

KLB-SYSTEM POLYURETHAN PU 5000 RX



Very rapid-setting, slip-resistant 2-component polyurethane resin coating, light-stable

Packaging units

Article no.	Packaging	Content (kg)	Units/pallet
AK6400-70	Bucket combo	12.00 kg	30



Product characteristics

Mixing ratio parts by weight	A : B = 100 : 80
Mixing ratio parts by volume	A : B = 100 : 128
Processing time	0 °C / 32 °F : 45 min. 10 °C / 50 °F : 40 min. 20 °C / 68 °F : 35 min. 30 °C / 86 °F : 30 min.
Processing temperature	Minimum 0 °C / 32 °F – Maximum 30 °C / 86 °F (room and floor temperature)
Curing time (accessibility)	Base coat: 0 °C / 32 °F : 30 - 40 min.* 10 °C / 50 °F : 30 - 40 min.* 20 °C / 68 °F : 20 - 30 min. 30 °C / 86 °F : 20 - 30 min. Sealing layer: 0 °C / 32 °F : 5 - 6 hrs.* 10 °C / 50 °F : 4 - 5 hrs.* 20 °C / 68 °F : 2 - 3 hrs. 30 °C / 86 °F : 2 - 3 hrs. *without addition of catalyzer
Curing	2 - 6 hours until mechanical load depending on temperature 3 days until chemical load at 20 °C / 68 °F
Further coatings	After 2 - 3 hours, but after 24 hours at the latest at 20 °C / 68 °F
Consumption	Base coat: 0.5 - 0.9 kg/m ² Sealing coat: 0.3 - 1.0 kg/m ² , depending on the slip resistance grade Scattering: 2.0 - 2.7 kg/m ²
Layer thickness	Approx. 2.0 mm
Colours	Approx. RAL 7015 (Slate grey) Approx. RAL 7030 (Stone grey) Approx. RAL 7032 (Pebble grey) Approx. RAL 7042 (Traffic grey A)
Shelf life	6 months (originally sealed)

Product description

KLB-SYSTEM POLYURETHAN PU 5000 RX is a rapid-setting, light-stable 2-component polyurethane resin which is used in combination with a special scattering agent for slip-resistant, textured floor coatings in commercial and industrial areas, on parking areas and garages as well as indoors and outdoors.

KLB-SYSTEM POLYURETHAN PU 5000 RX consists of a reactive 2-component polyurethane resin which will be applied after mixing onto the prepared substrate with a toothed trowel and scattered with the **RX-Abstreukomponente**.

After the base coat has hardened, which occurs after 20 to 40 minutes, the top seal can already be applied.

The special advantage is the granted accessibility after only 2 - 6 hours, depending on the surrounding temperature.

KLB-SYSTEM POLYURETHAN PU 5000 RX is suitable for functional and slip-resistant coatings (R10, R11 or R12) for areas with low to medium mechanical load.

The fluid components A + B both serve as base coat and sealer. But only in combination with the **RX-Abstreukomponente**, they will guarantee the rapid-curing time.

The coating cures to a hard and tough polymeric material with good resistance to impact and to abrasion. The coating is resistant to different chemicals, especially water, saline solutions, diluted acids and bases, cleansers and disinfectants, petrol, glycol, and many more. Conditional resistance to solvents. Ask for advice if in doubt.

Cleaning of the coating may be carried out with cleaning machines.

No yellowing of the coating occurs when exposed to UV light, which is why the covering can be used outdoors. **PU 5000 RX** is particularly advantageous for daytime and weekend construction sites where very fast use must be ensured.

Area of application

- Rapid-setting, slip resistant coating for short-term construction sites (day or weekend).
- Accessibility after 2 - 6 hours (dependent on temperature).
- Reconstruction of garages, parking garages, traffic areas.
- Basic balconies, access balconies, and patio coatings, e.g. for small areas.
- For commercially and industrially used areas with medium mechanical load, e.g. production areas, commercial traffic areas.
- Robust floor coating with a slip-resistant surface.

Product features

- rapid-setting
- accessible after 2 - 6 hours
- good resistance to water and chemicals
- light-stable for the most part
- slip-resistant
- jointless coating
- high mechanical resistance
- resistant to abrasion and wear
- Total Solid according to GISCODE (Test method "Deutsche Bauchemie")

Technical data

Viscosity - Component A+B	1000	mPas	DIN EN ISO 3219 (23 °C / 73.4 °F)
Solid content	99	%	KLB method
Density - Component A+B	1.42	kg/l	DIN EN ISO 2811-2 (20 °C / 68 °F)
Water absorption	< 0.2	weight-%	DIN 53495
Adhesive tensile strength	> 1.5	N/mm ²	DIN EN 1542
Shore-hardness D	79	-	DIN 53505 (after 7 days)
Abrasion (Taber Abraser)	15	mg	ASTM D4060 (CS10/1000)
Gloss level	40 - 60 (60°)	-	DIN 67530

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

Included in systems

- System G6 - KLB INDUSTRIAL PU RX Rapid

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

Tests

The following external test certificates are available:

- Slip resistance grade R10, R11/V4 or R12/V10 possible, according to DIN 51130 and BGR 181.
- Classification of the fire behavior according to DIN EN 13501-01:2010-01: B_{fl}-s1.

