

DESCRIPTION

PENECOAT™ SF ELASTIC is an elastic, two component polyurethane coating, free of solvents, for long lasting waterproofing. Based on the polyurethane technology, PENECOAT™ SF ELASTIC can be used in even demanding applications, such as potable water tanks. It cures by reaction (cross linking) of the two components.

RECOMMENDED FOR

PENECOAT™ SF ELASTIC can be used on surfaces in contact with potable water. It can be used on surfaces with insufficient ventilation, as it is free of solvents.

- ▶ Waterproofing potable water reservoirs/tanks (fully reinforced)
- ▶ Waterproofing channels and pipes of potable water (fully reinforced)
- ▶ Fire protection cisterns or watering systems
- ▶ Swimming pools (under tiles)
- ▶ Odorless waterproofing of various applications, below tiling in bathrooms, kitchens, balconies, pool channels, etc

ADVANTAGES

- ▶ Certified for use in potable water reservoirs/tanks
- ▶ Easy to apply
- ▶ When applied, it cures and creates a uniform hydrophobic membrane without joints
- ▶ Not hydrolyzed
- ▶ Flexible. Crack bridging
- ▶ Ensures excellent bonding on the surface
- ▶ Maintains its mechanical properties over a temperature span of -30 °C to 90 °C (-22 °F to 194 °F) – Not suitable for tanks and reservoirs with water over +60 °C (140 °F). No seasonal softening or hardening occurs
- ▶ Surface can return to service
- ▶ Full surface adherence
- ▶ The membrane can be easily repaired locally within minutes in case it gets mechanically damaged
- ▶ Low cost

TECHNICAL CHARACTERISTICS

Characteristics	Test Result	Test Method
Composition	Polyurethane resin + Hardener	
Color	Off-White	
Mixing ratio	A : B = 6 : 1 (by mass)	
Resistance to water pressure	No leakage (1m water column, 24h)	DIN EN 1928
Elongation at break	> 60% (without reinforcement)	ASTM D 412
Adhesion to concrete	> 2 N/mm ² (concrete failure)	ASTM D 903
Hardness (Shore A Scale)	70 ± 5	ASTM D 2240
Solids content	100%	CALCULATED
UV accelerated ageing, in the presence of moisture	Passed – No significant changes	EOTA TR-010
Hydrolysis (5% KOH, 7 days cycle)	No significant elastomeric change	Inhouse Lab
Application temperature	5 °C to 35 °C (41 °F to 95 °F)	Conditions: 20 °C (68 °F), 50% RH
Workability time	30 min	
Curing time	6-8 hours	
Traffic time	24 hours	
Final curing time	7 days	
Chemical properties	Good resistance against acidic and alkali solutions (5%), detergents, seawater and oils	

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: The surface needs to be clean, dry and sound, free of any contamination, which may harmfully affect the adhesion of the coating. Maximum moisture content should not exceed 5%. New concrete structures need to dry for at least 28 days. Old coatings, dirt, fats, oils, organic substances and dust need to be removed by a grinding machine. Possible surface irregularities need to be smoothened. Any loose surface pieces and grinding dust need to be thoroughly removed.

NOTE: Careful surface preparation is essential for optimum finish and durability. Do not wash surface with water.

Expansion joint sealing: Prime the expansion joints with the appropriate primer (U-SEAL 110 for porous substrates). Apply a polyethylene backing rod, of the appropriate section (PENETRON® BACKING ROD) inside the joint and fill the joint with the appropriate sealer, U-SEAL or SiMP®SEAL.

Priming: Clean cracks and hairline cracks of dust, residue or other contamination. Fill all cracks with suitable mortar. Prime all surfaces with the PENEPOX™ SF PRIMER A+B, by roller or by brush [min. 0.05 0.06 lb/ft² (250 – 300 gr/m²)]. Wait 12 hours to dry (but not more than 18 hours).

Mixing: Stir thoroughly PENEPOX™ SF ELASTIC A with a drilling mixer and a mixing wand, before use. Pour the content of PENEPOX™ SF ELASTIC B into the PENEPOX™ SF ELASTIC A and mix thoroughly with a low-speed drilling mixer and a mixing wand for about 3 minutes, until the mixture is completely homogeneous.

