LOW-EMISSION ENVIRONMENTALLY FRIENDLY AND PHOTOSTABLE TWO COMPONENT POLYURETHANE MATT SEALER TESTED AND ACCREDITED ACCORDING TO AGBB

DESCRIPTION

PU 805 E is a high-quality, unpigmented 2-component polyurethane sealer for the matt finish sealing of epoxy resin and polyurethane coatings. PU 805 E is based on a new environmentally friendly technology and offers a great alternative to solvent consistent sealers and may replace these in wide areas. The sealer results in even, matt surfaces which grant a pleasant and nice optical appearance. The reflecting “mirror-effect” of glossy coatings is reduced by the light dispersion of the surface. The product is preferably used for optically demanding areas. PU 805 E - R10 is the sealer´s anti-slip version. It was tested according to DIN 51130 and BGR 181 and classified anti-slip R10. Note: the processing information and the technical data of the slip-resistant sealer do not differ from standard product. PU 805 E cures by physical drying and chemical cross-linking to a consistent sturdy film. The product results in a hard and tough, abrasion-proof, photostable film with very little tendency to staining. Very well cleanable. PU 805 E offers good resistance to aqueous solutions, diluted acids and alkalis, as well as engine and fuel oil. The product shows very little tendency to staining to household-chemicals or strongly dyeing foodstuffs, drinks and tobacco like beer/ale, red wine or coke. Because of the water vapour permeable calibration the product may be used as a sealer for permeable coatings like EP 785 HS. PU 805 E offers good adhesion on different substrates and may therefore be used on older epoxy and polyurethane surfaces after conducting a trial and testing the interlayer. The products are certified according to the “Indoor Air Comfort Gold” and meet 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. Note: Sealed surfaces offer only limited resistance to mechanical load; Material handling equipment may effect or destroy the sealer. Limited extent usage. In very or frequently wet areas as well as areas exposed to chemicals, sealers containing solvents would be more appropriate.

RECOMMENDED FOR

Typical areas of application are:

- PU 805 E is used as an unpigmented matt sealer for high-quality epoxy resin- and polyurethane coatings for interior areas with special demands to the optical appearance.
- Decorative commercial areas with or without decorative scatterings like show-rooms, exhibition areas, shops, offices, use on decorative terrazzo floorings as a finish sealer and so on. Usually use for floors without or with little traffic of material handling equipment.
- Suitable as a finish for high-quality, photo-stable, flexible PU 410 decorative coatings. For interior areas.
- Matt sealer for water vapour permeable coatings like e.g. EP 785 HS, with or without chips (flakes).
- Seal and re-work older epoxy resin and polyurethane resin areas after adequate testing and preparation.
- Finish sealer for tempered cement coatings, as well as grounded concrete surfaces, after priming with EP 727 E (conduct a trial for testing).

ADVANTAGES

- Matt surface
- Tested, low-emission quality
- With accreditation for interior areas (DIBt®)
- Environmentally friendly
- Abrasion resistant
- Low odour
- Water vapour permeable
- Excellent adhesion
- Even appearance
- Easy to handle

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TECHNICAL CHARACTERISTICS

Characteristic	Test Result	Test Method
Viscosity (Components A+B)	250 – 400 mPa s	EN ISO 3219 at 73.4 ºF (23 ºC)
Density (Components A+B)	1.06 kg/lt	EN ISO 2811-2 at 68 ºF (20 ºC)
Color	Non-pigmented, matt	
Solid content	> 40 %	KLB-Method
Flashpoint	Not flammable	DIN 51755
Abrasion (Taber Abraser)	< 13 mg	ASTM D4060
Brightness (85º)	25	DIN 67530
Diffusion resistance rate	7500	DIN EN ISO 12572
Diffusion equivalente air layer sd (0.1 mm)	0.75 m	DIN EN ISO 7783-2
Processing time at 50 ºF (10 ºC)	180 minutes	
Processing time at 68 ºF (20 ºC)	120 minutes	
Processing time at 86 ºF (30 ºC)	50 minutes	
Processing temperature	Minimum 50 ºF (10 ºC) room and floor temperature	
Ripening (imperative)	After mixing wait at least 10 min, then blend once again for 1 min	
Curing time at 50 ºF (10 ºC)	14-18 hrs (Accessibility)	
Curing time at 68 ºF (20 ºC)	12-14 hrs (Accessibility)	
Curing time at 86 ºF (30 ºC)	8-12 hrs (Accessibility)	
Curing	Dust-dry after 2 - 3 hours at 68 ºF (20 ºC) 2-3 days for mechanical load at 68 ºF (20 ºC) 7 days for chemical resistance at 68 °F (20 ºC)	
Further coatings	After 12-18 hours, but not longer than 48 hours at 68 ºF (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.

VOC – CONTENCTS

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).

Characteristic	Max. Value	Actual Content
Directive 2004/42/EG Decopaint-directive (Component A)	≤ 140 g/l	10.5 g/l
Directive 2004/42/EG Decopaint-directive (Component B)	≤ 140 g/l	0 g/l
DGNB German sustainable Building Council (Components A+B)	< 3 %	0.9 %

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Characteristic	Max. Value	Actual Content
Climate:active Climate protection Initiative of the Austrian Federal Ministry of Agriculture, Forestry, Environment and Water (Components A+B)	< 3 %	0.9 %
LEED Leadership in Energy and Environmental Design (Components A+B)	< 100 g/l	9 g/l
Minergie Eco® Quality standard of the "Minergie society", Switzerland (Components A+B)	< 1 (<2) %	0.9 %

According to the decopaint-directive single components are used for the calculation. For the quality rating system for sustainable construction the mixture of both components in the correct mixing ratio is the determining factor.

