ensure complete homogenisation, then process.

Processing time max. 2 hours 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 squeegee (toothing 1 mm) or lint-free velours roller. Typically, work areas are divided up beforehand to avoid duplicate application and haphazard overlapping. Otherwise, an uneven surface appearance and streaking might appear. 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 10 °C / 50 °F and humidity must not exceed 75 %. The adhesion of water-based sealers decreases significantly at relative humidity levels above 75%. Therefore, a maximum humidity level of 75% must be maintained during the curing and drying process. Do not apply in high humidity, stormy or wet weather conditions, to ensure that the humidity does not exceed 75% during this time. Humidity levels must be controlled and, if necessary, measures must be taken to improve ventilation, e.g. using fans. Optimal adhesion is not achieved within 72 hours of application. 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 drying and cross-linking 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: Long or improper (e.g. too hot or too cold) storage can lead to film formation inside the bucket, which in turn can cause skin flakes in the sealing material during mixing. In this case, we recommend sieving the sealer. The bucket sieve KLB-Eimersieb 15L (Art. N. WZ7050-01) is ideal for this purpose, as it enables quick sieving and thus a good sealing result.

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 the sealed floor surfaces. To ensure intercoat adhesion, water-based sealers may be grouted with KLB products after 7 days at the earliest (at 20 °C / 68 °F).

Storage

Store in dry and frost-free conditions. Ideal storage temperature is between 10 - 20 °C / 50 - 68 °F. Do not store above 35 °C / 95 °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: PU10

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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PU805E/PU805E-R10-V2-062015	
DIN EN 13813:2003-01	
Synthetic resin screed mortar DIN EN 13813: SR-B1.5-AR0.5-IR5	
Fire behaviour	C _F -s1
Emission of corrosive substances	SR
Wear resistance BCA	AR 0.5
Adhesive tensile strength	B 1.5
Impact resistance	IR 5

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	11,7	g/l
Decopaint Directive 2004/42/EG - Component B	< 140	0	g/l
DGNB - Components A + B	< 0,5	PU10, Eurofins-tested	
klima:aktiv – Components A + B	< 3	0.9	%
LEED - Components A + B	< 100	10.6	g/l
Minergie ECO® - Components A + B	< 1 (< 2)	0.9	%

(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-koetzal.com. In addition, our "General Terms and Conditions" apply.