

**DESCRIPTION**

PENESEAL PRO™ is a spray applied liquid sealer which forms a sub-surface barrier that protects concrete against water penetration and seals hairline cracks. When sprayed onto a thoroughly cleansed concrete surface, it will react with the concrete to form a sub-surface gel. This gel seals the pores, capillaries and cracks. As long as water is present, the product will remain active and seal future hairline cracks.

**RECOMMENDED FOR**

Because of its ability to withstand thermal stress, PENESEAL PRO™ is ideal for concrete roofs, podium decks, bridge decks, terraces, traffic bearing structures, runways, and driveways. In short, everywhere concrete is directly exposed to the elements and considerable thermal stress can be expected. For below ground projects, Penetron is the proven system of choice.

**ADVANTAGES**

- ▶ Seals existing cracks. New hairline cracks will be sealed on contact with water.
- ▶ Protects against water, chloride and sulphate ingress; increases resistance to chemical attack and carbonation; PENESEAL PRO™ is not to be used in areas where strong acid or alkali attack can be expected.
- ▶ Sub-surface nature does not affect the adhesion of subsequent products.
- ▶ Increases surface hardness, approximately 13/16 in (20.6 mm depth), to 8 on Moh's scale.
- ▶ Simple, fast and economical application compared to alternative membrane systems.
- ▶ Trafficable within 6 hours after first water curing without affecting protection. The product will not peel or scratch and the treated surfaces can be polished. No negative screed necessary.
- ▶ Non toxic - can be applied to potable water containing structures.
- ▶ Ease of repair - if large cracks continue to be present or re-appear during the life of the structure they are easy to find and fix; no tedious lifting and removal of membrane to find the cracks is necessary.

**DIRECTIONS FOR USE**

**Application Methods:** The product can be applied using simple hand spraying equipment for small areas to motorized spray units for large projects. With a simple backpack spray unit, coverage of 120-180 sq yards (100-151 m<sup>2</sup>) per hour can be achieved. After application all equipment should be thoroughly cleaned with water. Contact your Penetron International representative for further details on spraying equipment.

**Tools:** Low-pressure sprayer, soft bristle broom, squeegee, and water hose.

**Application:**

- Step 1.** Flood all cracks with PENESEAL PRO™ at approximately 1 quart per 15 feet (1 liter per 5 linear meters).
- Step 2.** Apply the product to the surface to be treated at the recommended coverage rate.
- Step 3.** Spray the product at low pressure and in low wind conditions.
- Step 4.** When surface is dry to the touch (2-6 hours after application) flood the surface with abundant water. If it rains before the product is dry, a second application is required once the surface is dry.
- Step 5.** Twenty-four (24) hours later, flood the surface with abundant water again.
- Step 6.** Another 24 hours later, flood the surface with abundant water again.
- Step 7.** After third flooding, the treated area can be ponded to verify the waterproofing performance.

#### COVERAGE

1 quart to 45-65 sq ft (1 liter to 4-6 m<sup>2</sup>): 45 sq ft (4 m<sup>2</sup>) for rough and porous surfaces, 65 sq ft (6 m<sup>2</sup>) for very smooth, dense surfaces and 55 sq ft (5 m<sup>2</sup>) for normal surfaces. Cracks: additional 1 quart per 15 feet (1 liter per 5 linear meters).

#### SPECIAL CONSIDERATIONS

- ▶ PENESEAL PRO™ is not suitable for the repair of structural or design cracks. For cold joints, expansion joints, penetrations and pour joints, appropriate joint treatment products such as PENECRETE MORTAR™, waterstops, elastomeric sealants, etc., need to be applied in addition to the PENESEAL PRO™ treatment.
- ▶ In case the main purpose of application is floor hardening, use PENESEAL FH™ instead.
- ▶ PENESEAL PRO™ should not be used for negative side waterproofing. PENETRON® should be used for this application.
- ▶ PENESEAL PRO™ can be used on concrete that contains fly ash, slag or silica fume, as long as these ingredients do not exceed 30% of the total cementitious materials in the concrete mix. To ascertain suitability, execute a trial on a small area or obtain concrete mix design from supplier. To increase suitability of such concrete, a calcium treatment may be applied to the surface. This can also be done to increase effectiveness on old and heavily carbonated concrete.
- ▶ Do not spray PENESEAL PRO™ onto glass, aluminum, wood or painted surfaces. In case this happens, remove the product with water.
- ▶ Contact your Penetron International representative for details. PENESEAL PRO™ should not be used as a replacement or a solution for poor design, detailing and workmanship.

#### PACKAGING

Available in 5 gallon (19 L) pails, 55 gallon (208 L) drums and 275 gallon (1041 L) containers.

#### STORAGE / SHELF LIFE

Two years when stored in sealed drums. Keep pails closed and avoid exposure to heat and direct sunlight. **DO NOT ALLOW TO FREEZE!**

#### TECHNICAL DATA

##### Property and Safety Information:

Color: Transparent  
Specific Gravity: 1.12  
Non-toxic and biodegradable  
Non-explosive, non-flammable  
No known ill effects if swallowed

#### SAFE HANDLING INFORMATION

**CAUTION:** Avoid skin and eye contact. If contact is made, flush areas with lots of water. Protective gloves should be worn. Breathing apparatus is advised if applied in enclosed environments.



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PENESEAL PRO

Impregnation for protection and repair of concrete structures [Protection against penetration Class I.2 (I) and Increasing of physical resistance Class 5.2 (I)]

Abrasion resistance: ≥ 30 % improvement

Capillary water absorption: Class II

Impact strength: Class III (≥ 20 Nm)

Bond strength by pull-off: ≥ 0,8 N/mm<sup>2</sup>

Penetration depth: ≥ 5 mm

#### WARRANTY

PENETRON INTERNATIONAL, LTD. warrants that the products manufactured by it shall be free from material defects and will conform to formulation standards and contain all components in their proper proportion. Should any of the products be proven defective, the liability to PENETRON INTERNATIONAL, LTD. shall be limited to replacement of the material proven to be defective and shall in no case be liable otherwise or for incidental or consequential damages. **PENETRON INTERNATIONAL, LTD. MAKES NO WARRANTY AS TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED.** User shall determine the suitability of the product for its intended use and assume all risks and liability in connection therewith.