



## KLB-SYSTEM POLYURETHAN PU 817 Flex



Low-emission, elastic, transparent and light-stable 2-component polyurethane matt sealer with an impact sound insulation effect for surfaces that are suitable for chair castors

### Packaging units



| Article no. | Packaging       | Content (kg) | Units/pallet |
|-------------|-----------------|--------------|--------------|
| AK6534-72   | Combo packaging | 5.00 kg      | 90           |
| AK6534-50   | Combo packaging | 10.00 kg     | 60           |

### Product characteristics

|                              |                                                                                                                                               |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Mixing ratio parts by weight | A : B = 100 : 13.6                                                                                                                            |
| Mixing ratio parts by volume | A : B = 100 : 12,4                                                                                                                            |
| Reifezeit                    | <b>After mixing, wait at least 10 minutes, then blend once again for 1 minute (we urgently recommend complying to this).</b>                  |
| Processing time              | 10 °C / 50 °F : 90 min.<br>20 °C / 68 °F : 45 min.<br>30 °C / 86 °F : 30 min.                                                                 |
| Processing temperature       | Minimum 10 °C / 50 °F (room and floor temperature)                                                                                            |
| Curing time (accessibility)  | 10 °C / 50 °F : 16 - 24 hrs.<br>20 °C / 68 °F : 8 - 16 hrs.<br>30 °C / 86 °F : 4 - 8 hrs.                                                     |
| Curing                       | After 2.5 - 3 hours dust-dry at 20 °C / 68 °F<br>3 days until mechanical load at 20 °C / 68 °F<br>7 days until chemical load at 20 °C / 68 °F |
| Further coatings             | After 8 - 16 hours, but after 48 hours at the latest at 20 °C / 68 °F                                                                         |
| Consumption                  | approx. 0.160 - 0.200 kg/m <sup>2</sup>                                                                                                       |
| Shelf life                   | 12 months (originally sealed) – <b>Protect from frost!</b>                                                                                    |

### Product description

**KLB-SYSTEM POLYURETHAN PU 817 Flex** is a high-quality, low-emission and transparent 2-component polyurethane sealer for matt top sealing, particularly for certain recommended elastic polyurethane coatings such as **KLB-SYSTEM POLYURETHAN PU 414 FLAIR**, **KLB-NaturaPUR PU 435** or **PU 405**.

The sealing results in uniform, matt surfaces that give the floors an even and sublime appearance. Due to the elastic and low-emission setting of the binder, the sealer can be perfectly used to seal elastic coatings that are applied in decorative private or commercial areas, like recreation rooms. **KLB-SYSTEM POLYURETHAN PU 817 Flex** is particularly suitable for areas where, in addition to high demands on indoor air quality and walking comfort, good resistance to chair castors is required.

**KLB-SYSTEM POLYURETHAN PU 817 Flex** 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.

**KLB-SYSTEM POLYURETHAN PU 817 Flex** cures by drying and chemical cross-linking to form durable, robust films - additionally being elastic, abrasion-resistant, light-stable with low soiling tendency and good cleanability.

**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 certain chemicals, other top sealers would be more appropriate.

For its type of application, **KLB-SYSTEM POLYURETHAN PU 817 Flex** has a sufficient resistance to aqueous solutions, diluted alkalis and bases as well as to household chemicals. Furthermore, it is characterised by a low tendency to stain against many foodstuffs.

**KLB-SYSTEM POLYURETHAN PU 817 Flex** has good adhesion to various substrates and can therefore also be used - after laying trial surfaces and testing the intercoat adhesion - on old polyurethane resin coatings.

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#### Area of application

- **PU 817 Flex** is used as a transparent matt sealer on certain recommended elastic polyurethane coatings for interior areas and in recreation rooms with special demands on the visual appearance.
- Decorative commercial areas with or without decorative scatterings like showrooms, exhibition areas, shops, offices, etc. with little loads.
- Suitable as finish for high-quality, light-stable and elastic decorative coatings in interior areas, made of **PU 414 FLAIR**, **PU 435 NaturaPUR**, **PU 405** or **PU 410**.
- For sealing and reworking older polyurethane resin surfaces after adequate testing and preparation.

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#### Product features

- elastic
- tested, low-emission quality
- EMICODE® EC 1PLUS certified
- Total Solid according to GISCODE
- matt
- even surface
- good processing properties
- very high adhesion
- resistant to abrasion and wear

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#### Technical data

|                           |                 |      |                                   |
|---------------------------|-----------------|------|-----------------------------------|
| Viscosity - Component A+B | Approx. 600     | mPas | DIN EN ISO 3219 (23 °C / 73.4 °F) |
| Density - Component A+B   | 1.04            | kg/l | DIN EN ISO 2811-2 (20 °C / 68 °F) |
| Flashpoint                | Non combustible | -    | DIN 51755                         |
| Gloss level               | 10 - 20 (85°)   | -    | DIN 67530                         |

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

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#### Suitable coatings

The following PU self-levelling coatings can be sealed with **PU 817 Flex**:

**PU 435 NaturaPUR, PU 405, PU 410, PU 414 Flair.**

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 and internal test certificates are available:

- Chair castor test in combination with **PU 435 NaturaPUR** according to DIN EN 425:2002-08
- Certified as low-emission according to EMICODE with the EC 1<sup>PLUS</sup> label. Compliant with AgBB for recreation rooms.

### Note:

Please ask for the tested system build-up!

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## 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 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. 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.

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## 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.

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## Maturing time

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

To obtain optimum technical properties, **PU 817 Flex** must be mixed 10 minutes before processing. Mix again briefly to ensure complete homogenisation, then process.

**Processing time max. 45 minutes at 20 °C / 68 °F (see chart "Processing time").**

**Note:** end of pot life is not visible!

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## Processing

As with all reactive resin systems, processing should take place immediately after mixing using a rubber squeegee (toothing 2 mm) or a 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 80 %. The recommended climate conditions must also be maintained during curing and drying. 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 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.

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#### 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).

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#### 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.

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#### 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.

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## CE marking

|                                                                                           |                     |
|-------------------------------------------------------------------------------------------|---------------------|
|          |                     |
| KLB Kötztal Lacke + Beschichtungen GmbH<br>Günztalstraße 25<br>89335 Ichenhausen, GERMANY |                     |
| 25                                                                                        |                     |
| PU817Flex-V1-112025                                                                       |                     |
| DIN EN 13813:2003-01                                                                      |                     |
| Synthetic resin screed mortar<br>DIN EN 13813: SR-B1,5-AR0,5-IR4                          |                     |
| Fire behaviour                                                                            | E <sub>ff</sub> -s1 |
| Emission of corrosive substances                                                          | SR                  |
| Wear resistance BCA                                                                       | AR 0,5              |
| Adhesive tensile strength                                                                 | B 1,5               |
| Impact resistance                                                                         | IR 4                |

## 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       | 5,9            | g/l |
| Decopaint Directive 2004/42/EG - Component B | < 140       | 0              | g/l |
| DGNB - Components A + B                      | < 0,5       | PU10           | %   |
| klima:aktiv – Components A + B               | < 3         | 0.18           | %   |
| LEED - Components A + B                      | < 100       | 5.3            | g/l |
| Minergie ECO ® - Components A + B            | < 1 (< 2)   | 0.18           | %   |

(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-koetztal.com](http://www.klb-koetztal.com). In addition, our "General Terms and Conditions" apply.