

IFU Title : Penecrete Mortar
Page No : 1 of 2.
Issue No : I/2
Issue date : 12/02/2014
Reissue date : 05/03/2017

Instructions for use PENECRETE 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; 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. The applied material has no shrinkage behaviour.

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
- 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
- Non-shrinking
- Fast setting
- Inorganic – contains no polymers
- 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 (20 mm) 3/4” wide and a minimum of (20 mm) 3/4” deep. 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.

Tie holes should be roughened prior to filling. 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.

Spalled and honeycombed areas must be thoroughly cleaned and chiselled 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: 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 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 troweled into the cracks with some pressure, but not so pliable that it would run out or sag out of the crack. 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 (4°C), 40°F to a frozen substrate or if temperatures will drop below freezing during the first 24 hours after 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 while “green” (tacky), fill cavity flush to surface with PENECRETE MORTAR™ which has been mixed to a medium stiff trowel able consistency. 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.

Spalled and honeycombed areas: Prime area to be repaired with a slurry coat of PENETRON®. While still “green” (tacky), apply PENECRETE MORTAR™ in layers of (13mm) 1/2” not to exceed 6.5cm (approximately 2.5”). Each layer should be allowed to set long enough that it will leave only a slight indent (approximately 1.6 mm or 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: 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® crystalline waterproof coating should be applied over the Penecrete Mortar 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: A Curing treatment period is dependent on site exposure and weather conditions. Under normal conditions no additional curing treatment is required. During hot, low humidity weather 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 for a period of 3 days is recommended. To protect against extreme weather conditions such as heavy rain or freezing conditions during the setting period, use polythene sheeting taped down at the edges or other approved method.

SPECIAL CONSIDERATIONS

A) This product is not recommended for use in expansion/movement joints and mobile cracks.

B) Where layers are to be built up, PENECRETE MORTAR™ can be applied in (13 mm) 1/2” layers not exceeding (approximately 6.5 cm) 2.5”. To prevent sagging, slumping and shrinkage cracks, each layer should be allowed to stiffen before applying subsequent layers. Where layers cannot be applied “wet on wet” or if more than 24 hours have elapsed apply a bonding primer coat of Penetron surface applied coating between each layer.

CONSUMPTION & YIELD OF (22.7 KG) 50 LB BAG

All values are approximate depending on surface conditions.

Cracks, U-shaped Size (25 mm x 25 mm) 1”x1” Consumption (5 kg/m²)1.0 lb/ft² ~Yield/bag (15.2 m) 50 ft

Reglets Size (25 mm x 25 mm) 1”x1” Consumption (5 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 no's **Honeycomb and Surface Patching:** Approximately (0.01 m³)0.4 ft³ / bag

PACKAGING Available in (25 kg) 55 lb pails. Each container (plastic can/pail) is labelled with the product name and directions for use. Each container will have the product batch number printed on the lid. This will be a series of 11 or 12 numbers eg 20120950660 the first 4 numbers = year i.e.2012 next 3 numbers = day of year i.e.095 day of the year and the last 4 numbers = batch number i.e. 0660.

STORAGE / SHELF LIFE

PENECRETE MORTAR™ must be stored in a dry enclosed area off the ground at a minimum temperature of (7°C) 45°F. Shelf life when stored in proper conditions in unopened, undamaged packaging is 12 months. Unused powder material must be immediately returned to the original air tight pails, sealed, and can be used within 6 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. Refer to MSDS for additional safety precaution

ACCIDENTAL RELEASE MEASURES Personal Precautions: Evacuate contaminated area. Do not walk through spilled material. Increase ventilation and wear protective clothing and respiratory protection. Environmental Precautions: Keep spilled material and runoff from entering drains, sewers, ditches and waterways. Minimize use of water to prevent environmental contamination. Methods for Clean-up: Avoid generating dust. Vacuum, shovel or sweep up spilled material and place in a tightly sealed drum for proper disposal.

Penetron UK Ltd,

Unit J11,Hastingwood Industrial Park,Wood Lane, Erdington,Birmingham.B24 9QR

Telephone 07833-746550.

Mail:smather@penetron.co.uk.

Web: www.penetron