

# KLB-SYSTEM POLYURETHAN PU 1900 ECO



Low-emission, very fast-setting 2-component polyurethane special resin for the quick renovation of cracks in screeds and for bonding structural elements

## Packaging units

Article no.	Packaging	Content (kg)	Units/pallet
AK0001-97	Combo packaging	0.50 kg	240



## Product characteristics

Mixing ratio parts by weight	A : B = 100 : 100
Mixing ratio parts by volume	A : B = 100 : 100
Processing time	10 °C / 50 °F: 16 - 20 min 20 °C / 68 °F: 8 - 12 min 30 °C / 86 °F: 4 - 6 min
Processing temperature	Minimum 10 °C / 50 °F (room and floor temperature)
Curing time (accessibility)	10 °C / 50 °F: approx. 90 - 120 min 20 °C / 68 °F: approx. 45 - 60 min 30 °C / 86 °F: approx. 20 - 30 min
Curing	2 - 3 days until mechanical load at 20 °C / 68 °F
Further coatings	After curing
Consumption	Grout volume approx. 1.25 kg/l
Packaging	Spray bottle combo packaging 0.5 kg
Shelf life	6 months (originally sealed) – <b>Protect from frost!</b>

## Product description

**KLB-SYSTEM POLYURETHAN PU 1900 ECO** is a low-emission, very reactive, universal 2-component polyurethane special resin for the quick renovation of screed cracks, for closing joints and for bonding profiles, rails and more.

**KLB-SYSTEM POLYURETHAN PU 1900 ECO** adheres to clean, absorbent substrates, such as concrete, cement screed, calcium sulphate screed, etc. The low viscosity of the resin means it penetrates pores, cracks and capillaries well, ensuring good adhesion and a force-fit connection after curing. Thanks to its particularly good penetrative properties and wettability, the product is suitable for critical substrates and extremely tolerant to moisture.

**KLB-SYSTEM POLYURETHAN PU 1900 ECO** reacts very quickly, and additional layers can be applied after a short time. The primer (e.g. epoxy resin primers, among others) required for the subsequent layer can be applied to the cured resin. **KLB-SYSTEM POLYURETHAN PU 1900 ECO** therefore enables the quick renovation of cracks, as well as the installation of components (rails, profiles, etc.) without significant delay before the priming, coating, or covering work begins. When applied correctly, a range of different subsequent coverings can be used. By adding quartz sand KLB-Quarzsand 0.1/0.3 mm based on the width of the crack, cracks can be filled and closed.

**KLB-SYSTEM POLYURETHAN PU 1900 ECO** is certified by EUROFINS and EMICODE® EC 1<sup>PLUS</sup>, thus meets the requirements for a sustainable building

certification according to DGNB, LEED or BREEAM; not only the German requirements of AgBB or ABG, but also the emissions regulations of many other European countries.

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#### Area of application

- For closing screed cracks, contraction joints and sections of screed.
- As a quick-curing repair resin.
- For bonding metal rails, profiles, angles, and much more.
- On screeds and concrete.
- For bonding concrete and filling cracks and hollow layers.
- For force-fit injections on concrete.
- In combination with mixed sand KLB-Mischsand 3/1, quartz sand KLB-Quarzsand 0.1/0.3 mm or 0.3/0.8 mm. For closing wide, rigid joints (> 10 mm).
- Quick-renovation mortar for small areas when mixed with KLB 1

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#### Product features

- tested, low-emission quality
- EMICODE® EC 1PLUS certified
- very rapid-setting
- all-purpose use
- consistent to hydrolysis and saponification
- high penetration
- can be filled with fire-dried quartz sand
- good interlayer adhesion

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#### Technical data

Viscosity - Component A+B	approx. 1200	mPas	DIN EN ISO 3219 (23 °C / 73.4 °F)
Density - Component A+B	1.28	kg/l	DIN EN ISO 2811-2 (20 °C / 68 °F)
Water absorption	< 0.2	weight-%	DIN 53495
Bending tensile strength	(1 : 5 with KLB 1) 5	N/mm <sup>2</sup>	DIN EN 196/1
Compressive strength	(1 : 5 with KLB 1) 20	N/mm <sup>2</sup>	DIN EN 196/1
Adhesive tensile strength	> 1.5	N/mm <sup>2</sup>	DIN EN 1542
Shore-hardness D	79	-	DIN 53505 (after 7 days)

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

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#### Tests

The following external test certificates are available:

- Certified as low-emission according to EMICODE with the EC 1<sup>PLUS</sup> label. Compliant with AgBB for recreation rooms.

