

**DESCRIPTION**

PENECOAT™ ELASTIC - PROFESSIONAL is a liquid-applied, highly permanent, elastic, cold applied and cold curing, one component polyurethane membrane, used for long-lasting waterproofing, ideal for surfaces to be covered. PENECOAT™ ELASTIC - PROFESSIONAL cures by reaction with ground and air moisture and provides excellent mechanical, chemical and thermal properties.

**RECOMMENDED FOR**

- ▶ Rooftops
- ▶ Balconies and terraces
- ▶ Wet areas (under-tile) in bathrooms, balconies, kitchens, etc.
- ▶ Protection of polyurethane foam insulation
- ▶ Concrete constructions (bridge-decks, tunnels, etc.)
- ▶ Bitumen and asphalt felts and PVC membranes

**ADVANTAGES**

- ▶ Simple application (roller or airless spray)
- ▶ When applied polymerizes and forms a seamless, waterproofing membrane without joints
- ▶ Resistant to water and frost. Leaves no bare spots or puddles
- ▶ Crack-bridging up to 2 mm thick.
- ▶ Provides water vapor permeability (allows the substrate to “breathe”)
- ▶ Provides exceptional surface adherence without any additional anchoring
- ▶ Excellent resistance to weather conditions
- ▶ Maintains its mechanical properties over a temperature span of -30 °C to 90 °C (-22 °F to 194 °F). No seasonal softening or hardening occurs
- ▶ The waterproofed surface can return to service
- ▶ The membrane can be easily repaired locally within minutes in case it gets mechanically damaged
- ▶ Low cost

**TECHNICAL CHARACTERISTICS**

<i>Type</i>	Prepolymerized polyurethane resin	
<i>Color</i>	White	
<i>Rain stability time</i>	3-4 hours after application [68 °F (20 °C), 50% RH]	
<i>Light pedestrian traffic time</i>	12 hours	[20 °C (68 °F), 50% RH]
<i>Final Curing Time</i>	7 days	[20 °C (68 °F), 50% RH]
<i>Chemical properties</i>	Good resistance against acidic and alkali solutions (5%), detergents, seawater and oils	

**Technical characteristics of PENECOAT™ ELASTIC - PROFESSIONAL**

Characteristic	Test Result	Test Method
Elongation at break	>600 %	ASTM D 412
Tensile strength	> 4 N/mm <sup>2</sup>	ASTM D 412
Water vapor permeability	> 30 gr/m <sup>2</sup> /day lb/ft <sup>2</sup>	ISO 7783
Resistance to water pressure	No Leak (1 m water column, 24 h)	DIN EN 1928
Adhesion to concrete	> 2,0 N/mm <sup>2</sup> (concrete surface failure)	EN 1542
Crack bridging capability	Up to 2 mm crack	EOTA TR-008
Hardness (Shore A scale)	>70	ASTM D 2240 (15")
Hydrolysis (5% KOH, 7 days cycle)	No significant elastomeric change	INHOUSE LAB
Service temperature	-30 °C to 90 °C (-22 °F to 194 °F)	INHOUSE LAB
Shock temperature (15 min)	200 °C (392 °F)	INHOUSE LAB

All data are average values obtained under laboratory conditions. Impractical use, temperature, humidity and absorption of the substrate may influence the above given values.

**DIRECTIONS FOR USE**

**Surface Preparation:** Surface must be clean, dry and sound, free of any contamination, which may harmfully affect the adhesion of the membrane. Maximum moisture content should not exceed 5%. Old, loose coatings, dirt, fats, oils, organic substances and dust need to be removed by a grinding machine. Possible surface irregularities need to be smoothed. Any loose surface pieces and grinding dust need to be thoroughly removed. New concrete structures need to dry for at least 28 days. Carefully repair and seal existing cracks and joints, before the application, for long lasting waterproofing results. Contact PENETRON HELLAS S.A. for additional information, regarding your project.

**Priming:**

**Porous surfaces:** Prime absorbent surfaces, like concrete, cement screed or wood with PENEPRIMER™ – PU primer. Alternatively, dilute PENECOAT™ ELASTIC - PROFESSIONAL in 10 – 15% (by volume) PENCELEANER™ A PLUS and apply as mentioned. Apply PENECOAT™ ELASTIC - PROFESSIONAL after approx. 2 – 3 hours (while the surface is “tacky”).

**Non-porous surfaces:** Prime non-absorbent surfaces, like metal, ceramic tiles, old coatings and “green” concrete, with PENEPOX™ – W primer and apply PENECOAT™ ELASTIC - PROFESSIONAL after approx. 12 hours (while the surface is “tacky”).

Allow the primer to cure, according to its technical instructions.

**Application:** Apply PENECOAT™ ELASTIC - PROFESSIONAL on the primed surface, while the surface is

wet (“tacky”) and lay it out by a roller or a brush, until all surface is covered. If desired, you can use airless spray.

Reinforce always with FABRIC at difficult areas (in the first layer of wet product), such as wall-floor connections, chimneys, pipes, waterspouts (siphon), etc. While wet, put a correct-size piece of FABRIC on PENECOAT™ ELASTIC - PROFESSIONAL, press it to soak and then apply enough amount of PENECOAT™ ELASTIC - PROFESSIONAL, till saturation of the FABRIC

Contact PENETRON HELLAS S.A. for detailed application instructions, regarding FABRIC.

