STABLE 3-COMPONENT POLYURETHANE MORTAR COATING

DESCRIPTION

PU-BETON 4012 is a high- quality, stable, 3-component polyurethane mortar coating, for chemical and hot-water-resistant coatings. PU-BETON 4012 is a product used in combination with and in addition to PU-BETON 4006, 4009, and PU-BETON 4011 for concave and triangular covings, as well as for skirtings. PU-BETON 4012 is especially suitable for the food production industry with increased exposure to water and hot water, like e.g. production areas in breweries, dairy farms, slaughter houses and butcheries, and others, but also for other areas with increased exposure to chemicals. PU-BETON 4012 consists of reactive component and a mineral component, which are carefully aligned, resulting in a robust coating. Apply the mortar mixture with a suitable trowel. The material offers a sufficient processing time. When processing very uneven floors PU-BETON 4012 may be used as filler for larger holes, outbursts, surface defects, and so on. The coating offers an increased degree of thermal and mechanical stability, and a very good resistance to many chemicals, especially to aqueous salt solutions, different acids and bases, as well as solvents. Compared to the classic synthetic resin coatings, PU-BETON 4012 offers an increased glass transition temperature. That is why the material provides a high temperature resistance. Because of the high impact resistance a good durability to the impact load is achieved. Yellowing may occur when exposed to UV-rays because of the consistency. This will not affect any technical proper- ties of the material though. Polyurethane mortar coatings are functional coatings. The optical appearance may not always be consistent. Differences in texture, colouring, and shoulders, as well as fastening grooves may be visible especially on smooth coatings (R9).

RECOMMENDED FOR

- Highly resistant mortar for skirtings or covings, e.g. adjoining coating, respectively floor coating based on PU-BETON 4009 or PU-BETON 4006, for high thermal, chemical, and mechanical resistance. For the use in food production and food processing areas with increased cleaning requirements (wet coats), like e.g. dairy farms, slaughter houses, breweries.
- For filling holes and large surface defects with the subsequent coating using PU-BETON 4009 or PU- BETON 4006.

ADVANTAGES

- Stable adjustment
- Rapid-setting
- Hot-water resistant
- For repair work
- Good processing properties
- Resistant to chemicals

TECHNICAL CHARACTERISTICS

Characteristic	Test Result	Test Method
Density (Components A+B+C)	2.12 kg/lt	EN ISO 2811-2 at 68 ^{O}F (20 ^{O}C)
Color	Natural, beige, red, green, grey	
Solid content	>99%	KLB - Method
Weight loss	< 1.0 % after 28 days	
Water absorption	< 0.2 weight %	DIN 53495
Tensile bending strength	10 N/mm^2	DIN EN 196/1
Compressive strength	45 N/mm^2	DIN EN 196/1

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Characteristic	Test Result	Test Method
Processing time at 59 °F (15 °C)	35 minutes	
Processing time at 68 °F (20 °C)	25 minutes	
Processing time at 77 °F (25 °C)	20 minutes	
Processing temperature	Minimum 59 °F (15 °C) – Maximum 25 °F (77 °C) room and floor temperature	
Curing time at 50 °F (10 °C)	16-24 hrs (Accessibility)	
Curing time at 68 °F (20 °C)	10-14 hrs (Accessibility)	
Curing time at 77 °F (25 °C))	8-10 hrs (Accessibility)	
Curing	1-2 days for mechanical load at 68 °F (20 °C) 2 days for chemical resistance at 68 °F (20 °C)	
Further coatings	After 10-14 hours , but not longer than 36 hours at 68 °F (20 °C)	
Layer thickness	Starting at 3 mm	

The aforementioned results are related to average laboratory test results. In reality the climate changes, such as temperature, moisture and surface porosity may change these results.

DIRECTIONS FOR USE

Surface Preparation: The surface to be coated has to be levelled, with grip, has to have adequate tensile and compressive strength, has to be clean, free from laitance and dusting parts, as well as any contamination. Materials impairing adhesion, such as e.g. grease, oil, or paint residues must be removed using suitable methods. The substrate must have a sufficiently high strength for the intended use as well as for the coating. Suitable is concrete, minimum quality of C25/30 according to DIN EN 206 cement screed, and polymer-modified cement screeds, CT-C30-F5 at least, bonded, in a layer thickness of 60 and 30 mm respectively, according to DIN 18560 part 3. Screeds as separating layer or insulation, polymer-modified, CT-C40-F5 at least, with a layer thickness > 65 mm, according to DIN 18560 part 4. Other substrate is not, or is generally not suitable. The surface to be coated must be prepared mechanically, preferably by shot-blasting. The surface strength must then be at least 1.5 N/mm². Apply fastening grooves at closing-off edges, passageways, and so on, 6 - 10 mm deep and wide. For concrete, the moisture content must not exceed 6 CM-%. The possibility of moisture ingress from the rear must be permanently excluded. Please refer to the advice issued by the trade associations, e.g. the current edition of BEB-worksheets KH-0/U and KH-0/S, as well as the product information of the recommended KLB-Base Coat PU-BETON 4050 Grundierung. On areas with increased thermal exposure use only PU-BETON 4050. The prepared area has to be primed accurately, saturated, and free of pores. If the substrate hasn't been sealed completely, bubbles and pores may appear due to rising air. Subsequently scatter with fire-dried quartz sand, grain size 0.7/1.2 mm if necessary. Conduct a trial if in doubt.

