PENECRETE MORTAR®

Version, Penetron Hellas 17.08.2026

CRYSTALLINE WATERPROOFING MORTAR

DESCRIPTION

PENECRETE MORTAR® consists of Portland cement, specially treated quartz sand and a compound of active chemicals. The active chemicals react with moisture and the by-products of cement hydration to cause a catalytic reaction, which generates an insoluble integral crystalline complex. These crystalline complexes grow in the presence of water and block the capillaries of the concrete and minor shrinkage cracks, thus waterproofing the concrete. Chemical activation begins when the powder is mixed with water and may take several days to completely block the capillaries, depending on ambient temperature and environmental conditions.

RECOMMENDED FOR

Applied in conjunction with PENETRON® for:

- Installation of seal strips, reglets and coves at joints to assure water tightness
- Patching of tie holes and faulty construction joints
- Patching and filling of routed out cracks
- Repairing of spalled and honeycombed areas

ADVANTAGES

- Can be applied to the positive or negative water pressure sides of a structure
- Resists strong hydrostatic pressure
- Seals cracks up to 0,5 mm (1/51")
- Easy to use – needs only to be mixed with water prior to application
- Allows the concrete to "breathe"
- Can be skim coated or feather edged
- Can be applied to moist concrete
- Fast setting
- Inorganic – contains no polymers
- NSF 61 certified used in potable water applications
- Non-flammable
- Resists abrasion and mechanical wear
- Freeze/thaw resistant
- Zero VOC - Penetron powdered products contain zero volatile organic compounds and are safe for use both outdoors and in confined indoor spaces.

TECHNICAL CHARACTERISTICS

Technical data of PENECRETE MORTAR®

Time Period	Compressive Strength (ASTM C-109)	Tensile Strength (ASTM C-190)
1 day	11 MPa (1600 psi)	2,2 MPa (320 psi)
3 days	17 MPa (2400 psi)	3,6 MPa (520 psi)
7 days	40 MPa (5800 psi)	5,0 MPa (730 psi)
28 days	48 MPa (6900 psi)	6,2 MPa (900 psi)

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: All surfaces to be patched, repaired or sealed with PENECRETE MORTAR® must be clean and sound. Cracks should be routed out to a U-shaped configuration, approximately 20 mm (3/4") wide and a minimum of 20 mm (3/4") deep or to a reversed Π-shaped configuration 25x25x30 mm (1''x1''x1,2") in size. Tie holes should be roughened prior to filling. Spalled and honeycombed areas must be thoroughly cleaned and chiseled back to sound concrete prior to repair. Remove all dirt, cement laitance, form release agents, curing compounds, paints, coatings, etc. by means of wet or dry sandblasting, high pressure water jet (> 300 bar) or other suitable mechanical means. Surfaces must be well moistened to a dull dampness at the time of application. The concrete should be damp with no wet sheen on the surface.

Mixing: For routed cracks, coves and non-moving joints, add water to PENECRETE MORTAR® until a medium stiff, trowelable consistency is reached. The texture of the mix should be pliable enough to be trowelled into the cracks with some pressure, but not so pliable that it would run out or sag out of the crack.

Mixing ratios: Approximate mixing ratio is 4 ½ parts PENECRETE MORTAR® powder to 1 part water (by volume).

For tie holes and pointing applications, add only a small amount of water. Mixed consistency should be that of "dry earth", holding a shape when squeezed in your hand but easily crumbled when pressed between fingers. Mix only as much material as can be used within 20 minutes.

Application:

Cracks/Seal strips (reglets & coves): After proper surface preparation and routing to appropriate configuration, prime areas to be patched or repaired with a slurry coat of PENETRON® and 10 mm (2/5") around the area and while "green" (tacky), fill cavity flush to surface with PENECRETE MORTAR® in mortar consistency.

Spalled and honeycombed areas: Prepare surface and chisel back to sound concrete. Prime area to be repaired with a slurry coat of PENETRON®. While still "green" (tacky), apply PENECRETE MORTAR® in layers of 13 mm (1/2") until desired profile is obtained. Each layer should be allowed to set long enough that it will leave only a slight indent (approximately 1,6 mm (1/16")) when pressed with a finger. Where possible, the surface of the repair should be packed tightly using a hammer and block of wood.

Tie holes and pointing applications: Prepare surface and chisel back to sound concrete. Prime area to be repaired with a slurry coat of PENETRON® and while still "green" (tacky) apply PENECRETE MORTAR® in "dry earth" consistency.

PENECRETE MORTAR® should be tightly rodded into tie holes or packed tightly using a hammer and block of wood.

NOTE: For all applications, PENETRON® should be applied as a surface treatment as soon as PENECRETE MORTAR® has set (approximately 1-2 hours). If this is not practical, leave surface rough for subsequent surface treatment to bond.

Curing: Provide protection against extreme weather conditions such as heavy rain or freezing conditions during the setting period. Curing is not normally required except during hot, low humidity weather. In these conditions a light mist of water approximately 24 hours after the repair is completed will help to ensure a controlled cure. In extreme dry heat, water misting may be required more frequently.

SPECIAL CONSIDERATIONS

DO NOT apply PENECRETE MORTAR® at temperatures below 4 ºC (40 ºF), to a frozen substrate or if temperatures will drop below freezing during the curing period (approximately 24 hours).

This product is NOT recommended for use in expansion or other joints designed for movement.

CONSUMPTION & YIELD OF 22,7 kg (50 lb) BAG

Reglets, Cracks, U-shaped or reversed Π-shaped	
Size	25 mm x 25 mm (1"x1")
Consumption	4.9 kg/m² (1,0 lb/ft²)
~Yield/bag	15,2 m (50 ft)
Coves, triangular shaped	
Size	38 mm x 38 mm (1,5"x1,5")
Consumption	5 kg/m² (1,0 lb/ft²)
~Yield/bag	15,2 m (50 ft)
Tie Holes	
Size	25 mm x 25 mm x 25 mm (1"x1"x1")
Consumption	N/A
~Yield/bag	600 nos
Honeycomb and surface patching	
Approx. 0,011 m³ (0,4 ft³) / bag	

All values are approximate depending on surface conditions.

PACKAGING

Available in 22,7 kg (50 lb) bags and 5 kg (11 lb) pails.

STORAGE / SHELF LIFE

PENECRETE MORTAR® must be stored in a dry enclosed area off the ground at a minimum temperature of 7 ºC (45 ºF). Shelf life when stored in proper conditions in unopened, undamaged packaging is 24 months.

SAFE HANDLING INFORMATION

This product contains Portland cement and is highly alkaline. The use of rubber gloves, goggles and other appropriate protective gear during mixing and application is recommended. Avoid contact with eyes and skin. In case of eye contact, rinse immediately with plenty of water and seek medical advice. 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.

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CERTIFICATION

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DOP NO: 10.00002D310322-01
EN 1504-3
PENECRETE MORTAR
Products and systems for structural and non-structural protection and repair of concrete structures
Compressive strength: Class R4 (≥ 45 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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