KLB KÖTZTAL
Lacke+Beschichtungen GmbH

KLB-SYSTEM POLYURETHAN
PU 424

Tough-elastic, low-emission, plain-coloured 2-component polyurethane coating as supporting layer for scattered coverings in the system for kitchen floorings.

Packaging units

Artikelnummer	Verpackung	Inhalt	VE/Palette
AK6951-92	Combo can	1.00 kg	240
AK6951-50	Bucket combo	10.00 kg	30
AK6951-30	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 : 49
Processing time	10 °C / 50 °F : 35 min. 20 °C / 68 °F : 20 min. 30 °C / 86 °F : 10 min.
Processing temperature	Minimum 10 °C / 50 °F (room and floor temperature)
Curing time (accessibility)	10 °C / 50 °F : 16 - 20 hrs. 20 °C / 68 °F : 10 - 14 hrs. 30 °C / 86 °F : 6 - 8 hrs.
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 10 - 14 hours, but after 48 hours at the latest at 20 °C / 68 °F
Consumption	(Scattered layer) approx. 0.7 - 0.9 kg/m² of PU 424 / 0.5 - 0.7 kg/m² of mixed sand KLB-Mischsand 3/1
Colours	KLB standard colours - see colour chart, other colours on request! For scattered coatings with coloured sand KLB-Colorsand CQS-46xx, please refer to the colour chart of the coloured sand!
Shelf life	12 months (originally sealed)

Product description

KLB-SYSTEM POLYURETHAN PU 424 is a low-emission, elastic 2-component polyurethane coating for producing base layers for scattered floors.

Preferably, the elastic coating is used as a low-emission kitchen coating in **SYSTEM H2 "KLB Kitchen Low-VOC PU**". **KLB-SYSTEM POLYURETHAN PU 424** is combined with mixed sand **KLB-Mischsand 3/1** as a base layer for subsequent scattering with coloured sand **KLB-Colorsand CQS-46xx.** Alternatively, it is possible to scatter with natural sands and seal with a coloured head sealer, e.g. **PU 5580**.

System H2 enables the production of low-emission, decorative and slip-resistant floor coverings, which can be used especially in wet areas such as kitchens, but also in other sectors. The hardened coating is viscoplastic, resistant and has good thermal resistance.

Within **SYSTEM H2**, **KLB-SYSTEM POLYURETHAN PU 424** is certified according to “Indoor Air Comfort Gold” and meets the requirements for a sustainable building certification according to DGNB, LEED or BREEAM. The “Indoor Air Comfort” product certification sets the highest requirements for the emission of volatile organic compounds and meets not only the German requirements of AgBB or ABG, but also the emissions regulations of many other European countries.

The product offers good resistance to chemicals such as water, saline solutions, diluted acids and bases, mineral oils as well as to household chemicals and common cleaning agents. Seek advice for special requirements.

KLB-SYSTEM POLYURETHAN PU 424 can be supplied in various colour shades, but is not resistant to yellowing due to its chemical structure. **Note**: slight colour deviations are possible for technical reasons. In combination with the coloured sands CQS-46xx (see colour chart coloured sands) and the transparent sealer **KLB-SYSTEMPOLYURETHAN PU 484**, largely light-stable kitchen coverings can be obtained.

Area of application

- System product for the production of commercially used, low-emission, slip-resistant wet coverings, especially for kitchen coverings.
- Coloured base layers in kitchens for decorative coverings sprinkled with colour sands and subsequent sealing layers, e.g. with **PU 484**, indoors and outdoors.
- As a base coat for scattered coverings with slip-resistant properties on deformable substrates.
- On substrates susceptible to deformation such as mastic asphalt, metal, wood and mixed substrates.

Product features

- low-emission
- good filling capacity
- free of deleterious substances against varnish
- good resistance to water and chemicals
- mechanically resistant

Technical data

Viscosity - Component A+B	Approx. 1350 - 1600	mPas	DIN EN ISO 2811-2 (23 °C / 73.4 °F)
Solid content	> 99.5	%	KLB method
Density - Component A+B	Approx. 1.20	kg/l	DIN EN ISO 2811-2 (20 °C / 68 °F)
Weight loss	Approx. 0.3	% en poids	KLB method after 28 days
Water absorption	< 0.2	%	DIN 53515
Tensile strength	> 25	N/mm²	DIN EN ISO 527
Elongation at break	> 5	%	DIN 53455 (after 7 days)
Shore-hardness D	72	-	DIN 53455 (after 7 days)

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

Included in systems

- System H2KLB KITCHEN LOW-VOC PU
- System H6KLB FOOD PU RX Decor

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

Tests

External test certificates are available:

- Within the system. low-emission and AgBB-compliant, certified according to „Eurofins Indoor Air Comfort Gold“.

- In the system with proof of usability as an industrial kitchen coating (Kiwa GmbH-Polymerinstitut).
- Classification of the fire behaviour in System H2 according to DIN EN 13501-01:2010-01: B_{fl}-s1.

Note:

Please ask for the tested system build-up!

