

**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; block the capillaries of the concrete and minor shrinkage cracks, thus waterproofing it. 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 1/64" (0.4 mm)
- ▶ 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 for use 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

**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 3/4" (20 mm) wide and a minimum of 3/4" (20 mm) deep. **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 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.

Approximate mixing ratio (by volume) is 4½ parts powder to 1 part water. Alternatively, 100 ml of water to 450 g of PENECRETE MORTAR™ powder.

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:** DO NOT apply PENECRETE MORTAR™ at temperatures below 40°F (4°C), to a frozen substrate or if temperatures will drop below freezing during the curing period (approximately 24 hours).

**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 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 1/2" (13 mm) not to exceed 2.5 in (approximately 6.5cm). Each layer should be allowed to set long enough that it will leave only a slight indent (approximately 1/16" or 1.6 mm) 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

### CRYSTALLINE WATERPROOFING MORTAR

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 40°F (4°C), 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 joints or other joints designed for movement.

PENECRETE MORTAR™ can be applied in 1/2" (13 mm) layers not exceeding 2.5 in (approximately 6.5 cm) to prevent shrinkage cracks in the mortar.

#### CONSUMPTION & YIELD OF 50 LB (22.7 KG) BAG

All values are approximate depending on surface conditions.

##### Cracks, U-shaped

Size 1"x1" (25 mm x 25 mm)  
Consumption 1.0 lb/ft<sup>2</sup> (5 kg/m<sup>2</sup>)  
~Yield/bag 50 ft (15.2 m)

##### Reglets

Size 1"x1" (25 mm x 25 mm)  
Consumption 1.0 lb/ft<sup>2</sup> (5 kg/m<sup>2</sup>)  
~Yield/bag 50 ft (15.2 m)

##### Coves, triangular shaped

Size 1.5"x1.5" (38 mm x 38 mm)  
Consumption 1.0 lb/ft<sup>2</sup> (5 kg/m<sup>2</sup>)  
~Yield/bag 50 ft (15.2 m)

##### Tie Holes

Size 1"x1"x1" (25 mm x 25 mm x 25 mm)  
Consumption N/A  
~Yield/bag 600 nos

##### Honeycomb and Surface Patching

Approximately 0.4 ft<sup>3</sup> (0.01 m<sup>3</sup>) / bag

#### 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.

#### PACKAGING

Available in 50 lb (22.7 kg) bags or 55 lb (25 kg) pails.

#### STORAGE / SHELF LIFE

PENECRETE MORTAR™ must be stored in a dry enclosed area off the ground at a minimum temperature of 45°F (7°C). Shelf life when stored in proper conditions in unopened, undamaged packaging is 12 months.

#### TECHNICAL DATA

	Compressive Strength ASTM C-109	Tensile Strength ASTM C-190
1 day	1600 psi (11 MPa)	320 psi (2.2 MPa)
3 days	2400 psi (17 MPa)	520 psi (3.6 MPa)
7 days	5800 psi (40 MPa)	730 psi (5.0 MPa)
28 days	6900 psi (48 MPa)	900 psi (6.2 MPa)

All data are average values obtained under laboratory conditions. Impractical use, temperature, humidity and absorption of the substrate may influence the above given values.

#### 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. Refer to MSDS for additional safety precautions.



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EN 1504-3  
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PENECRETE  
for structural and non-  
structural repair CC mortar  
Compressive strength:  
Class R4 (≥ 45 MPa)

Chloride content:  
< 0,05 % by mass  
Adhesive bond: NPD  
Restrained shrinkage,  
expanding: NPD  
Elastic modulus: NPD  
Thermal compatibility  
(Part I): NPD  
Corrosion behaviour:  
deemed to have  
no corrosive effect  
Reaction to fire: NPD  
Dangerous substances: NPD