

KLB-NaturaPUR PU 435



Decorative, low-emission floor coating made from bio-based raw materials with the special characteristics of linoleum.

Packaging units



Article no.	Packaging	Content (kg)	Units/pallet
AK6225-50	Hobbock combo	12.00 kg	30
AK6225-30	Hobbock combo	26.00 kg	12

Product characteristics

Mixing ratio parts by weight	A : B = 3 : 1
Mixing ratio parts by volume	A : B = 100 : 29,3
Processing time	10 °C / 50 °F : 45 - 50 min. 20 °C / 68 °F : 25 - 30 min. 30 °C / 86 °F : 12 - 15 min.
Processing temperature	Minimum 10 °C / 50 °F (room and floor temperature)
Curing time (accessibility)	10 °C / 50 °F : 24 - 36 hrs. 20 °C / 68 °F : 14 - 20 hrs. 30 °C / 86 °F : 10 - 12 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 18 - 24 hours, but after 48 hours at the latest at 20 °C / 68 °F
Consumption	Approx. 2.5 - 3.0 kg/m ²
Layer thickness	Approx. 2.5 - 3.0 mm
Packaging	Combo packaging 12 kg, Hobbock combo 26 kg
Colours	Available in different RAL tones – see colour chart!
Shelf life	12 months (originally sealed)

Product description

KLB-NaturaPUR PU 435 is a decorative, elastic and low-emission 2-component floor coating with a proportion of bio-based raw materials based on vegetable oils, wood and cork granulates as well as a share of natural mineral fillers and pigments, which are cross-linked with a low-emission, light-stable polyisocyanate.

KLB-NaturaPUR PU 435 can be applied in liquid form and without joints, is sustainable and low-emission and cures to a slightly structured covering with linoleum-like characteristics. The liquid application enables the economical production of decorative and jointless floorings in commercial areas with high requirements on appearance and durability.

The coating is particularly suitable for private or commercial projects, such as exhibitions, schools, recreation rooms and other public spaces where a high-quality flooring with pleasant walking comfort and a decorative look is desired.

The comfortable floor coating is applicable in layer thicknesses of 2 to 3 mm and results in homogeneous, coloured surfaces with high flexibility and impact sound reduction. The coating is yellowing-resistant to a large extent.

KLB-NaturaPUR PU 435 is certified by EUROFINS and EMICODE® EC 1^{PLUS}; 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-NaturaPUR PU 435 is generally sealed with our **KLB-SYSTEM POLYURETHAN PU 817 Flex**. This transparent top sealer gives the surface a uniformly matt appearance and makes it highly resistant to chemicals or stains. The flooring is then suitable for areas that are walked on, as well as for light rolling traffic, e.g. when using swivel chairs/office swivel chairs with soft tyres.

The surface is smooth, but can also be equipped with a slip-resistance up to grade R10, e.g. using **KLB-SYSTEM POLYURETHAN PU 817 Flex-R10**. The covering is hygienic, easy to clean and to disinfect.

Area of application

- In private or commercially used areas with pedestrian traffic and low loads from chair castors.
- As decorative, low-emission floor coating for recreation rooms with high walking comfort and impact sound-absorbing features.
- In areas with swivel chairs/office swivel chairs with soft tyres according to DIN 12528 and DIN EN 12529
- Suitable for sales or office rooms, exhibitions and showrooms, kindergartens, doctor's offices, hospitals or schools.
- Suitable on concrete, cement screed and similar.

Product features

- tested, low-emission quality
- EMICODE® EC 1PLUS certified
- jointless coating
- decorative, appealing surface
- environmentally friendly
- made from renewable raw materials
- sustainable
- insulating impact sound
- suitable for heated floor constructions
- good cleanability
- good resistance to water and chemicals
- low susceptibility to staining
- easy-care
- wear-resistant
- disinfectable
- elastic

Technical data

Viscosity - Component A+B	approx. 6700	mPas	DIN EN ISO 3219 (23 °C / 73.4 °F)
Solid content	> 99.0	%	KLB method
Density - Component A+B	1.04	kg/l	DIN EN ISO 2811-2 (20 °C / 68 °F)
Weight loss	0.2	weight-%	KLB method after 28 days
Water absorption	< 0.2	weight-%	DIN 53495
Adhesive tensile strength	> 2	N/mm ²	DIN EN 1542
Shore-hardness A	approx. 78	-	DIN 53505 (after 28 days)
Abrasion (Taber Abraser)	approx. 100	mg	ASTM D 4060 (CS 17/1500)

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

Tests

The following external and internal test certificates are available:

- Slip resistance grade R9 and R10 possible, according to DIN 51130 and BGR 181.
- Product is compliant with DIN EN 13813: 2003-01
- Chair castor test according to DIN EN 425:2002-08
- Water absorption according to DIN EN 1062-3, Class W3
- Certified as low-emission according to EMICODE with the EC 1^{PLUS} label. Compliant with AgBB for recreation rooms.
- Reduction of impact sound according to DIN EN ISO 717-2: 9dB; in combination with PU 430: 13dB.
- Classification of the fire behaviour according to DIN EN 13501-01:2019-05: B_{fl}-s1

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, e.g. by shot-blasting.