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 associations, e.g. the current edition of BEB-worksheets KH-0/U, KH-0/S, and KH-2. Usually when applying a coat the sealing is applied as the finish layer. Please note that the previous coat hasn't been soiled already. The ideal point of time for sealing is achieved when the previous coating has built an adequate film, but hasn't cured completely yet. When using the usual systems curing applies to 68 °F (20 °C) after 18 hours at the earliest and 72 hours at the latest. When sealing at a later point of time conduct a trial and test the substrate for adequate adhesion. Clean and prepare older substrate with a suitable mechanical method where required. When sealing old synthetic resin surfaces test for adequate adhesion. It is recommended to conduct a trial.

Mixing: Combi-trading units will be supplied in the correctly measured mixing ratio. Temper component A before use. Shake well before emptying in a clean oval bucket. Add component B and mix immediately. Blend with a slow speed mixer (200 - 400 rpm) for at least 2 - 3 minutes, for a material that is homogeneous and free of streaks. To avoid mixing errors it is recommended to empty the resin/hardener-mixture into a clean container and mix briefly once again.

Important to improve results: Wait at least 10 minutes (pre-reaction) – and blend once again.

PU 805 E must be mixed 10 minutes before application to achieve optimum technical properties. Blend briefly one more time to achieve a complete homogenisation.

Processing time max. 2 hours at 68 °F (20 °C see chart "Processing time").

Note: End of pot-life not visible

Mixing ratios:

A:B = 100:13.6 parts by weight
A:B = 100:12.4 parts by volume

Processing/Handling:

Process right after homogenisation just like with all other reactive resin products. Apply with a lint-free and solvent-resistant velour sealing roller. Divide working areas to avoid duplicate applications and overlaps. Overlapping and duplicate applications may lead to an uneven appearance and streaks.

For larger areas it is recommended that 2 or more people apply the material. One or more people apply the material in one direction, another person distributes the fresh material in a 90°-angle. Use a 50 cm roller for re-rolling on larger areas. Roller should be coated with the material. Use only for distribution not for application. Always work "fresh- in-fresh" and watch for an even distribution. Avoid ponding otherwise blooming and blushing may occur.

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 dew- point 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.

Suitable coatings

The following self-levelling coatings can be sealed with PU 805 E / PU 805 E – R10::

EP 200 VF, EP 202, EP 202 Clean, EP 213, EP 213 RAPID, EP 216 UNIVERSAl, EP 216 RAPID, EP 220, PU 405, PU 410, PU 420, PU 421, PU 425 Comfort.

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

COVERAGE

0.120 – 0.160 kg/m^2 for each application.

SPECIAL CONSIDERATIONS

To remove fresh contamination and to clean tools, use water immediately. Hardened material can only be removed mechanically.

Please note our maintenance and care recommendation for sealed floorings. For the warranty of interlayer adhesion do not apply any KLB-floor care products on aqueous sealers within the first 7 days at 68 °F (20 °C).

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: W1/DD

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 HELLAS S.A. for additional information, regarding your project.

PACKAGING

PU 805 E is available in 4.4+0.6 kg and 8.8+1.2 kg. containers.

STORAGE / SHELF LIFE

Store in dry and frost-free conditions. Ideal storage temperature is between 50 - 68 ºF (10 - 20 ºC). Do not store above 95 ºF (35 ºC).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. PENETRON HELLAS S.A. has recently updated Safety Data Sheet on the safe use of PENETRON® products. Each Safety Data Sheet contains health and safety information for the protection of your employees and your customers. KEEP OUT OF REACH OF CHILDREN.

CERTIFICATION

Slip resistance grade R9, R10 and R11 possible, according to DIN 51130 and BGR 181.

Certified low-emission according to „Eurofins Indoor Air Comfort Gold“. Compliant with AgBB and DIBt® accredited for recreation rooms.
Please ask for the tested system structure.

CE

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PU805E/PU805-R10-V2-062015
DIN EN 13813:2003-01
Synthetic resin screed mortar
DIN EN 13813: SR-B1.5-AR0.5-IR5
Fire behavior: C_{fl}-s1
Emission of corrosive substances: SR
Wear resistance BCA: AR 0.5
Adhesive tensile strength B 1.5
Impact resistance: IR 5

WARRANTY – DISCLAIMER

PENETRON HELLAS S.A. warrants that its products are manufactured under certified ISO Standard procedures, are of excellent quality and shall be free from material defects and contain all components in their proper proportion. Should any of the products be proven defective, the liability to PENETRON HELLAS S.A. shall be limited to replacement of the material proven to be defective, since the standard application procedures have been met and the suitability of the product for the particular application have been proven. PENETRON HELLAS S.A. makes no warranty as to merchantability of fitness for a particular purpose. User, after contacting the distributor of the product, shall determine the suitability of the product for his intended use and assume all risks and liability in connection therewith. While every care has been taken, the information provided in this product's data sheet make no part of any contract. All recommendations, technical data and test data contained in this product's data sheet are based upon the results of control laboratory tests or in actual field tests. However, PENETRON HELLAS S.A. makes no warranty of any kind, concerning this data. In any case, this data are given in good faith based in the PENETRON HELLAS S.A. experience, till the publication of this sheet. Due to variance in storage, handling and applications of the materials, PENETRON HELLAS S.A. accepts no liability for the results obtained. It is suggested that potential users try small applications to determine the suitability of each individual product for their specific requirements. The users should always refer to the most recent edition of the product's data sheet. PENETRON HELLAS S.A. may particularly differentiate its versions of the product's data sheet compared with those of PENETRON INTERNATIONAL LTD or respective PENETRON companies worldwide. These changes are due to text formatting, different application weathering and procedures or different product names and aim at the optimal consumer information.

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