

## DESCRIPTION

PENECOAT™ POOL is a one or two component (with the addition of UV elasticizer), coloured, flexible, hard, aliphatic polyurethane based, protective pool coating. PENECOAT™ POOL ensures high impact and abrasion strength and very good resistance against chemical solutions used in pools, common and domestic detergents. It cures by reaction with ground and air moisture.

## RECOMMENDED FOR

PENECOAT™ POOL is used as a protective coating in:

- ▶ Pools
- ▶ Artificial ponds
- ▶ Fountains
- ▶ Water tanks
- ▶ Water channels
- ▶ Related applications

## ADVANTAGES

- ▶ Easy application (single component, ready-to-use)
- ▶ Provides strong resistance to pool chemical solutions
- ▶ Abrasion resistant
- ▶ No chalking
- ▶ No discoloration by sunlight
- ▶ Decorative material
- ▶ Resistant to puddle water
- ▶ Low cost

## TECHNICAL CHARACTERISTICS

| Characteristics                      | Test Result                           | Test Method                          |
|--------------------------------------|---------------------------------------|--------------------------------------|
| <i>Composition</i>                   | Aliphatic polyurethane                |                                      |
| <i>Color</i>                         | Light blue, blue, beige/sand, whitish |                                      |
| <i>Application temperature</i>       | 5 °C to 35 °C (41 °F to 95 °F)        | Conditions: 20 °C (68 °F),<br>50% RH |
| <i>Tack free time</i>                | 1-3 hours                             |                                      |
| <i>Light pedestrian traffic time</i> | 24 hours                              |                                      |
| <i>Final curing time</i>             | 7 days                                |                                      |

**Technical characteristics of PENECOAT™ POOL**

| Characteristic                                                                                | Test Result                                                                                | Test Method       |
|-----------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|-------------------|
| Hardness (Shore A Scale)                                                                      | >80                                                                                        | ASTM D 2240       |
| Resistance to water pressure                                                                  | No leak (1m water column, 24)                                                              | DIN EN 1928       |
| Surface chalking after 2000h of accelerated aging (DIN EN ISO 4892-3, 400 MJ/m <sup>2</sup> ) | No chalking observed.<br>Chalking grade 0.                                                 | DIN EN ISO 4628-6 |
| Water vapor permeability (0,45 kg/m <sup>2</sup> )                                            | 2,15 g/m <sup>2</sup> d                                                                    | ISO 7783          |
| Permeability to CO <sub>2</sub> (0,45 kg/m <sup>2</sup> )                                     | 0,31 g/m <sup>2</sup> d                                                                    | EN 1062-6         |
| Permeability to water (0,45 kg/m <sup>2</sup> )                                               | 1,78 g/m <sup>2</sup> d                                                                    | EN 1062-3         |
| Adhesion to concrete                                                                          | >2,0 N/mm <sup>2</sup> (concrete surface failure)                                          | EN 1542           |
| 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       |
| Service temperature                                                                           | -40 °C to 90 °C                                                                            | Inhouse Lab       |
| Chemical properties                                                                           | Good resistance against acidic and alkali solutions (5%),<br>detergents, seawater and oils |                   |

**Chemical resistance of PENECOAT™ POOL**

|                        |   |                 |   |
|------------------------|---|-----------------|---|
| Sodium hypochlorite 5% | + | Sea water       | + |
| Hydrochloric acid 5%   | + | Skin sunscreens | - |

PENECOAT™ coated on cement board, immersed for 30 days, in laboratory conditions:

+ : Stable. - : Non stable (color change).

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. Remove all loosing materials. New concrete structures need to dry for at least 28 days. Maximum moisture content should not exceed 5%. Old coatings, dirt, fats, oils, organic substances and dust need to be removed by a grinding machine. Any loose surface pieces and grinding dust need to be thoroughly removed.

In case of PENECOAT™ POOL application on old pool coating (eg. epoxy coatings) or surfaces with low mechanical strength, grinding of the surface is required, prior to application, with a grinding machine, to remove considerable thickness, to remove polishing and roughen the surface. To enhance adhesion and stabilization, we recommend adding the water-based epoxy primer PENEPOX™ W. Dilution of PENEPOX™ W with water at a ratio of 10 to 20% (by weight), is highly recommended, at an indicative consumption between 180-200 gr/m<sup>2</sup>. The application of the polyurethane-based paint PENECOAT™ POOL is made within 12 to 24 hours (lower temperatures period), while at normal temperatures is recommended within 2-3 hours.

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

**Application:** Apply the first layer of PENECOAT™ POOL, on the prepared surface, with a fine quality roller. Apply the second layer of PENECOAT™ POOL after 1-3 hours (not more than 4 hours). If required, apply a third layer of PENECOAT™ POOL, after 1-3 hours (not more than 4 hours).

**Enhance UV flexibility system:** We recommend in most applications the addition, by mixing, 10% by weight of PENECOAT™ POOL (1 kg PENECOAT™ CLEAR per 10 kg PENECOAT™ POOL), the aliphatic plasticizer, PENECOAT™ CLEAR. That way, PENECOAT™ POOL presents enhanced bonding properties and chemical resistance, excellent UV resistance and, finally, it turns from a flexible to an elastic material, able to bridge capillary cracks up to approx. 1/64 " (0.5 mm). Mixing of the material is as follows: Mix PENECOAT™ POOL thoroughly for approx. 2-3 minutes, using a mixing drill at low speed, and then add the quantity of PENECOAT™ CLEAR, mixing for additionally 2-3 minutes, until the mixture is homogenous.

**NOTE:** It is recommended to apply all layers of PENECOAT™ POOL coating on the same day, to achieve the best bonding between layers.

**COVERAGE**

150 to 200 gr/m<sup>2</sup> (0,03 to 0,04 lb/ft<sup>2</sup>) per layer. Apply on two to three layers.

**SPECIAL CONSIDERATIONS**

For the best results, the temperature application and curing should be between 5 °C to 35 °C (41 °F to 95 °F). Low temperatures cause curing retardation, while high temperatures speed up curing. High humidity may affect the final finish.

Vapors of PENECOAT™ POOL are heavier than air and they tend to concentrate on the bottom of the pool. We recommend high attention to good ventilation and safety measures at work.

Tools should be cleaned, before polymerization with the solvent PENECCLEANER™ A PLUS.

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

**PACKAGING**

PENECOAT™ POOL is available in 20 kg (44 lb), 10 kg (22 lb), 5 kg (11 lb) and 1 kg (2,2 lb) containers.

**STORAGE / SHELF LIFE**

PENECOAT™ POOL can be stored for 9 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**

Flammable. No smoking. 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**


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DOP NO: 14.014-04-10D160922-05  
EN 1504-2

PENECOAT POOL

Surface protection product – coating:

Protection against ingress – [Method 1.3]

Moisture Control – [Method 2.2]

Increasing Resistivity – [Method 8.2]

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 II: 5 m ≤ S<sub>D</sub> ≤ 50 m

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

Thermal compatibility: 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**

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