Low-emission system build-up with intermediate scattering

- Prime with a low-emission KLB primer, e.g. **EP 58**, **EP 53 Spezialgrund AgBB** or **EP 54 RAPID U** using a rubber squeegee or velours roller, consumption approx. 0.35 - 0.5 kg/m².
- Openly scattering the fresh surface with quartz sand 0.3/0.8 mm, consumption approx. 0.5 - 1.0 kg/m².
- After hardening of the primer, apply a scratch coat with **PU 429** while adding approx. 20 - 30 % of quartz sand 0.1/0.3 mm, consumption approx. 0.8 - 1.0 kg/m². NO SCATTERING!
- The surface must be pore-less for any subsequent coating.
- Upon accessibility of the area (within the reworking time frame of 24 hours), apply the coating **PU 435** in a layer thickness of 2.5 to 3 mm, e.g. with a **toothed trowel Toothed Blade S1** or Pajarito 92, consumption approx. 2.5 - 3.0 kg/m². After 15 to 20 minutes, roll out with a steel spiked roller (metal needle roller).
- Apply the colourless top sealer **PU 817 Flex** using a trowel with rubber blade (toothing 2 mm) or a lintfree velours roller (6 to 8 mm pile height) in crosswise motion, consumption 0.160 - 0.200 kg/m². By using **PU 817 Flex-R10**, the slip resistance can be adjusted up to grade R11.

Substrate

To achieve a homogeneous surface appearance, the substrate must be carefully prepared. To do so, it must be as flat as possible by thorough and uniform preparation.

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-% and 2.5 CM-% for cement screed, 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 KLB base coats, like **EP 58**. 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 for the entire packaging unit. Empty all of the hardener compound B into the resin A package. 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. Partial quantities need to be weighed out in the right mixing ratio after having stirred up the single components.

Processing

Before starting work, divide up the work areas. Process the material immediately after mixing and spread it over the prepared surface with a toothed trowel in a uniform layer. To achieve a homogeneous appearance, apply along the wet edge in even strokes. Always work "fresh-in-fresh". Rolling the fresh coating with a steel spiked roller (metal needle roller) is recommended to achieve an even and visually appealing surface structure. This should be carried out time-delayed after 15 - 20 minutes.

Attention: with polyurethane coatings, moisture in any form must be avoided, especially drops of perspiration.

Note: to ensure that the subsequent top sealer can be applied without introducing any dirt or shoe marks, the surface may only be walked on with overshoes. Steel or nail shoes are not suitable in this context. Tools, hoover wheels and electric cables must be clean. If necessary, this must be ensured by cleaning them. Black cables can cause discolouration and should be checked beforehand or replaced by others.

For the application of the top sealer, it is absolutely necessary not to enter the soft **PU 435** with nail shoes. We therefore recommend wearing shoes with a larger contact surface for sealing, such as cleated shoes.

Floor and air temperature must not fall below 10 °C / 50 °F and humidity should not exceed 75 %. The material to be processed must be at room temperature during processing. Within the recommended processing conditions, the floor temperature may be a maximum of 3 °C colder than the ambient room air temperature 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 problems and foaming to occur. Do not work in direct sunlight or on strongly heated surfaces, as the processing time is greatly reduced and bubble formation is possible. Polyurethane coatings are sensitive to moisture when fresh, the humidity specifications must therefore be observed.

Coating dew-damp substrates and the use of damp sand as well as perspiration will cause the material to foam 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 the working conditions are not complied with, the technical properties of the end product may deviate.

Special remarks: coloured products should always belong to the same batch and be used on the same surface, as slight colour deviations in different batches cannot be excluded due to the raw material. The batch number is indicated on the container labels.

Colour changes, loss of gloss or yellowing may occur with certain light and weather influences and with prolonged and intensive use.

