

**REACTIVE PENETRATING CONCRETE SEALER**

**DESCRIPTION**

PENESEAL PRO® (RTU) is a ready-to-use (RTU: Ready To Use), spray applied liquid sealer which forms a sub-surface barrier that protects concrete against water penetration and seals hairline cracks up to 1/12 in (2 mm) in thickness. It is applied on surfaces exposed to heat stress. When sprayed onto a thoroughly cleansed concrete surface, it will react with the calcium hydroxide of 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, while protects the concrete against contamination, water and chloride ingress. For below ground projects, Penetron is the proven system of choice.

**RECOMMENDED FOR**

- ▶ Concrete roofs
- ▶ Podium decks, bridge decks
- ▶ Terraces
- ▶ Traffic bearing structures, runways, and driveways
- ▶ wherever concrete is directly exposed to the elements and considerable thermal stress can be expected

**ADVANTAGES**

- ▶ 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

**TECHNICAL CHARACTERISTICS**

<i>Color</i>	Transparent
<i>Specific gravity</i>	70 lb/ft <sup>3</sup> (1.12 kg/Lt)
<i>Toxicity</i>	Non-toxic and biodegradable
<i>Flammability</i>	Non-explosive, non-flammable
<i>Ill effects</i>	No known ill effects if swallowed

**DIRECTIONS FOR USE**

**Surface Preparation:** Remove all coatings, form oils, curing or sealing agents through chemical or mechanical means. Remove dust, dirt, laitance or any other contaminates, by sweeping all areas to be treated with a fine bristle broom or scrub brush. Substrate temperature must be between 41 – 95 °F (5 – 35 °C). In case of new concrete, surfaces must be 14 days (28 days is recommended), after deforming and must be clean and free of dust (not wet).

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**Application:** Flood all cracks with PENESEAL PRO® at approximately 1 quart per 15 feet (1 liter per 5 linear meters). Apply the product to the surface to be treated at the recommended coverage rate. Spray the product at low pressure and in low wind conditions. 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. Twenty-four (24) hours later, flood the surface with abundant water again. Another 24 hours later, flood the surface with abundant water again. After third flooding, the treated area can be ponded to verify the waterproofing performance.

**NOTE:** 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 yd<sup>2</sup> (100-151 m<sup>2</sup>) per hour can be achieved. After application, all equipment should be thoroughly cleaned with water. Contact PENETRON HELLAS S.A. for further details on spraying equipment.

**COVERAGE**

**1 quart to 45-65 ft<sup>2</sup> (1 Lt to 4-6 m<sup>2</sup>)**

- 45 ft<sup>2</sup> (4 m<sup>2</sup>) for rough and porous surfaces
- 65 ft<sup>2</sup> (6 m<sup>2</sup>) for very smooth, dense surfaces
- 55 ft<sup>2</sup> (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.

Recommended tools are low-pressure sprayer, soft bristle broom, squeegee, and water hose. After application all equipment should be thoroughly cleaned with water.

Contact your PENETRON HELLAS S.A. for details. PENESEAL PRO® should not be used as a replacement or a solution for poor design, detailing and workmanship.

**PACKAGING**

PENESEAL PRO® is available in 5 gallon (19 Lt) pails and 13 lb (6 Kg).

**STORAGE / SHELF LIFE**

Storage life is 2 years when stored in sealed drums. Keep pails closed and avoid exposure to heat and direct sunlight. Do not allow to freeze.

**SAFE HANDLING INFORMATION**

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



1085-CPR-0080  
EN 1504-2

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**PENESEAL PRO**

Impregnation for protection and repair of concrete structures

[Protection against penetration Class 1.2 (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

## REACTIVE PENETRATING CONCRETE SEALER

**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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