KLB-SYSTEM POLYURETHAN
PU 9010 Flex

Non-pigmented, light-stable and weather-resistant 1-component polyurethane coating

Packaging units



Article no.	Packaging	Content (kg)	Units/pallet
PU6803-47	Bucket	12.00	45
PU6803-61	Bucket	6.00	75

Product characteristics

Mixing ratio parts by weight	Ready for processing!
Processing time	No pot life!
Processing temperature	Minimum 15 °C / 59 °F (room and floor temperature)
Curing time (accessibility)	18 - 24 hours at 20 °C / 68 °F
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	Top coat: 0.400 - 0.550 kg/m² per application Decorative pebbles coating: 8 - 12 kg per 100 kg of decorative pebbles 0.180 - 0.220 kg/m² per each mm of layer
Layer thickness	6 - 12 mm
Colours	Non-pigmented, as pigmented version you can use PU 9018 Flex Color!
Shelf life	6 months (originally sealed)

Product description

KLB-SYSTEM POLYURETHAN PU 9010 Flex is a single component polyurethane sealer containing solvents, which can also be used as binding agent for decorative sand coatings.

KLB-SYSTEM POLYURETHAN PU 9010 Flex cures even in thicker layers due to air humidity without any blistering. Due to these good properties, **KLB-SYSTEM POLYURETHAN PU 9010 Flex** is suitable for the coating of exterior balconies and patios.

KLB-SYSTEM POLYURETHAN PU 9010 Flex may be used in combination with **KLB-SYSTEM POLYURETHAN PU 410** for pigmented coatings scattered with **parti-Color®-Chips** (flakes). Furthermore, the material is suitable for coloured sand scattered, slip resistant coatings.

KLB-SYSTEM POLYURETHAN PU 9010 Flex is also used as binding agent for exterior area decorative mortar coatings. The material is suitable as base coat, levelling coat or top coat. The coating is flexible and crack-bridging; therefore especially usable for substrates susceptible to increased deformation due to temperature, e.g exterior concrete areas. Slip-resistant coatings are principally recommended for weathered exterior areas. When coating balconies and patios, observe the details like connections, water drainage, declines and more. It is not recommended to seal tiles with non-pigmented material.

The cured coating offers a bright gloss, outstanding resistance to weathering, light, and chalking. Because the sealer is visco-plastic, the material is crack-bridging and flexible even at low temperatures. The material offers sufficient resistance to chemicals like water, saline solutions, mineral oils, diluted acids and bases or diesel.

KLB-SYSTEM POLYURETHAN PU 9018 Flex Color is available as pigmented alternative. Please note the product information accordingly!

Note: surfaces coated with **KLB-SYSTEM POLYURETHAN PU 9010 Flex** should not be used as parking areas for cars. **KLB-SYSTEM POLYURETHAN PU 9010 Flex** is not permanently resistant to tire imprints. The product contains solvents, but is very rich in solids.

Area of application

- Suitable as top coat for exterior balconies and patios when used in combination with the pigmented coating **PU 410** or **PU 9018 Flex Color** with **partiColor®-Chips** (flakes) scattering and the weather-resistant, transparent top sealer PU 9010 Flex.
- For coloured sand scattered coatings with slip-resistant properties and non-pigmented top sealer **PU 9010 Flex**.
- Decorative sand coatings bound with **PU 9010 Flex** with a finish layer.

PU 9010 Flex is suitable for refreshing the pebble coatings even after several years.

Product features

- smooth surface
- viscoplastic
- resistant to abrasion and wear
- ready-to-use
- for renovations
- containing solvents

Technical data

Viscosity	1100	mPas	DIN EN ISO 3219 (23 °C / 73.4 °F)
Solid content	> 72	%	KLB method
Density	1.04	kg/l	DIN EN ISO 2811-2 (20 °C / 68 °F)
Tensile strength	23.5	N/mm²	DIN EN ISO 527
Elongation at break	245	%	DIN EN ISO 527
max. tear resistance	39	N/mm²	DIN 53515
Shore-hardness D	65	-	DIN 53505 (after 28 days)
Abrasion (Taber Abraser)	30	mg	ASTM D4060 (CS10/1000)
Gloss level	80 - 90 (20°)	-	DIN 67530

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

Included in systems

- System L3 KLB DECOR STONE-CARPET PU Outdoor

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

Tests

External test certificates are available:

- Classification of the fire behaviour in combination with **PU 426**, according DIN EN 13501-01:2010-01: C_{fl}-s1.

Note:

Please ask for the tested system build-up!