Cleaning

To remove fresh contamination and to clean tools, use thinner **VR 28** or **VR 33** 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 if possible, 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: 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

	
KLB Kötztal Lacke + Beschichtungen GmbH Günztalstraße 25 89335 Ichenhausen, GERMANY	
23	
PU435-V2-122025	
DIN EN 13813:2003-01	
Synthetic resin screed mortar DIN EN 13813: SR-B2,0-AR0,5-IR20	
Fire behaviour	B _f -s1
Emission of corrosive substances	SR
Wear resistance BCA	AR 0,5
Adhesive tensile strength	B 2,0
Impact resistance	IR 20

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	< 500	1,1	g/l
Decopaint Directive 2004/42/EG - Component B	< 500	0	g/l
DGNB - Components A + B	< 0,5	0,09	%
klima:aktiv – Components A + B	<3	0,09	%
LEED - Components A + B	<100	1,1	g/l
Minergie ECO ® - Components A + B	<1(<2)	0,09	%

(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.

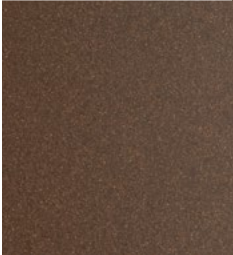
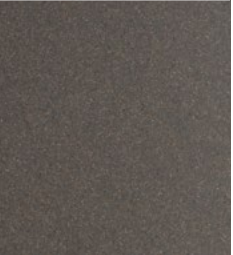
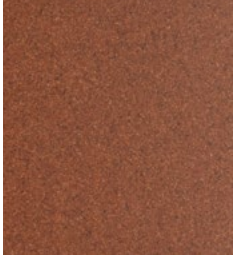
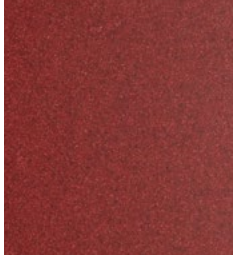
All stated information is based on our experience and technical preparation. We guarantee the correct and proper quality of our products. We do not assume any responsibility for the work not carried out by us, since we have no influence on the processing or processing conditions. We recommend on-site 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-koetzal.com. In addition, our "General Terms and Conditions" apply.



KLB-NaturaPUR PU 435

Elastic floor coating on the basis of bio-based raw materials for a healthy and pleasant indoor climate.



Bahamas-white NAT 2200 	Jurassic-beige NAT 2201 	Natural-beige NAT 2202 	Sahara-beige NAT 2203 	Savanna-yellow NAT 2204 
Alpine-grey NAT 2205 	Hazelnut-brown NAT 2206 	Mammoth-brown NAT 2207 	Orca-grey NAT 2208 	Sunset-orange NAT 2209 
Amber-brown NAT 2210 	Coral-red NAT 2211 	Pacific-blue NAT 2212 	Seashell-turquoise NAT 2213 	Lagoon-blue NAT 2214 
Crocodile-green NAT 2215 	Midnight-blue NAT 2216 			

Rechtliche Hinweise

Legal Advice | Renseignements légaux

DE - Die aufgeführten Muster zeigen den typischen Farbausfall. Abweichungen sind chargenbedingt möglich. Um Farbabweichungen in einer Fläche zu vermeiden, sind diese immer in einer Charge auszuführen. Die vorliegenden Abbildungen können durch die Druckverfahren verfälscht sein. Im Zweifelsfall Originalmuster anfordern. Alle angegebenen und hergestellten Farbtöne sind ca. Farbtöne, die nicht immer den exakten RAL-Standardtönen entsprechen. Lieferungen können von Charge zu Charge geringfügig abweichen, was keinen Mangel darstellt. Machbarkeit und Lieferzeiten bei Sonderfarben sind abhängig von Produkt und Farbton.

Auch können Farbtöne verschiedener Produkttypen voneinander abweichen. Dies ist bei der Ausführung der Arbeiten, bei denen auf eine einheitliche farbliche Gestaltung Wert gelegt wird, besonders zu berücksichtigen, indem abgrenzbare Arbeitsabschnitte mit demselben Produktionsansatz (siehe Chargen-Nummer auf dem Etikett) und mit den gleichen Produkttypen ausgeführt werden. Wird bei Nachlieferungen für das gleiche Objekt auf hohe Farbgleichheit Wert gelegt, muss bei einer Folgebestellung, neben der Farbbezeichnung auch die Chargennummer des vorausgegangenen Auftrages angegeben werden.

