

**REACTIVE PENETRATING CONCRETE SEALER**

**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
- ▶ Crack sealing ability 0,5 mm (Ref: 0524-443-06/May 24<sup>th</sup>, 2016)
- ▶ 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 20,6 mm (13/16 in) 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>	1,23 kg/L (77 lb/ft <sup>3</sup> )
<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:** Surface damage, such as honeycombs, voids, etc. must be routed out & repaired with PENECRETE MORTAR®. Surface should be minimum 14 days old (28 days is recommended), clean, free of dust and dry (no damp areas!) Any formwork oil, curing compounds or previous treatments should be completely removed. Temperature should be between 5° and 35°C (41° and 95°F). Avoid application when rain is imminent or in heavy wind. Old concrete and concrete affected by carbonation may need to be treated with calcium for adequate reaction.

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**Application:** Flood all cracks with PENESEAL PRO® at approximately 1 L per 5 linear meters (1 quart per 15 feet). 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 100-151 m<sup>2</sup> (120-180 yd<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. PENESEAL PRO® is ready to use and not to be diluted with water.

**COVERAGE**

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

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

Cracks: additional 1 L per 5 linear meters (1 quart per 15 feet).

**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 6 Kg (13 lb), 19 L (5 gal) pails, 208 L drums (55 gal) and 1041 L (275 gal) containers.

**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**



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DOP NO: 10.00017D121217-01  
EN 1504-2

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

Reaction to fire: NPD

Dangerous substances: NPD

## REACTIVE PENETRATING CONCRETE SEALER

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