KLB KÖTZTAL
Lacke+Beschichtungen GmbH

KLB-SYSTEM POLYURETHAN
PU 425 Comfort

Low-emission, plain-coloured 2-component polyurethane coating for elastic, comfortable floorings. To be used in combination with KLB-SYSTEM POLYURETHAN PU 430 Silent for high-quality floor coverings with high walking comfort and good impact sound reduction.

Packaging units

Article no.	Packaging	Content (kg)	Units/pallet
AK6115-50	Bucket combo	10.00 kg	30
AK6115-30	Hobbock combo	30.00 kg	12

Product characteristics

Mixing ratio parts by weight	A : B = 100 : 25
Mixing ratio parts by volume	A : B = 100 : 29
Processing time	10 °C / 50 °F : 45 min. 20 °C / 68 °F : 30 min. 30 °C / 86 °F : 20 min.
Processing temperature	Minimum 10 °C / 50 °F - Maximum 30 °C / 86 °F (room and floor temperature)
Curing time (accessibility)	10 °C / 50 °F : 36 - 48 hrs. 20 °C / 68 °F : 24 - 28 hrs. 30 °C / 86 °F : 12 - 14 hrs.
Curing	After 2 - 3 days resistant to light mechanical load; full mechanical and chemical load resistance after 7 days
Further coatings	After 24 - 28 hours, but after 48 hours at the latest at 20 °C / 68 °F
Consumption	Approx. 1.4 kg/m² for each mm of layer
Layer thickness	2.0 - 3.0 mm
Colours	KLB standard colours – see chart. Other colours upon request!
Shelf life	12 months (originally sealed)

Product description

KLB-SYSTEM POLYURETHAN PU 425 Comfort is a 2-component, self-levelling, low-emission polyurethane coating for smooth, flexible floors. **KLB-SYSTEM POLYURETHAN PU 425 Comfort** may be used as coating on the prepared substrate or in combination with the flexible interlayer **KLB-SYSTEM POLYURETHAN PU 430 Silent**. Combining these two materials results in increased walking comfort and reduced subsonic noise. Using **KLB-SYSTEM POLYURETHAN PU 425 Comfort** is therefore particularly advantageous in areas with high demands on the floor covering, e.g. in recreation rooms, residential and commercial areas, practices, kindergartens, nursing and old people's homes, physiotherapy and occupational therapy practices, fitness and wellness areas, etc.

KLB-SYSTEM POLYURETHAN PU 425 Comfort is certified according to “Indoor Air Comfort Gold” and meets the requirements for a sustainable construction certification according to DGNB (Germany), LEED (United States) or BREEAM (Great Britain). “Indoor Comfort Gold” fulfills the highest requirements in regards to the emission of Volatile Organic Compounds and respects not only the German limits of AgBB or ABG, but also of the emissions regulations of many other European Countries.

KLB-SYSTEM POLYURETHAN PU 425 Comfort has good flow and smoothing properties and cures with almost no shrinkage. The cured surface is hard and tough, but also flexible and very resistant to mechanical load. **KLB-SYSTEM POLYURETHAN PU 425 Comfort** offers good mechanical properties. Elastic properties enable particular advantages lie in the area of comfortable floor coverings and in the case where more flexibility is required due to the substrate, such as with weak substrates susceptible to deformation (mastic asphalt, chipboard, metal and renovation surfaces). For usage in industrial areas, it is recommended to use more robust coatings like **KLB-SYSTEM POLYURETHAN PU 420** or **PU 421**.

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 425 Comfort can be supplied in various colour shades, but is not resistant to yellowing due to its chemical structure. **Note:** slight colour deviations of the coating are possible for technical reasons. Therefore, a sealing top layer with **KLB-SYSTEM POLYURETHAN PU 806 E** becomes necessary.

Coatings combined with **KLB-SYSTEM POLYURETHAN PU 430 Silent** may show deformation and indents with increased mechanical load. Indents may reverse when the load is being reliefed, even though they may stay visible.

Area of application

- High-quality, comfortable, jointless coating for areas with light or medium load.
- Decorative floor for areas with high walking comfort and cushioning impact of perpetration.
- Sales areas, offices, exhibition and others.
- Kindergartens, doctor’s surgeries, schools, exhibitions and more.
- Suitable as coating for substrates susceptible to deformation like mastic asphalt, metal, wood or mixed material substrates, as well as substrates susceptible to cracks.

Product features

- tested, low-emission quality
- insulating impact sound
- comfortable
- good processing properties
- good resilience
- free of deleterious substances against varnish
- mechanically resistant
- Total Solid according to GISCODE (Test method "Deutsche Bauchemie")

Technical data

Viscosity - Component A+B	4400	mPas	DIN EN ISO 3219 (23 °C / 73.4 °F)
Solid content	100	%	KLB method
Density - Component A+B	1.34	kg/l	DIN EN ISO 2811-2 (20 °C / 68 °F)
Weight loss	0.3	weight-%	KLB method after 28 days
Water absorption	< 0.2	weight-%	DIN 53495
Breaking strain	96	%	DIN EN ISO 527-3
Shore-hardness A	76	-	DIN 53455 (after 7 days)
Shore-hardness D	29	-	DIN 53455 (after 7 days)

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

Included in systems

- System G3 - KLB INDUSTRIAL LOW-VOC PU Comfort Sealed
- System G8 - KLB DECOR LOW-VOC PU Comfort Silent

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

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Tests

External test certificates are available:

- Classification of the fire behaviour according to DIN EN 13501-01:2010-01: B_{fl}-s1.
- Resilience test in combination with **PU 430 Silent** according to DIN EN 1991-2-1:2010-12.
- Slip resistance grade R9 and R10 possible, according to DIN 51130 and BGR 181.
- Reduction of subsonic noise in combination with **PU 430 Silent** according to DIN EN ISO 717-2: 11 db.
- Certified as low-emission according to „Eurofins Indoor Air Comfort Gold“. Compliant with AgBB for recreation rooms.