Build-up of coats

SYSTEM H2 KLB KITCHEN PU Low VOC

- Prepare the substrate such as concrete, cement screed or similar mechanically, e.g. with shot blasting.
- Prime with **EP 53 Spezialgrund AgBB**, consumption approx. 0.3 to 0.4 kg/m².
- If required: apply a scratch coat with **EP 53 Spezialgrund AgBB** and mixed sand **KLB-Mischsand 2/1,** mixing ratio 1 : 0.8 parts by weight, consumption approx. 0.8 to 1.2 kg/m² mixture.
- Openly sanding the fresh surface with quartz sand 0.3/0.8 mm, consumption approx. 0.5 - 1.0 kg/m². The surface must be pore-closed after hardening.
- Prepare and seal connections, inlets, penetrations and more using suitable sealing tapes with **PU 420**.
- Apply a sealing intermediate layer with **PU 420**, using the scraper **Toothed blade RS4** or alternatively, Pajarito 48, consumption approx. 2.5 to 3.0 kg/m². Recommended layer thickness approx. 2 mm.
- Wall elevations can be carried out with a stable **PU 424**. By adding 1 to 1.5 % of suspending agent **KLB-Stellmittel 5 FT** to **PU 424,** a sufficiently stable consistency is achieved. Pull up the wall with the smoothing trowel over grain. **CQS-46xx** can then be blown or thrown in.
- After curing, apply the base coat consisting of **PU 424** and mixed sand KLB-**Mischsand 3/1** in a mixing ratio of 1 : 0.7 parts by weight. Smooth over the grain with a smoothing trowel and re-roll with a nylon roller (8 mm pile height) after 10 to 15 minutes. Consumption approx. 1.2 to 1.5 kg/m² (mixture).
- When freshly applied, cover the entire surface with coloured sand Colorsand CQS-46xx (see coloured sand colour chart), consumption approx. 2.5 to 3.5 kg/m².
- After curing, sweep off excess quartz sand, sand if necessary and vacuum off all sanding dust.
- Apply the **PU 484** top selaer onto the clean, prepared surface using the rubber squeegee and subsequent rolling with a nylon roller (8 mm pile height) to achieve the desired surface or slip resistance. Consumption depending on grain size and slip resistance: 0.450 to 0.700 kg/m². Check the consumption to achieve the required slip resistance level.

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. 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 base coats. The substrates to be coated should be prepared mechanically. The prepared area must be saturated, pore-free and primed carefully. If the substrate has not been primed to be pore-free, bubbles and pores can develop in the coating due to air rising from the substrate. In case of doubt, we recommend testing on a trial surface. The surface can be scattered openly with approx. 0.5 - 1.0 kg/m² of quartz sand 0.3/0.8 mm in order to improve adhesion.

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.

Addition of quartz sand:

Add the additives only after the components A and B have been pre-mixed. Suitable for producing a uniform base layer is coloured sand in scatterings with only the mixed sand **KLB-Mischsand 3/1**.

Mixing ratio:

PU 424 : mixed sand **Mischsand 3/1** = 1 : 0,7 parts by weight

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Processing

Process the material immediately after mixing with a coating knife or notched trowel. Pull out an even layer on the prepared surface.

The product is adjusted for optimum deaeration, however, rolling with a nylon roller is recommended to improve the wetting of the substrate, to optimise levelling and to remove remaining air bubbles.

The sanding should be carried out time-delayed after approx. 15 - 30 minutes into the fresh coating. The wet edge of the coating must always be kept free so that an even layer of sand can develop. After hardening, the excess sand is removed by sweeping, vacuuming or pushing off.

Floor and air temperature must not fall below 10 °C / 50 °F and humidity must not exceed 75 %. The material to be processed must have room temperature. **Within the recommended processing conditions, the floor temperature may be a maximum of 3 °C / 3K / 5.4 °F colder than the ambient room air temperature in order to exclude a dew point on the surface to be coated and the fresh coating**. If a dew-point situation arises, regular curing will not be possible with hardening poblems and foaming 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 and chemicals must 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.

Cleaning

To remove fresh contamination and to clean tools, use a suitable thinner when fresh. **VR 28** is recommended. Hardened material can only be removed mechanically.

Storage

Store in dry and at frost-free conditions. Ideal storage temperature is 10 - 20 °C / 50 - 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: PU40

Kennzeichnung VOC-Gehalt:
(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

KLB Kötztal Lacke + Beschichtungen GmbH Günztalstraße 25 FRG-89335 Ichenhausen	
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PU424-V1-122020	
DIN EN 13813:2003-01	
Synthetic resin screed mortar DIN EN 13813: SR-B2.0-AR0.5-IR7	
Fire behaviour	E_{fl}-s1
Emission of corrosive substances	SR
Wear resistance BCA	AR 0.5
Adhesive tensile strength	B 2.0
Impact resistance	IR 7

VOC content

The product complies with the high requirements to low VOC contents, as required for sustainable construction. Therefore, these values exceed by far the European Union directive 2004/42/EG (decopaint directive).

	Limit value	Actual content	
Decopaint Directive 2004/42/EG - Component A	< 500	15	g/l
Decopaint Directive 2004/42/EG - Component B	< 500	0	g/l
DGNB - Components A + B	< 3	0,64	%
Klima:aktiv - Components A + B	< 3	0,64	%
LEED - Components A + B	< 100	10	g/l
Minergie ECO ® - Components A + B	< 1 (< 2)	0,64	%

(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.

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