KLB KÖTZTAL
Lacke + Beschichtungen GmbH

KLB-SYSTEM POLYURETHAN
PU 466

Rapid-setting, highly elastic 2-component polyurethane grouting resin for load-bearing, accessible and deformable structural, connection, industrial and movement joints. Advantageous in renovation, quick to install and use, low-odour and solvent-free.

Packaging units



Article no.	Packaging	Content (kg)	Units/pallet
AK6155-50	Bucket combo	12.00 kg	30
AK6155-17	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 : 123
Processing time	5 °C / 41 °F : 25 - 30 min. 20 °C / 68 °F : 6 - 8 min. 30 °C / 86 °F : 4 - 5 min.
Processing temperature	Minimum 5 °C / 41 °F (room and floor temperature)
Curing time (accessibility)	5 °C / 41 °F : 210 - 240 min. 20 °C / 68 °F : 50 - 70 min. 30 °C / 86 °F : 20 - 40 min.
Curing	Easily loadable after 1.5 - 2 hours 24 hours until mechanical load at 20 °C / 68 °F 36 hours until chemical load at 20 °C / 68 °F
Consumption	Approx. 1.75 kg/l Approx. 1.90 kg/l when adding 33 % of mixed sand KLB-Mischsand 2/1
Packaging	Bucket combo 12 kg, Hobbock combo 30 kg
Colours	Grey (approx. REAL 7030)
Shelf life	12 months (originally sealed)

Product description

Solvent-free, highly elastic 2-component polyurethane grouting resin for the production and renovation of load-bearing and accessible structural, connection, industrial and movement joints. The product is rapid-setting and requires only short installation times. It can be applied in thick layers in block casting and ground level with the floor after only a short time.

This creates even, accessible floor surfaces that can be rolled over with forklift trucks and that replace classic joint profiles. Due to the high elasticity with very good deformability and high elongation, the movements of components can be absorbed and occurring shear and pressure forces evenly distributed. Unfilled, the joint compound can also be used for narrow joints.

KLB-SYSTEM POLYURETHAN PU 466 suits application in storage, commercial or industrial facilities as well as for accessible joints on parking decks, underground parking, and much more.

The joints are created within a system consisting of the primers **KLB-SYSTEM POLYURETHAN PU 64 Haftpromotor** or **KLB-SYSTEM POLYURETHAN PU 68 Rapid** U and, if necessary, with the sealant **KLB-SYSTEM POLYUREA PU 469.**

For block joints that can be driven over, the material is additionally fillable with mixed sand **KLB-Mischsand 2/1**.

KLB-SYSTEM POLYURETHAN PU 466 can be applied from a joint width of 5 mm. The minimum depth is 20 mm. The curing is low-shrinkage and fast. The joint then has good chemical resistance to water and aqueous solutions, glycol, diluted acids and petrol. Conditional resistance is given to solvents.

Important note: elastic joints are subject to significantly higher stress. Therefore, they must be checked periodically and renewed if necessary.

Area of application

- Movement, expansion and shrinkage joints between concrete floor slabs and screed elements.
- Deformable block joints on accessible concrete slabs in industrial halls.
- Flexible filling of dummy joints.
- Renovation of cracks.

Product features

- solvent-free
- odorless
- rapid-setting
- viscoplastic
- deformable
- good filling capacity
- quickly grindable

Technical data

Viscosity - Component A+B	Approx. 28,000 - 35,000	mPas	DIN EN ISO 3219 (23 °C / 73.4 °F)
Solid content	> 99.5	%	KLB method
Density - Component A+B	1.75	kg/l	DIN EN ISO 2811-2 (20 °C / 68 °F)
Water absorption	< 0.3	weight-%	DIN 53495
Tensile strength	5.9 (unfilled), 3.3 (3 : 1 when filled with mixed sand 2/1)	N/mm²	DIN 53504
Elongation at break	> 500 (unfilled), > 440 (3 : 1 when filled with mixed sand 2/1)	%	DIN 53455 (after 7 days)
Elongation at break	80	%	DIN EN ISO 527-3
Shore-hardness A	Ca. 75	-	DIN 53505 (after 7 days)
Abrasion (Taber Abraser)	30	mg	ASTM D4060 (CS10/1000)

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

Build-up of coats

Production of a block joint between 2 concrete slabs

- Chisel out the joint, remove profiles if necessary and prepare the concrete edge zones. Seek technical advice for this.
- Prime the concrete in the joint area with **PU 68 Rapid U**, consumption approx. 0.3 - 0.5 kg/m². Openly scattering with quartz sand 0.7/1.2 mm, consumption approx. 0.5 - 1.0 kg/m².
- If necessary, reprofile break-outs with a mortar made of **PU 68 Rapid U** and mixed sand **KLB-Mischsand 1** in a weight ratio of 1 : 10. Alternatively, a mortar made of **PU 469** and mixed sand **KLB-Mischsand 1** can be used in a mixing ratio of 1 : 4.