Note:

Please ask for the tested system build-up!

Build-up of coats

General

- Prepare the substrate mechanically, preferably by shot-blasting or if necessary, by diamond grinding.
- If the substrate is sufficiently good, slightly absorbent, even with low roughness depths and enough adhesive tensile strength, **PU 5000 RX** can be applied directly.
- Further coating build-up of coats according to the desired slip resistance.

Reconstruction of substrates

- Prepare the substrate mechanically, preferably by shot-blasting or if necessary, by diamond grinding.
- Provided that the substrate is very absorbent and shows depth of roughness, the application of the primers **EP 51 RAPID S** or **EP 52 RAPID** is mandatory, consumption: approx. 0.3 - 0.4 kg/m².
- Scatter the fresh surface completely with fire-dried quartz sand. Adjust the consumption and grain size to the slip resistance grade of the scattering material used:

Slip resistance grade R10: covered scattering with quartz sand, grain size 0.1/0.5 mm, consumption approx. 2.0 kg/m².

Slip resistance grade R11: open scattering with quartz sand, grain size 0.3/0.8 mm, consumption approx. 1.0 kg/m².

Slip resistance grade R12: open scattering with quartz sand, grain size 0.7/1.2 mm, consumption approx. 1.0 kg/m².

- **Optional:** depending on the depth of roughness, apply a base levelling coat with **PU 5000 RX** using a Kaupp spatula or steel trowel, consumption approx. 0.5 - 0.8 kg/m². Immediately scatter with **RX-Abstreukomponente**, consumption approx. 2.1 - 2.5 kg/m². After 30 minutes, sweep off any excess, vacuum if necessary. When the mechanical curing is sufficient, in-between grinding with grain size 16 is possible.
- Further build-up of coats according to the desired slip resistance.

Note: the swept scattering component **RX-Abstreukomponente** can be used again, provided it is clean and put back into a sealable bucket.

Coating with slip-resistance grade R10

- Apply the base coat **PU 5000 RX**, Components A + B, consumption approx. 0.5 - 0.8 kg/m², with a toothed trowel (**Toothed blade S8** or Pajarito TKB-S3) and distribute evenly with a velour roller. Scattered surfaces have to be applied by pulling over grain with a steel trowel.

- Immediately scatter with **RX-Abstreukomponente R10**, consumption approx. 2.1 - 2.5 kg/m².
- After curing (approx. 20 - 30 minutes), sweep off any excess with a broom and vacuum over again.
- Approx. 1.5 hours after after base coat application, apply the top sealer **PU 5000 RX** evenly with a rubber squeegee, consumption approx. 0.3 - 0.4 kg/m², re-roll with a velour roller in crosswise motion.

Coating with slip-resistance grade R11/V4

- Apply the base coat **PU 5000 RX**, Components A + B, consumption approx. 0.5 - 0.8 kg/m², with a toothed trowel (**Toothed blade S8** or Pajarito TKB-S3) and distribute evenly with a velour roller. Scattered surfaces have to be applied by pulling over grain with a steel trowel.
- Immediately scatter with **RX-Abstreukomponente R11**, consumption approx. 2.1 - 2.5kg/m².
- After curing (approx. 20 - 30 minutes), sweep off any excess with a broom and vacuum over again.
- Approx. 1.5 hours after after base coat application, apply the top sealer **PU 5000 RX** evenly with a rubber squeegee, consumption approx. 0.6 - 0.8 kg/m², re-roll with a velour roller in crosswise motion.

Coating with slip-resistance grade R12/V10

- Apply the base coat **PU 5000 RX**, Components A + B, consumption approx. 0.7 - 0.9 kg/m², with a toothed trowel (**Toothed blade S8** or Pajarito TKB-S3) and distribute evenly with a velour roller. Scattered surfaces have to be applied by pulling over grain with a steel trowel.
- Immediately scatter with **RX-Abstreukomponente R12**, consumption approx. 2.3 - 2.7 kg/m².
- After curing (approx. 20 - 30 minutes), sweep off any excess with a broom and vacuum over again.
- Approx. 1.5 hours after after base coat application, apply the top sealer **PU 5000 RX** evenly with a rubber squeegee, consumption approx. 0.8 - 1.0 kg/m², re-roll with a velour roller in crosswise motion.