After 12 hours (not later than 36 hours), apply another layer of the PENECOAT™ ELASTIC - PROFESSIONAL. If necessary, apply a third layer of the PENECOAT™ ELASTIC - PROFESSIONAL.

**NOTE:** Reinforcement of the entire surface with the PENETRON® FABRIC is highly recommended. Use 2 – 4 in (5 – 10 cm) stripe overlapping. If PENECOAT™ ELASTIC - PROFESSIONAL is applied without FABRIC reinforcement, we recommend a three-layer application.

**Finishing:** For a color-stable and chalking-free surface, apply one or two layers of the PENECOAT™ PU – L over PENECOAT™ ELASTIC - PROFESSIONAL. The application of PENECOAT™ PU-L is especially required if a dark final color is desired (e.g. red, grey, green, etc.). If a medium traffic, wear-resistant surface is desired (e.g. balconies, terraces), apply two layers of PENECOAT™ PU – L. If a heavy traffic, abrasion-resistant surface is desired (e.g. car parking), apply one or two layers of PENECOAT™ PU – H after sprinkling sufficient amount of proper grade quartz sand (0,1 to 0,4mm particle size). The coverage with quartz sand should be made in third layer (sacrificial layer) of PENECOAT™ ELASTIC

## LIQUID-APPLIED POLYURETHANE WATERPROOFING MEMBRANE

- PROFESSIONAL while the surface is still fresh, where the indicative consumption of PENECOAT™ ELASTIC - PROFESSIONAL is 0,5 kg/m<sup>2</sup>.

**NOTE:** PENECOAT™ system is slippery when wet. In order to avoid slipperiness during wet days, sprinkle suitable aggregates (QUARTZ SAND MIX) onto the still wet coating, to create an anti-slip surface.

**COVERAGE****Approx. coverage of primer on porous surface**

PENEPRIMER™ – PU 0,25 kg/m<sup>2</sup> (0,05 lb/ft<sup>2</sup>)

PENECOAT™ ELASTIC - PROFESSIONAL/10–15% (by vol.) PENE CLEANER™ A PLUS 0,5 kg/m<sup>2</sup> (0,1 lb/ft<sup>2</sup>)

**Approx. coverage of primer on non-porous surface**

PENEPOX™ – W 0,15 – 0,20 kg/m<sup>2</sup> (0,03 – 0,04 lb/ft<sup>2</sup>)

Approx. coverage of PENECOAT™ ELASTIC - PROFESSIONAL is 1,2 – 2 kg/m<sup>2</sup> (0,25 – 0,41 lb/ft<sup>2</sup>) in two or three layers [indicative consumption 0,6 – 0,7 kg/m<sup>2</sup> (0,12 – 0,14 lb/ft<sup>2</sup>) per layer]. Indicatively, for two layers 1,3 – 1,5 kg/m<sup>2</sup> (0,27 – 0,31 lb/ft<sup>2</sup>) is recommended. The use of FABRIC is expected to double the PENECOAT™ ELASTIC - PROFESSIONAL consumption per m<sup>2</sup> (ft<sup>2</sup>).

**SPECIAL CONSIDERATIONS**

DO NOT apply over 0,6 mm thickness (dry film) PENECOAT™ ELASTIC - PROFESSIONAL per layer. For the best results, the temperature during application and cure should be between 5 °C and 35 °C (41 °F and 95 °F). Low temperatures may cause retardation in curing, while higher temperatures may accelerate the process. High humidity may affect the final finish.

Always stir PENECOAT™ ELASTIC - PROFESSIONAL well before use.

PENECOAT™ ELASTIC - PROFESSIONAL requires covering by aliphatic polyurethane elastic protective top-coat PENECOAT™ PU-L.

Contact PENETRON HELLAS S.A. for specific instructions, regarding your project.

**PACKAGING**

PENECOAT™ ELASTIC - PROFESSIONAL is available in 25 kg (55 lb), 15 kg (33 lb), 6 kg (13 lb) and 1 kg (2 lb) pails.

**STORAGE / SHELF LIFE**

When stored in a dry and cool place in their original, unopened containers, shelf life is 12 months. Protect the material against moisture and direct sunlight. Storage

temperature should be between 5 °C – 35 °C (41 °F – 95 °F).

**SAFE HANDLING INFORMATION**

Wear appropriate eye, skin and breathing protection, when using this product. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. 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**

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136 79 Acharnes, Greece  
15

DOP NO: 14.026-20-25D070722-05  
EN 1504-2

PENECOAT ELASTIC - PROFESSIONAL

Surface protection product – coating:  
Protection against ingress [Method 1.3]  
Linear shrinkage: NPD

Coefficient of thermal expansion: NPD  
Adhesion by cross-cut test: NPD

Permeability to CO<sub>2</sub>: S<sub>D</sub>>50m

Water vapour permeability: Class I: S<sub>D</sub><5m

Capillary absorption and permeability to water: ω < 0,1  
kg/m<sup>2</sup>.h<sup>0,5</sup>

Thermal compatibility: NPD

Resistance to thermal shock: NPD

Chemical resistance: NPD

Crack bridging ability: NPD

Adhesion strength by pull-off test: ≥ 1,5 (1,0) N/mm<sup>2</sup>

Reaction to fire: Class F

Slip / skid resistance: NPD

Behavior after artificial weathering: NPD

Antistatic behavior: NPD

Adhesion on wet concrete: NPD

Dangerous substances: According 5.3

**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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