

PHOTOSTABLE NON-PIGMENTED RAPID-SETTING 2-COMPONENT POLYURETHANE RESIN FOR TOP SEALING SLIP RESISTANT WITH COLOURED SAND SCATTERED COATINGS

DESCRIPTION

PU 475 SPEZIAL is a high-quality, non-pigmented and solvent-free, 2-component polyurethane resin for transparent top and coverage sealing of decorative sand scattered coatings and mortar coatings, as well as a clear resin layer on coatings. PU 475 SPEZIAL is certified "low-emission" according to AgBB and suitable for recreation rooms. The 2-component product consists of a medium-viscous, pale polyurethane resin and a high-quality, non-pigmented hardener. The final material is rapid setting, non-yellowing, and results in optically appealing, even surfaces. PU 475 SPEZIAL is adjusted as transparent top sealer of coloured sand scattered coatings for requirements to slip resistant wet areas, like e.g. kitchen, slaughterhouse, butchery, food industry, and furthermore coloured sand scattered coatings with special demands to consistent, non-yellowing surfaces. PU 475 SPEZIAL is suitable as pore sealer and levelling filler of decorative and terrazzo coatings for commercially and industrially used areas. Apply the pore sealer in repeated applications. May also be applied in one layer in 1 to 2 mm. To improve the optical appearance it is recommended to apply a matt-sealer after pore-sealing. The thoroughly mixed resin cures to a non-pigmented, hard and tough glossy surface with accessibility after only a short period of time. The resin is almost odourless during processing. The polyurethane is non-yellowing and therefore especially suitable for pale coatings. PU 475 SPEZIAL offers good resistance to chemicals and mechanical load. The surface is to a large extent resistant to wear and tear, hygienic, and very well cleanable. Chemical resistance to water, salt, grease, aqueous solutions, diluted acids and bases. Conditionally resistant to solvents, concentrated acids and bases, as well as oxidizing chemicals.

RECOMMENDED FOR

- ▶ PU 475 SPEZIAL is used as photo-stable top sealer for coloured, sand scattered coatings in areas with slip resistant requirements.
- ▶ For areas in the food industry with special requirements to the optical appearance.
- ▶ As pore sealing filler of coloured, finely grained Terrazzo coatings. Use in combination with the matt sealers EP 705 E, PU 806 E, PU 880, EP 860, and others.
- ▶ PU 475 SPEZIAL is especially suitable for pale coatings because the material shows only slight yellowing.
- ▶ Suitable as non-yellowing top sealer for RX- coatings.

ADVANTAGES

- ▶ Rapid-setting
- ▶ Suitable for wet areas
- ▶ Cures without blistering
- ▶ Good interlayer adhesion
- ▶ Non-pigmented, glossy
- ▶ Very fast accessible
- ▶ Resistant to water and chemicals
- ▶ Non-yellowing
- ▶ Resistant to hydrolyses and saponification
- ▶ Solvent-free

TECHNICAL CHARACTERISTICS

Characteristic	Test Result	Test Method
Viscosity (Components A+B)	1200 - 1400 mPa	EN ISO 3219 at 23°C
Density (Components A+B)	1.07 kg/l	EN ISO 2811-2 at 20°C
Color	Non-pigmented	
Water absorption	< 0.2 weight %	DIN 53495
Solid content	> 99 % KLB-Method	
Abrasion (Taber Abraser)	30 mg	ASTM D4060
Shore-hardness D	65-70	DIN 53505 (28 days)
Processing time at 10 °C	12-18 minutes	
Processing time at 20 °C	10-12 minutes	
Processing time at 30 °C	7-9 minutes	
Processing temperature	Minimum 10 °C room and floor temperature	
Curing time at 50 °F (10 °C)	10-12 hrs (Accessibility)	
Curing time at 68 °F (20 °C)	5-6 hrs (Accessibility)	
Curing time at 86 °F (30 °C)	3-4 hrs (Accessibility)	

Clear coat resins on smooth coatings may only be accessed after 18 - 24 hours!

Characteristic	Test Result	Test Method
Curing	12-24 hours for mechanical load at 20 oC 12-24 hours for resistance to water at 20 oC 24-48 hours for chemical resistance at 20 oC	
Further coatings	After curing, but not longer than 24-28 hours at (20 oC	

*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 substrate to be coated has to be levelled, dry, free of dust, has to have adequate tensile and compressive strength, and be free from weakly-bonded components or surfaces. Materials impairing adhesion, such as grease, oil, and paint residues must be removed using suitable methods. Please refer to the advice issued by the trade association, e.g. the current edition of BEB-worksheets KH-O/U and KH-O/S, as well as the product information for the recommended KLB-Base Coats, like e.g. EP 30, EP 50, EP 51 RAPID S, and EP 52 Spezialgrund. The substrate to be coated should be prepared mechanically, preferably by shotblasting. The surface has to be prepared accurately, saturated, and free of pores. To increase the adhesion the surface has to be scattered with approx. 0.5 - 1.0 kg/m² quartz sand, grain size 0.3/0.8 mm. If the material is used for resination of mortar surfaces or as top sealer for coloured sand, scattered coatings, the surface must not be older than 48 hours. The surface has to be clean and free from contamination. On scattered coatings the excess sand will be removed after approx. 12 - 24 hours (dependent on the used product as base coat). Remove by sweeping, chipping off, and vacuuming. For smoother coatings grind slightly. This method requires accurate proceedings so the sand bed will not be soiled or irregularly removed. Resination may be carried out after all loose sand has been vacuumed thoroughly. It is very important that the area is not soiled or contaminated with any substances impairing adhesion. Surfaces should only be accessed with clean, pale shoes and clean clothes.