Mixing: Combi-trading units will be supplied in the correctly measured mixing ratio. Processing and material properties can only be granted when using the provided blend of the 3 components. First of all empty the binding agent components (Components A + B) completely in a clean container and blend with a slow speed mixer (200 - 400 r/pm) thoroughly. Blend for approx. 1 minute for a material that is homogeneous and free of streaks. Blending in Component C should be carried out with a compulsory mixer for a consistent mortar quality. Add the premixed binding agent into the compulsory mixer, then add Component C. Mix for a material that is homogeneous for approx. 3 minutes at 68 °F (20 °C). Lower temperature may increase, higher temperature may decrease the blending times.

Note: Pay attention to consistent blending times. Process complete units only! Inaccurate mixing ratios will lead to useless results. Do not mix more than 2 units at a time!

Mixing ratios:

A:B:C= 7.5:7.5:100 parts by weight

Processing/Handling:

Distribute the mortar-mixture on the area evenly right away without any delay. Mold the material with a suitable trowel. Compact and smooth. Always work "fresh-in-fresh" to avoid any shoulders. Seal with PU-BETON 4080 after the covings have cured, within 48 hours. Floor and air-temperature must not fall below 59 °F (15 °C) and/or humidity must not exceed 40-85 %. The difference in floor and room temperature must be less than 37.4 °F (3 °C) so the curing will not be disturbed. If a dew- point situation occurs adhesion may malfunction, curing may be disturbed, and spotting may occur. Curing time applies to 68 °F (20 °C). Lower temperature may increase, higher temperature may decrease the curing and processing time. If working conditions are not complied with, deviations in the described technical properties may occur in the end product.

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Build-up of Coats:

- Saturated base coat with the system based PU- BETON 4050, consumption 0.4 - 0.5 kg/m². To avoid the running off of the material on walls and vertical surfaces, add a thixotropic agent (1.5 - 2 % according to the total amount of the material). Scatter subsequently.
- Use PU-BETON 4012 for triangular or concave covings. For a side length or radius of 5 cm, consumption of approx. 2.2 - 2.8 kg per running meter. Also suitable for filling larger holes or local separations.
- Apply PU-BETON 4006 with a spiked coating knife in layers of approx. 6 mm, respectively PU-BETON 4009 in layers of approx. 9 mm. Vent with a spiked roller.
- Scatter completey with fire-dried quartz sand, grain size 0.3/0.8 mm or 0.7/1.2 mm. After curing sweep off and vacuum thoroughly until no more sand is released.
- Apply PU-BETON 4080 with a rubber squeegee and roll with a velour roller, using criss-cross strokes. Consumption approx. 0.650 - 0.900 kg/m². Work fast and seamless.

It is mandatory to stay within the recommended consumption for the slip resistance grade.

COVERAGE

Approx. 2.2 – 2.8 kg/m^2 at side-length or radius of 5 cm.

SPECIAL CONSIDERATIONS

To remove fresh contamination and to clean tools, use thinner VR 28 or VR 33 immediately. Hardened material can only be removed mechanically.

The product is subject to the hazardous material-, operational safety-, and transport-regulations for hazardous goods. Refer to the DIN-Safety Data Sheet and the information on the labelled containers!

GISCODE: PU 40

Indication of VOC-Content: (EG-Regulation 2004/42), Maximum Permissible Value 140 g/l (2010,II,j/wb): Ready-for-use product contains < 140 g/l VOC.

Contact PENETRON ROMANIA. for additional information, regarding your project.

PACKAGING

PU-BETON 4012 consists of the following components:

Srandard-Unit			
1 Sale-Unit	**PU 4012**	Component A	1.0 kg
1 Sale-Unit	**PU 4012**	Component B	1.0 kg
1 Sale-Unit	**PU 4012**	Component C	13.0 kg
1 Sale-Unit	Pigment		0.05 kg
Total quantity			15.05 kg

STORAGE / SHELF LIFE

Store in dry and frost-free conditions. Ideal storage temperature is between 59 - 68 ^{0}F (15 - 20 ^{0}C). Bring to a suitable working temperature before application. Tightly re-seal opened containers and use the content as soon as possible. When properly stored in a dry place in unopened and undamaged original packaging, shelf life is 12 months.

SAFE HANDLING INFORMATION

Avoid skin and eye contact. If contact is made, flush areas with lots of water and seek medical advice. Protective gloves, mask and goggles should be worn. For further information please refer to Safety Data Sheet.. KEEP OUT OF REACH OF CHILDREN.

CERTIFICATION

CE

KLB Kötztal Lacke + Beschichtungen GmbH
Günztalstraße 25
FRG-89335 Ichenhausen
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PU4012-V1-022013
DIN EN 13813:2003-01
Synthetic resin screed mortar
DIN EN 13813: SR-B1.5-AR0.5-IR8
Fire behavior: E_{fl}-s1
Emission of corrosive substances: SR
Wear resistance BCA: AR 0.5
Adhesive tensile strength B 1.5
Impact resistance: IR 8

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