- When it is needed after the mortar has hardened, reopen the closed joint by a separating cut and insert a closed-cell PE round cord of suitable width.
- Insert the grouting material **PU 466** filled with 33 % of mixed sand **KLB-Mischsand 2/1,** consumption approx. 1.90 kg/l by excess of 1 - 2 mm.
- After about two hours, grind the filled joint flat with the surface of the concrete slab/coating using a floor or concrete grinder; rough grinding with PCD cup; levelling or intermediate grinding with diamond cup. Alternatively, as the requirement may be, a floor stripper can be used, which is then followed by another intermediate grinding with a diamond cup. Vacuum afterwards.
- Optionally, for higher demands on visual appearance: fine grinding with an eccentric grinder (grit 80 - 120), which is followed by vacuuming.
- Application of a scratch coat or a pore-closure with **PU 469**, filled with approx. 33% of mixed sand **KLB-Mischsand 2/1 using a Kaupp spatula or a trowel**, consumption approx. 0.5 - 0,7 kg/m². The consumption depends on the porosity of the substrate.
- Then, another fine grinding with an eccentric grinder (grit 120 to 180) is recommended.
- This is followed by a final sealing layer with **PU 469** using a velours roller, consumption approx. 0.40 - 0.8 kg/m².

Filling cracks and construction joints < 15 mm

- Open cracks or narrow construction joints with a tapered joint cutter (V-shape) up to a maximum width of 10 to 15 mm.
- Then thoroughly vacuum out the joints and clean the edges with **VR 28** if necessary.
- Prime the joint flanks with a brush and **PU 64 Haftpromotor**. Consumption approx. 0.04 - 0.08 kg/lfm.
- Fill the joint / crack with **PU 466** with approx. 1 mm excess; consumption 1.75 kg/l. Note: for large cracks, a second grouting may be required.
- After curing (1 - 2 h at 20°C / 68 °F), chip off the excess with a floor scraper.

Substrate

The joint to be filled must be dry, free of dust, sufficiently resistant to tension and compression as well as be free from weakly-bonded components, oils and liquid impurities. Because of the adjusted texture, the material is usable for slight inclines as well. Materials impairing adhesion such as grease, oil, paint residues, cement or other weakly-bonded or lose parts should be removed beforehand with suitable measures. Prepare joint edges by chiseling or cutting. Ideally, chamfer the joint edges. After clean-up, the joint or bonding area may be cleaned with compressed air. Prepare joints and adhesion surface areas thoroughly and accurately each time.

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 1 - 2 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.

Addition of filling sand for joint grouting

12 kg **PU 466**
4 kg of mixed sand **KLB-Mischsand 2/1**

respectively

30 kg **PU 466**
10 kg of mixed sand **KLB-Mischsand 2/1**

Before adding any additives, the binding agent must be premixed, only then is added the supplement.

Processing

Joints, if not already existing, need to be cut in the substrate with a rotary cutter, and vacuumed with an industrial hoover. If necessary, clean the joint edges with a solvent, e.g. **VR 28** or **VR 33**. Afterwards, a closed-cell PE-round cord of suitable joint width is inserted to prevent three-sided adhesion. The joint sides are then primed with **PU 68 Rapid U** or **PU 64 Haftpromotor.**

The primed joint is then filled with **PU 466**. Pour the fresh mixture into the crack or joint and spread the material evenly. It must be filled with excess. In case of cracks, a second grouting may be necessary.

After hardening (approx. 1 - 2 hours), the excess material can be sanded off using a PCD cup (rough grinding), then with a diamond cup (levelling or intermediate grinding). Alternatively, as the requirement may be, a floor stripper can be used, which is then followed by another intermediate grinding with a diamond cup. Optionally, for higher demands on visual appearance, a fine grinding with an eccentric grinder (grit 80 - 120) can be done.

The grinding should be carried out in such a way that the joint is levelled with the floor surfaces on both sides. After grinding and vacuuming, a scratch coat and sealer can be applied to wide joints.

Floor and air temperature must not fall below 5 °C / 41 °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. 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 28** or **VR 33** immediately. Hardened material can only be removed mechanically.

Storage

Store in dry and if possible, at frost-free conditions. Ideal storage temperature is between 10 - 25 °C / 50 - 77 °F. Bring to a suitable working temperature before application. Tightly re-seal opened containers and use the content as soon as possible. Storage of the hardener compound at lower temperatures may cause crystalline deposits which remelt when heated mildly.

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 500 g/l (2010,II,j/lb): Ready-for-use product contains < 500 g/l VOC.

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-koetztal.com. In addition, our "General Terms and Conditions“ apply.

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