Nach dem Stand der Technik können Kunststoffe Veränderungen durch Witterungseinflüsse und UV-Strahlen erfahren. Hierzu zählen Vergilben, Glanzverlust, Weißenlaufen oder Kreden. Diese Veränderungen können je nach Produkt und Farbton unterschiedlich stark sichtbar werden. Die Funktionsfähigkeit der Bodenbeschichtung wird dadurch nicht beeinträchtigt.

Für Flächen die sich nur gering verändern sollen und für Anwendungen im Außenbereich empfehlen wir UV-beständige Versiegelungen, oder vollflächig mineralische Abstreuer einzusetzen.

Unsere Angaben beruhen auf unseren bisherigen Erfahrungen und Ausarbeitungen. Wir übernehmen Gewähr für die einwandfreie Qualität unserer Produkte, die Verantwortung für das Gelingen der von Ihnen durchgeführten Arbeiten können wir nicht übernehmen, da wir keinen Einfluss auf die Verarbeitung und Verarbeitungsbedingungen haben. Es wird empfohlen, im Einzelfall Versuchsflächen anzulegen. Darüber hinaus gelten unsere „Allgemeinen Geschäftsbedingungen“.

GB - The samples shown in this colour chart represent typical colour appearance. Colour deviations are possible depending on the batch. Please use one batch for bigger areas if possible. These illustrations may be distorted by the printing process. In case of doubt, please request original samples. All stated and produced colour tones are approximate quotations and may not always correspond to specific RAL standard colours. Different batches may show minor deviations, which doesn't constitute any deficit. Producibility and delivery time depends on the product and colour.

Colours in different kinds of product may vary as well. This is especially important for an even coloured design. Work on separated overlapping sections should be carried out with the same kind of product in the same batch (labelled container). For subsequent deliveries or the same object please state the colour and batch number from the previous order.

Changes in synthetic material may occur due to weathering and especially UV-rays. Yellowing, blooming, loss of gloss or dusting may occur depending on the used product and colour. Intensity of deviations depends on product and colour tone. Functionality of the coated floor is not being affected.

For areas where minor deviation is important and for usage for exterior areas we recommend color-resistant sealing or complete mineral scattering. Our general information is based upon our experience and technical preparation. We guarantee the correct and proper quality of our products. We do not assume responsibility for the work not carried out by us, since we have no influence on the processing or processing conditions. We recommend trials to be conducted. Besides our „General terms and conditions“ apply.

FR - Les échantillons listés présentent la palette de couleurs typique. Des écarts sont possibles en raison des conditions des lots. Afin d'éviter les écarts de couleur sur une surface, il est recommandé de toujours utiliser le matériel d'un seul lot. Les présentes illustrations peuvent être falsifiées pendant le procédé d'impression. En cas de doute, veuillez demander des échantillons originaux. Toutes teintes indiquées précédemment sont approximatives, soit elles ne correspondent pas toujours exactement aux coloris RAL. Les produits livrés peuvent varier légèrement de lot à lot, ce qui ne représentera pas une cause de réclamation. La faisabilité et les délais de livraison des produits en coloris spéciaux dépendent du produit et du coloris même.

Aussi les teintes de types de produit différents peuvent diverger l'une de l'autre. Ceci est particulièrement important à considérer en cas de travaux dans lesquels obtenir une teinte unitaire est significatif, étant que des zones de travail délimitables sont travaillées avec le même lot (voir numéro de lot sur l'étiquette) et avec le même type de produit. A l'occasion de livraisons supplémentaires, dans le cas où sur la même surface il était très important de respecter l'utilisation de la même couleur, il sera nécessaire de préciser en phase de commande, au-delà du nom de la couleur, aussi le numéro de lot de la commande précédente.

Selon l'état de la technique les matières plastiques peuvent subir des altérations du fait de l'influence des conditions météorologiques et des rayons UV. Parmi ces altérations il y a : jaunissement, perte de brillance, formation de taches blanches ou farinage. Ces altérations peuvent être plus ou moins fortement visibles en fonction du produit et de la teinte. La fiabilité du revêtement de sol n'en sera toutefois perturbée.

Pour des surfaces pas susceptibles de s'altérer et pour les zones extérieures nous recommandons d'appliquer des finitions stables aux rayons UV ou de saupoudrer à refus avec des sables minéraux.

Les indications de cette fiche reposent sur les résultats des expériences et essais réalisés à ce jour. Nous garantissons la qualité de nos produits, mais toutefois, nous ne pouvons garantir la réussite de vos travaux dans la mesure où nous n'avons aucune influence sur la mise en œuvre et les conditions d'applications. Nous recommandons de procéder à des essais préalables. Par ailleurs, nos «Conditions Générales de Vente» s'appliquent systématiquement.

