PRODUCT DATA SHEET

PENETRON PLUS®

Version, Penetron Hellas 17.08.2026

CRYSTALLINE WATERPROOFING DRY-SHAKE

DESCRIPTION

PENETRON PLUS® is a unique integral crystalline chemical treatment for the waterproofing and protection of concrete. PENETRON PLUS® has been specially formulated for dry-shake applications on horizontal concrete surfaces, where greater impact and abrasion resistance is required. Packaged in the form of a dry powder compound, PENETRON PLUS® consists of Portland cement, various active proprietary chemicals, and a synthetic aggregate hardener, which has been crushed and graded to particle sizes suitable for concrete floors and industrial troweled floors, for permanent waterproofing protection. PENETRON PLUS® becomes an integral part of the concrete surface thereby eliminating problems normally associated with coatings (e.g. scaling, dusting, flaking and delamination). The active chemicals react with the moisture in the fresh concrete, causing a catalytic reaction, which generates a non-soluble crystalline formation within the pores and capillary tracts of the concrete.

RECOMMENDED FOR

- Sewage and water treatment plants
- Traffic bearing surfaces
- Warehouse floors
- Foundation slabs
- Below-grade
- Parking structures

ADVANTAGES

- Resists extreme hydrostatic pressure from either positive or negative surface of the concrete slab
- Becomes an integral part of the concrete
- Highly resistant to aggressive chemicals
- Can seal hairline cracks up to 0,5 mm (1/51”)
- Allows concrete to breath
- Non-toxic. Approved for use in potable water applications (NSF 61)
- Less costly to apply than most other methods
- Permanent
- Increases flexibility in the construction schedule
- Zero VOC - Penetron powdered products contain zero volatile organic compounds and are safe for use both outdoors and in confined indoor spaces

DIRECTIONS FOR USE

Surface Preparation: After fresh concrete is placed, consolidated and leveled, wait until concrete can be walked on leaving an indentation of 6-9 mm (1/4”-1/3”). Concrete should be free of bleed water and be able to support the weight of a power trowel. Float open the surface.

Application: Immediately after floating open the surface and within one hour of finishing the concrete, apply one-half of the dry shake PENETRON PLUS® by hand or mechanical spreader. The dry shake material must be spread evenly. As soon as the dry shake PENETRON PLUS® has absorbed moisture from the base slab, it should be power floated to the surface. Immediately after power floating, apply remaining dry shake material at right angles to the first application. Allow remaining dry shake material to absorb moisture from the base slab and then power float the material into the surface. When concrete has hardened sufficiently, power trowel surface to the required finish.

Application Rates: Under normal conditions, the coverage rate for PENETRON PLUS® is 0,6 kg/m² (1 lb/yd^2), depending on the degree of abrasion resistance required.

Coverage: One 18 kg (40 lb) bag covers approximately 34 m² (360 ft^2).

NOTE: Under heavy traffic conditions or where even greater abrasion resistance is required, consult PENETRON HELLAS S.A. for a recommendation that meets your specific needs.

Curing: Curing is important and should begin as soon as final set has occurred, but before surface starts to dry. Conventional moist curing procedures such as water spray, wet burlap or plastic covers may be used. Curing should continue for at least 48 hours. In hot, dry, sunny conditions, consult manufacturer for specific instructions. In lieu of moist curing, concrete sealers and curing compounds meeting ASTM C-309 may be used. In all cases, follow ACI guidelines and recommendations for proper curing.

NOTE: It is common that edges of a slab wall will set up earlier than the main body of concrete. Such edge areas can be dry-shaked and finished with hand tools prior to proceeding with application of the main body of concrete.

SPECIAL CONSIDERATIONS

For the best results, when applying dry shake materials, the air content of the concrete should not exceed 3% (a high air content can make it difficult to achieve a proper application). If a high entrained air content is specified (e.g. for concrete that will be exposed to freezing and thawing), contact the PENETRON HELLAS S.A. for further application information. In hot, dry, or windy conditions, it is advisable to use an evaporation retardant on the fresh concrete surface to prevent premature drying of the slab. Chronic moving cracks or joints will require a suitable flexible sealant. For certain concrete mix designs, we recommend a test panel be produced and evaluated for finishing. For example, high performance concrete with a low water/cement ratio, air entrainment, super plasticizers, or silica fume may reduce bleed water and make the concrete more difficult to finish.

For more instructions, alternative application methods, or information concerning the compatibility of the Penetron treatment with other products or technologies, contact or PENETRON HELLAS S.A.

PACKAGING

This product can be purchased in 18 kg (40 lb) bags.

STORAGE / SHELF LIFE

PENETRON PLUS® must be stored dry at a minimum temperature of 7 ºC (45 ºF). Shelf life is two years when stored under proper conditions.

SAFE HANDLING INFORMATION

PENETRON PLUS® is alkaline. As a cementitious powder or mixture, PENETRON PLUS® may cause significant skin and eye irritation. Wear proper skin and eye protection. In the event of skin or eye irritation, wash the affected area with clean water and seek immediate medical attention. Comprehensive and up-to-date Material Safety Data Sheets are maintained on all Penetron products. Each sheet contains health and safety information for the protection of your employees and customers. 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.

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.

CERTIFICATION

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Allentown, PA 18103
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1085-CPR-0040
DOP NO: 10.00008D310322-01
EN 1504-3
PENETRON PLUS
Products and systems for structural and non-structural protection and repair of concrete structures
Compressive strength: Class R3 (≥ 25 MPa)
Chloride ion content: < 0.05% by mass
Adhesive bond: NPD
Restrained shrinkage, expanding: NPD
Elastic modulus: NPD
Thermal compatibility (Part1): NPD
Carbonation resistance: deemed to have no corrosive effect
Reaction to fire: NPD
Dangerous substances: NPD

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