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#### Substrate

The substrate must be even, dry, dust-free, sufficiently resistant to tension and compression, and free of weakly bonded components or surfaces. Materials reducing adhesion, such as grease, oil and paint residues, must first be removed with suitable measures. The substrates to be coated must be prepared mechanically by (diamond) grinding. The surface strength must be minimum 1.5 N/mm<sup>2</sup>.

Do not use **PU 1900 ECO** on surfaces that are in contact with the ground.

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#### Mixing

The fast-curing material consists of 2 plastic bottles and is supplied in coordinated 0.5 kg packages. The package of Component A has sufficient volume to contain the

entire packaging unit. Unscrew the top of both bottles and empty the contents of the small one containing Component B into the opening of the bottle containing Component A. Close the larger bottle (Component A) again and shake thoroughly for 2 minutes. The knife can be used to cut open the spray nozzle. Apply the material directly from the spray bottle immediately after mixing. Before adding any additives, the resin must be premixed, only then is added the supplement. The amount of mixed sand depends on the necessary consistency and stability.

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## Processing

### Closing cracks, dummy joints and sections of screed:

Existing cracks must be vacuumed out with a powerful vacuum cleaning system. If necessary, it can be cut open with a cutting disc to aid impregnation. Vacuum off contraction joints and sections of screed with a vacuum cleaning system. If necessary, the edges of the joint can be prepared further by cleaning them with the cutting disc. It is important that the cracks are as dry and free from dust as possible.

The freshly mixed material is processed by saturating the crack directly from the spray bottle. The material should ideally fill the entire crack. The crack can be filled multiple times until it is saturated with **PU 1900 ECO**. When closing very wide joints, approx. 50 - 100% of mixed sand **Mischsand 3/1**, quartz sand **Quarzsand 0.1/0.3 mm** or **Quarzsand 0.3/0.8 mm** can be added.

After a duration of approx. 15 - 25 minutes, **PU 1900 ECO** will set stable. This is the ideal time to scrape off any excess material with a trowel or a knife so that the closed joint is even.

Subsequent layers can be applied, depending on the temperature, after a curing time of approx. 25 - 50 minutes. For further application of coatings or top sealers, the cured surface of **PU 1900 ECO** must be primed with EP primers, such as **EP 50**, **EP 52 Spezialgrund**.

### Bonding metal parts, angles and stone:

In order to position end profiles, angles etc., a zigzag beading the width of the profile is applied to the intended substrate. The parts to be bonded must be placed in and secured to the adhesive bed immediately. Here, too, can excess material be scraped off with a trowel or a knife after a curing time of approx. 15 - 25 minutes. Depending on the temperature, further processing can take place after approx. 25 - 50 minutes.

### Use for injections:

Grout using a suitable injection press immediately after the product has been mixed. If cracks are grouted, use injection packers and cover the entire exposed crack with paste over a width of 10 cm along the crack. Start grouting from the deepest side. At the last packer, check the filling for resin leakage. After approx. 30 minutes, a subsequent injection process can be carried out. The packer and insulation can be removed the following day. Hollow layers are filled by drilling and grouting multiple times.

The floor and air temperatures must not fall below 0 °C / 32 °F and the humidity must not exceed 75%. The difference between the floor and room temperatures should be 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. 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 the working conditions are not complied with, the technical properties of the end product may deviate from those specified.

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## Cleaning

To clean fresh contamination and to clean tools, use **VR 28** or **VR 40** immediately after use. Hardened material can only be removed mechanically.

#### Storage

Store in dry and frost-free conditions. Ideal storage temperature: 15 - 25 °C / 59 - 77 °F. Bring to a suitable working temperature before application. Tightly re-seal opened packages and use up the content within 1 to 3 days.

#### Special remarks

This 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: PU40

**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.



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