Build-up of coats

Decorative sand coating 3 - 4 mm

- Apply one of the recommended KLB base coats, like **EP 52 Spezialgrund** and scatter with quartz sand, grain size 1 - 2 mm.
- A crack-bridging layer using **PU 426** may be applied.
- Apply, spread, and compact the decorative mortar coating using **PU 9010 Flex**. Mixing ratio: 4 - 6 kg of **PU 9010 Flex** for 50 kg of sand with a consumption of 10 - 12 kg/m² mortar mixture.
- To stabilize the surface, apply a varnish layer with **PU 9010 Flex**, consumption approx. 0.200 - 0.250 kg/m².

Slip-resistant scattered coating for exterior areas

- Prime with **EP 52 Spezialgrund** on cement substrate (exterior areas). For new concrete and substrates at risk of osmosis, the suitability of the covering must be checked and additional measures may be required.
- Optional: prime with **PU 9010 Flex**, adding **VR 28** if necessary for highly absorbent substrates, to create a non-absorbent substrate. Thoroughly mix **VR 28** thinner and **PU 9010 Flex**. If the substrate is not sufficiently even, a levelling layer is required.
- Apply the base coat using **PU 410, PU 9018 Flex Color** or **PU 9010 Flex**, and subsequently scattering completely with coloured sand, grain size 0.3/0.8 mm or 0.7/1.2 mm. Sweep off any excess grain after 24 hours. Grind and vacuum off if necessary.
- Resinate the surface with a coating knife using **PU 9010 Flex** and subsequently re-rolling with a velour roller for the desired slip resistance grade.
- Repeat sealing for further smoothing if necessary.

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. For concrete, moisture content must not exceed 4.5 CM-%, remaining residual humidity. The possibility of moisture ingress from the rear must be permanently excluded. In case of new substrates or those in contact with soil, there is a risk of osmosis bubbles forming. The suitability under the given conditions must be clarified. Observe the information issued by the trade associations, e.g. the most recent versions of BEB worksheets KH-0/U and KH-0/S as well as the notes provided in the product information for the recommended KLB base coats. Dry substrates can also be primed directly with **PU 9010 Flex** if the following coats are applied with **PU 9010 Flex**. The substrates to be coated should be prepared mechanically, preferably by grinding or blasting. The prepared area must be saturated, pore-free and primed carefully.

Mixing

Stir the material before application and apply directly when sealing. For the production of decorative sand coverings, mix sand and binder in a compulsory mixer. The binding is usually done with 10 to 12 % binder. Ensure complete mixing, especially to avoid binder nests! Use dry and tempered pebbles.

Processing

Note: single component polyurethane binding agents can become slightly thick during storage, especially after opening. Therefore, the process within one batch is mandatory. Opened containers should always be mixed with sufficient fresh material to avoid differences in wetting.

Sealing: apply the mixed material in even layers on the surface using a lint-free and solvent-resistant velour roller.

The consumption per coat can be between 0.5 and 0.8 kg/m² depending on the number of layers. If necessary, dilute **PU 9010 Flex** with the aligned thinner **VR 28** up to 10 %. Mix the thinner **VR 28** thoroughly with **PU 9010 Flex**.

Decorative pebble coatings: apply the material immediately after mixing onto the prepared substrate. Apply partially, distribute evenly with a smoothing trowel and level. Compact with pressure. For levelling and cleaning tools, small amounts of **VR 28** may be used. Use the thinner only for cleaning tools. Do not apply or spray any thinner on the surface, otherwise this may lead to texture disturbances.

Floor and air temperature must not fall below 15 °C / 59 °F and humidity should not exceed 75 %. The floor temperature has to be 3 °C / 3 K / 5.4 °F above the dew-point so as not to impede the curing process. If a dew-point situation arises, regular curing will not be possible with hardening poblems and discolourations (whitening, etc.) to occur. Do not work in strong sunlight or on strongly heated surfaces, as the working time will be greatly reduced and bubble formation is possible. Polyurethane coatings are sensitive to moisture when fresh, so the humidity specifications must be strictly observed. The coating of dew-damp substrates and the use of damp sand as well as sweat lead to foaming of the material and must be avoided. Exposure to water must be avoided within the first 5 - 10 hours due to the temperature. Exposure to chemicals should be avoided within 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.

Cleaning

To remove fresh contamination and to clean tools use thinner **VR 28** immediately. Hardened material can only be removed mechanically.

Storage

Store in dry and at frost-free conditions. Ideal storage temperature is between 10 - 20 °C / 50 - 68 °F. Temper the material before processing. Re-seal any opened containers tightly and use 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: PU50 **Indication of VOC-content:** (EG-Regulation 2004/42) Maximum Permissible Value 500 g/l (2010,II,i/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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