NOTE: The mixing of the components has to be effected very thoroughly, especially on the walls and bottom of the container.

Mixing ratios: Mixing ratio of PENEPOX™ SF ELASTIC is A : B = 6 : 1 (by mass).

Application: Apply the mixture of PENEPOX™ SF ELASTIC onto the surface and lay it out by roller, brush or trowel, until all waterproofing surface is covered. 12- 18 hours later (but not later than 48 hours), apply a second layer of PENEPOX™ SF ELASTIC A+B. For demanding or under-tile applications, 12- 18 hours later (but not later than 48 hours), apply a third layer of PENEPOX™ SF ELASTIC A+B. If PENEPOX™ SF ELASTIC A+B is to be covered with ceramic tiles, fully saturate with quartz aggregate sand 0,4-0,8mm (QUARTZ SAND MIX). The aggregates will create an adhesion bridge to the tile adhesive that will follow.

Reinforcing membrane: Reinforcing PENECOAT™ SF ELASTIC with FABRIC (in the first layer of wet product) across the coated surface, is highly recommended. Reinforce all critical spots with FABRIC, such as wall-floor connection, exhaust vents and piping, etc. While wet, put a correct-size piece of FABRIC on PENECOAT™ SF ELASTIC, press it to soak and then apply enough amount of PENECOAT™ SF ELASTIC, till saturation of the FABRIC. The use of FABRIC is expected to double the

PENECOAT™ SF ELASTIC consumption per ft² (m²). Contact PENETRON HELLAS S.A. for detailed application instructions, regarding FABRIC.

Coverage: 1,2 – 1,5 kg/m² (0,25 – 0,31 lb/ft²) applied in 2 - 3 layers. The use of FABRIC is expected to double the PENECOAT™ SF ELASTIC consumption per ft² (m²).

SPECIAL CONSIDERATIONS

For the best results, the temperature application and curing should be between 50 °F to 95 °F (10 °C to 35 °C). Low temperatures cause curing retardation, while high temperatures speed up curing. High humidity may affect the final finish.

The material is recommended for structures that are not exposed to direct sunlight. If exposed to sunlight, the material shows partial yellowing and chalking effect, but generally maintains good mechanical properties.

Careful compliance with the time margins is essential for an excellent result.

All the produced mixture must be used immediately on the surface, as polymerization causes an exothermic reaction and the mixture hardens quickly, preventing from applying it properly.

When you apply PENECOAT™ SF ELASTIC A+B, ensure that its consumption is inside the working time limits (30 minutes).

Hands and tools should be cleaned, before polymerization with the solvent PENELEANER™ A PLUS.

Contact PENETRON HELLAS S.A. for further information, regarding your project.

PACKAGING

PENECOAT™ SF ELASTIC A+B is available in 15+2,5 kg (33+5,5 lb) and 6+1 kg (13+2,2 lb) containers.

STORAGE / SHELF LIFE

PENECOAT™ SF ELASTIC A+B can be stored for 12 months in its original packing (unopened container) at 5 °C – 35 °C (41 °F – 95 °F) in a cool, dry place. Keep away from wet areas and direct sunlight.

SAFE HANDLING INFORMATION

Good ventilation or appropriate respiratory equipment is advised. 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

PENECOAT™ SF ELASTIC is certified by the current European and German regulations for use on surfaces with permanent contact with potable water. PENECOAT™ SF ELASTIC is certified by the General Chemical State Laboratory, based on the German Standard Kunststoffe im Lebensmittelverkehr, par. 1.3.2.5.2), the Greek Standard (Codex Alimentarius, articles. 21,21a,24,26,28) and the current European regulations. All test were carried out based on ELOT EN 1484, prEN 12873-1, prEN 14395-1 Standards.



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PENECOAT SF ELASTIC

Surface protection product – coating:
Protection against ingress [Method 1.3]
(Used with PENEPOX SF PRIMER)
Linear shrinkage: NPD

Coefficient of thermal expansion: NPD

Adhesion by cross-cut test: NPD

Permeability to CO₂: S_D > 50m

Water vapour permeability: Class II: 5 m < S_D < 5m

Capillary absorption and permeability to water: ω < 0,1
kg/m².h^{0,5}

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/mm²

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 is 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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