Note: to improve the processing conditions, up to 5 % of thinner **VR 28** can be added to the sealer **PU 5000 RX**. By doing so, the time for accessibility may decrease up to 30 minutes, depending on temperature.

With the addition of **PU-Beschleuniger 12**, the curing time can be reduced within the temperature range 0 °C / 32 °F to 10 °C / 50 °F.

For processing temperature between 6 °C / 42.8 °F and 10 °C / 50 °F: ½ packaging unit **PU-Beschleuniger 12** = 0.060 kg

For processing temperature between 0 °C / 32 °F and 5 °C / 41 °F: 1 packaging unit **PU-Beschleuniger 12** = 0.120 kg

Accessibility is granted after approx. 2 - 3 hours, depending on the surrounding temperature.

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. Surfaces suitable for coating are concrete C20/25, cement screed CT-C35-F5, as well as other sufficiently solid substrates. The substrate has to have adequately high strength for the intended occupational use. The substrates to be coated should be prepared mechanically, preferably by shot blasting or (diamond) grinding. The surface strength must then be at least 1.5 N/mm². 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. Observe the information issued by the trade associations, e.g. the most recent versions of BEB worksheets KH-0/U and KH-0/S. Reconstructing floors may require special procedures. Obtain technical advice.

Product components

Resin component:

PU 5000 RX, Components A + B, combi unit 12 kg

Scattering component:

1 packaging unit **PU 5000 RX-Abstreukomponente**, Hobbock 25 kg

Acceleration (for the processing below 10 °C / 50 °F):

PU-Beschleuniger 12, bottle 0.120 kg

Please order the PU accelerator separately if needed!

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 2 - 3 minutes until a homogeneous, streak-free compound forms. To prevent mixing errors, empty ("repot") the resin/hardener mixture into a clean container and mix it once again briefly. Partial quantities need to be weighed out in the right mixing ratio after having stirred up the single components.

When processing at temperatures below 10 °C / 50 °F, it is recommended to add the suitable amount of catalyzer (½ or 1 bottle with 12 kg).

Processing

Process immediately after mixing.

Apply the fresh coating material evenly on the substrate with a toothed trowel within the recommended amount of consumption. Re-roll without any time delay, then distribute. The recommended amount of application material may be achieved with a **Toothed blade S8** or Pajarito TKB-S3 with the usual depth of roughness.

When freshly applied, the surface must be scattered fully and in a saturated way with the scattering component **RX-Abstreukomponente** at the recommended rate. After a waiting time of approx. 20 to 30 minutes (at 20 °C), sweep off the excess scattering component **RX-Abstreukomponente** and, if necessary, vacuum the surface.

Immediately afterwards, apply a sealing coat with the velour roller in a crosswise motion with the recommended consumption quantities. If necessary, up to 5 % of thinner **VR 28** can be added to improve application.

Floor and air temperature must not fall below 0 °C / 32 °F and humidity must not exceed 75 %. 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 will not be possible with hardening problems and spotting to occur. Exposure to chemicals should be avoided within the first days. The specified hardening 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.

Separate cleaning and care recommendations are available for cleaning floors produced with KLB coatings and sealers.

Storage

Store in dry and at frost-free conditions. Ideal storage temperature is 15 - 20 °C / 59 - 68 °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 500 g/l (2010,II,j/lb): Ready-for-use product contains < 500 g/l VOC.

CE marking

CE	
1119	
KLB Kötztal Lacke + Beschichtungen GmbH Günztalstraße 25 FRG-89335 Ichenhausen	
18	
PU5000RX-V1-012018	
DIN EN 1504-2:2004	
Surface protection products-coating DIN EN 1504-2: ZA.1d,ZA.1f,ZA.1g	
Abrasion resistance	complied with
CO ₂ -permeability	SD > 50 m
Water vapour permeability	Class III
Capillary water absorption and water permeability	< 0.1 kg/m ² *h0.5
Resistance to increased chemical excavation	complied with
Resistance to impact	Class II
Tear-test for adhesive strength evaluation	> 1.5 N/mm ²
Fire behaviour	B _f -s1

CE	
KLB Kötztal Lacke + Beschichtungen GmbH Günztalstraße 25 FRG-89335 Ichenhausen	
17	
PU5000RX-V1-032017	
DIN EN 13813:2003-01	
Synthetic resin screed mortar DIN EN 13813: SR-B1.5-AR0.5-IR6	
Fire behaviour	B _f -s1
Emission of corrosive substances	SR
Wear resistance BCA	AR 0.5
Adhesive tensile strength	B 1.5
Impact resistance	IR 6



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