Mixing: Combi-trading will be supplied in the correctly measured mixing ratio. Component A has sufficient volume for the entire trading unit. Decant the hardener component B into the resin completely. Blend with a slow speed mixer (200 - 400r/pm) for at least 2-3 minutes, for a homogeneous mixture, free of streaks. To avoid mixing errors, it is recommended to principally empty the resin/hardener-mixture into a clean container and mix briefly once again.

Mixing ratios: A:B = 100:55 parts by weight
A:B = 100:56 parts by volume

Processing/Handling:

Scattered coatings: Apply the mixed material on the scattered, prepared surface, and pull off evenly with a pale rubber coating knife, without ponding. Afterwards roll, respectively distribute with a lint-free nylon roller. Work the area thoroughly with a roller for an even and free of pore structure. The amount of application depends on the required slip resistance and the displacement. Seek advice for the exact amount of application. The material may also be applied with a roller using criss-cross strokes, resulting in an increased roughness of coating. For a very smooth surface use in-between grinding, filling, or matt sealing. For areas with exposure to water use the matt sealer EP 860. Floor- and air temperature must not fall below 50 °F (10 °C) and/or humidity must not exceed 75 %. 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 dewpoint situation occurs adhesion may malfunction, curing may be disturbed, and spotting may occur. Exposure to water should be avoided within the first 7 days. 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.

Build-up of Coats:

Note: An overcoating of the completely hardened surface is not possible.

Slip resistant scattered coating in wet areas

- Prepare the substrate, e.g. preferably by shot blasting.
- Base coat application with the recommended KLB- Base Coats, e.g. EP 50, EP 52 SPEZIAL, or EP 51 RAPID S, consumption approx. 0.3 – 0.4 kg/m².
- Optional: Depending on the roughness and demands on the substrate apply a scratch coat, e.g. with EP 50, EP 52 SPEZIAL, or EP 51 RAPID S, and Mischsand 2/1 (alternatively QUARTZ SAND MIX 0.10 – 0.45 MM), mixing ratio 1.0 : 0.8 parts by weight, consumption approx. 0.8 - 1.2 kg/m².
- Important note: Depending on the type of primer/ scratch coat, the fresh coating is to be scattered lightly with quart sand, grain size 0.3/0.8 mm.

- Apply a primary layer using EP 99, EP 213 in layers of approx. 1.5 - 2 mm. Afterwards scatter completely with coloured sand, grain size 0.3/0.8 or 0.7/1.2 mm.
 - Sweep off any excess sand after 24 hours, if necessary grind and vacuum. Apply the top sealer subsequently.
 - Resinate the prepared surface with PU 475 SPEZIAL with a rubber coating knife. Use a velour roller subsequently for the desired surface, respectively slip resistance. Consumption 0.5 - 1.0 kg/m², depending on the grain size and slip resistance grade. Monitor the consumption for the desired slip resistance. For very smooth surfaces resinate in 2 layers.
 - Optional: Depending on the desired requirements to the coating, choose a matt top sealer, e.g. EP 860 for good chemical resistance. Consumption 0.150 - 0.180 kg/m². Apply with a velour roller, resistant to solvents, using crisscross strokes.
- Apply the coating PU 475 SPEZIAL with a notched trowel Multitool S6, consumption approx. 1.0 kg/m².

Resination of coated surfaces

- Prepare the substrate, e.g. preferably by shot blasting.
- Base coat application with the recommended KLB- Base Coats, e.g. EP 50, EP 52 SPEZIAL, or EP 51 RAPID S, consumption approx. 0.3 - 0.4 kg/m². Scatter with quartz sand 0.3/0.8 mm, consumption approx. 0.5 - 1.0 kg/m².
- Apply a scratch coat with e.g. EP 50, EP 52 SPEZIAL, or EP 51 RAPID S and Mischsand 2/1 (alternatively QUARTZ SAND MIX 0.10 – 0.45 MM), mixing ratio 1.0 : 0.8 parts by weight, consumption approx. 0.8 - 1.2 kg/m².
- Apply a coat with EP 200 VF or PU 410 in a layer of approx. 2 mm. Scatter subsequently with e.g. decorative flakes.
- After curing apply a clear resin coat with a toothed trowel, consumption 0.8 - 1.0 kg/m².
- Important note: Clear resin coatings have to cure approx. 18 - 24 hours before subsequent coatings and accessibility.
- Optional: Apply a matt sealer PU 805 E, or EP 705 E after 28 hours at the latest.

Suitable coatings

The following self-levelling coatings can be sealed with PU 475 SPEZIAL: PU 410, EP 200 VF

With other coatings adhesion must be tested. The surface adhesion can anyway be improved by grinding

COVERAGE

Resination for scattered coatings: Approx. 0.5-0.8 kg/m²

Clear resin coatings: Approx. 0.6-0.9 kg/m²

SPECIAL CONSIDERATIONS

To remove fresh contamination and to clean tools, use thinner VR 24 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 500 g/l (2010, II, j/lb): Ready-for-use

product contains < 500 g/l VOC.

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

PACKAGING

PU 475 SPEZIAL is available in 6.4+3.6 kg and 16+9 kg. containers.

STORAGE / SHELF LIFE

Store in dry and frost-free conditions. Ideal storage temperature is between 50 - 68 °F (10 - 20 °C). Bring to a suitable working temperature before application. Tightly reseal 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

KEEP OUT OF REACH OF CHILDREN.

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13

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DIN EN 13813:2003-01

Synthetic resin screed mortar

DIN EN 13813: SR-B1.5-AR0.5-IR10

Fire behavior: Efl-s1

Emission of corrosive substances: SR

Wear resistance BCA: AR 0.5

Adhesive tensile strength B 1.5

Impact resistance: IR 10

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