Note:

Please ask for the tested system build-up!

Build-up of coats

Preparation of mineral substrates

- Prepare the substrate like concrete, cement screed, etc. mechanically, preferably by shot-blasting.

System build-up **without intermediate scattering**

- Prime with the recommended KLB priming resin **EP 55**, consumption approx. 0.3 - 0.4 kg/m².
- If required: apply a scratch coat with **EP 55** and mixed sand **KLB-Mischsand 2/1**. Mixing ratio 1 : 0.8 parts by weight, consumption approx. 0.8 - 1.2 kg/m² (mixture).
- Alternatively, already after priming, a scratch coat with **PU 420** or **PU 421** can be applied without scattering by adding approx. 20 - 30 % of quartz sand 0.1/0.3 mm, consumption approx. 0.8 - 1.0 kg/m².

Important: it's only with the primer **EP 55**, that **PU 425 Comfort** can be applied directly without scattering after a curing time of at least 14 to max. 48 hours (at 20 °C / 68 °F), provided the surface is pore-free. In the case of other primers or changed time sequences, intermediate scattering must be carried out.

Low-emission system build-up **with intermediate scattering**

- Prime with the other recommended epoxy resin primers, e.g. **EP 57, EP 58** or **EP 53 Spezialgrund AgBB**. Consumption approx. 0.3 - 0.4 kg/m².
- If required: apply a scratch coat with **EP 57, EP 58** or **EP 53 Spezialgrund AgBB** and mixed sand **KLB-Mischsand 2/1**. Mixing ratio 1 : 0.8 parts by weight, consumption approx. 0.8 - 1.2 kg/m² (mixture).
- Openly scattering the fresh surface with quartz sand 0.3/0.8 mm, consumption approx. 0.5 - 1.0 kg/m².
- Alternatively, a scratch coat with **PU 421** or **PU 425 Comfort** can be applied onto the scattered primer by adding approx. 20 - 30 % of quartz sand 0.1/0.3 mm, consumption approx. 0.8 - 1.0 kg/m².
- The surface must be pore-less for any subsequent coating.

Substrate preparation of mastic asphalt

- Prepare the substrate mechanically, preferably by shot-blasting.
- This is followed directly by the application of a scratch coat with **PU 421** or **PU 425 Comfort** and approx. 20 - 30 % of quartz sand 0.1/0.3 mm.

- If the surface is pore-free, the subsequent coating can be applied directly.

Application of the flexible comfort coating

- Apply the flexible interlayer with **PU 430 Silent** in layers of 3 - 5 mm, consumption approx. 3 - 5 kg/m² using a spiked coating knife.
- After curing, apply the top-layer either with **PU 425 Comfort** in layers of 2 - 3 mm, consumption 2.8 - 3.2 kg/m², or with **PU 410**, consumption 2.6 - 3.0 kg/m² with a notched trowel **Toothed Blade S2** or Pajarito 78.
- Apply the low-emission and pigmented top sealer **PU 806 E**, consumption 0.140 - 0.180 kg/m² or alternatively the light-stable coating **PU 410** with **PU 805 E**. Other sealers may be used in special cases.

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 like **EP 57, EP 58** and **EP 53 Spezialgrund AgBB.** The substrates to be coated should be prepared mechanically, preferably by shot-blasting. 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. To improve adhesion, scatter the surface completely with 0.5 - 1.0 kg/m² quartz sand, grain size 0.3/0.8 mm.

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.

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 spiked roller is recommended to improve the wetting of the substrate, to optimise levelling and to remove remaining air bubbles. This should be carried out time-delayed after approx. 10 - 15 minutes. To work seamlessly, always work “fresh-in-fresh” and define work areas before starting.

Sealing of the **PU 425 Comfort** covering layer must be carried out with clean overshoes. Nail shoes must not be used.

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.

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 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

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

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DIN EN 13813:2003-01

Synthetic resin screed mortar
DIN EN 13813: SR-B1.5-AR0.5-IR10

Fire behaviour	C_{fl}-s1
Emission of corrosive substances	SR
Wear resistance BCA	AR 0.5
Adhesive tensile strength	B 1.5
Impact resistance	IR 10

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	5	g/l
Decopaint Directive 2004/42/EG - Component B	< 500	0	g/l
DGNB - Components A + B	< 0,5	0.7	%
Klima:aktiv - Components A + B	< 3	0.7	%
LEED - Components A + B	< 100	9.7	g/l
Minergie ECO ® - Components A + B	< 1 (< 2)	0.7	%

(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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