

## POURABLE RAPID SETTING CEMENT-BASED REPAIRING MORTAR

## DESCRIPTION

PENETRON® QUICK PATCH is a quick-setting, cementitious compound used for areas where fast repairs are necessary and the concrete must be put back in service promptly. PENETRON® QUICK PATCH is excellent for cold weather repairs. It can be used for repairs from full thickness down to 13 mm (½”) thickness.

## RECOMMENDED FOR

- ▶ Concrete roads and highways
- ▶ Bridge decks
- ▶ Airport runways and taxiways
- ▶ Distribution and storage facilities
- ▶ Manufacturing facilities
- ▶ Cold storage and food processing plants

## ADVANTAGES

- ▶ One component product mixed with clean water. No need for primers or liquid activators
- ▶ A hydraulic based, non-corrosive cementitious product that is fully compatible with concrete
- ▶ Fast setting and rapid strength development allows fast turnaround of repaired areas. High early strength - over 13,8 MPa (2000 psi) in 1 hour
- ▶ Can be extended with pea gravel for large or thick repairs. This allows for a higher yield
- ▶ Freeze-thaw durable and resistant to scaling by de-icing chemicals allowing for excellent long-term performance in cold environments
- ▶ Contains both polymers and fibers increasing bond, tensile and flexural strength
- ▶ Meets ASTM C928 (Specification for Very Rapid Hardening Cementitious Repair Materials)
- ▶ Zero VOC: Penetron powdered products contain zero volatile organic content and are safe for use both outdoors and in confined indoor spaces

## TECHNICAL CHARACTERISTICS

| Characteristic                                  | Test Result                                                 |                   | Test Method |
|-------------------------------------------------|-------------------------------------------------------------|-------------------|-------------|
| <i>Compressive Strength</i>                     | 1 hour                                                      | 14 MPa (2100 psi) | ASTM C 109  |
|                                                 | 3 hours                                                     | 31 MPa (4500 psi) |             |
|                                                 | 24 hours                                                    | 41 MPa (6000 psi) |             |
|                                                 | 7 days                                                      | 48 MPa (7000 psi) |             |
|                                                 | 28 days                                                     | 55 MPa (8000 psi) |             |
| <i>Setting Time (Gillmore Test)</i>             | Initial set                                                 | 20 minutes        | ASTM C 266  |
|                                                 | Final set:                                                  | 25 minutes        |             |
| <i>Scaling resistance to de-icing chemicals</i> | 25 cycles 3,47 kg/m <sup>2</sup> (0,71 lb/ft <sup>2</sup> ) |                   | ASTM C 672  |
| <i>Freeze/Thaw Resistance</i>                   | 99,2% D.F.                                                  |                   | ASTM C 666  |
| <i>Relative Dynamic Modulus</i>                 | 300 cycles                                                  |                   | Procedure B |

Cooler temperatures, inadequate ventilation and higher humidity can extend drying times. All data derived from tests under laboratory conditions; field conditions may yield slightly different results.

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## DIRECTIONS FOR USE

**Surface Preparation:** Remove all loose, unsound or contaminated concrete from patch area. Square off and vertical cut or undercut the patch area edges. Remove concrete to a depth, as determined by the load type, as follows:

| Loading       | Patch Thickness Limitations |                      |
|---------------|-----------------------------|----------------------|
|               | Minimum                     | Maximum              |
| Light, cars   | 13 mm                       | 51 mm , unextended   |
| Heavy, trucks | 51 mm                       | Unlimited , extended |

Moisten patch area thoroughly and keep continuously damp for at least one hour, then immediately before patch placement, remove all standing water by air blast or other method. Allow surface water to evaporate (sheen should disappear, but surface must remain somewhat darkened by moisture).

**NOTE:** Applications over 51 mm (2") thickness must be extended by pea gravel addition (see Mixing).

**Mixing:** Pre-wet mixer for the first batch and allow to drain. Carefully measure the required potable mixing water and pour it into the mixer. Start the mixer and then add PENETRON® QUICK PATCH slowly. Mix for one to two minutes until a uniform lump-free consistency is obtained. Never add additional water after initial mixing. Applications over 50 mm (2") in thickness must be extended by the addition of 50% by weight of clean, uniformly graded 10 mm (3/8") maximum size quartz aggregate. The quartz aggregate should be pre-wet and allowed to drain and dry slightly. Add 11,3 kg (25 lb) of quartz aggregate, for each 22,7 kg (50 lb) of PENETRON® QUICK PATCH used to the mixer only after a uniform lump-free consistency is obtained (see above), then continue mixing until the quartz aggregate blends in evenly. Do not add additional water, when using quartz aggregate.

**Mixing ratios:**

Quick Patch: 22,7 kg (50 lb)  
 Mix Water: 3,1 L (3,25 qt)  
 Mixed Yield: 0,012 m<sup>3</sup> (0,41 ft<sup>3</sup>)

**Application:** After mixing, PENETRON® QUICK PATCH should be placed without delay and quickly consolidated by tamping. The surface can be finished or it can be struck off with a screed to a level slightly above the surrounding concrete and later be shaved down with the sharp edge of a trowel, as it starts to set. Mix only an amount of material that can be placed within a 10-minute working time. Large jobs require adequate personnel to permit mixing, placing and finishing operations to occur simultaneously, without interruption, in order to avoid cold joints. Mixer and tools must be promptly cleaned to prevent build-up. Consideration should be given to providing stress relief for large patch areas.

**Curing:** Immediately after finishing, apply a good quality membrane type curing compound. Alternatively, moist cure for as long as possible, up to three days. Protect patched area from vibration or loading, until desired strength is achieved.

## SPECIAL CONSIDERATIONS

DO NOT add any admixtures, sand or cement.

DO NOT place in lifts.

DO NOT use for patching asphalt, later modified concrete or for vertical surfaces.

Pea gravel can be used, instead of quartz aggregates, following the instructions as mentioned.

Consult PENETRON HELLAS S.A. for additional information, regarding your project.

## PACKAGING

PENETRON® QUICK PATCH is available in 22,7 kg (50 lb) multi-wall bag with moisture-resistant liner.

## STORAGE / SHELF LIFE

PENETRON products must be stored dry at a minimum temperature of 7°C (45°F). Shelf life is one year when stored under proper conditions.

## SAFE HANDLING INFORMATION

Skin may be sensitive to cement. Use appropriate safety equipment (gloves, dust masks, eye protection), when working with this product. Avoid contact with eyes or prolonged contact with skin. If eye contact occurs, wash immediately and repeatedly with fresh water and then get medical attention without delay. If skin contact occurs, wash with soap and water. 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 THE REACH OF CHILDREN.

## POURABLE RAPID SETTING CEMENT-BASED REPAIRING MORTAR

## CERTIFICATION



1085

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Allentown, PA 18103  
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1085-CPR-0040

DOP NO: 10.20006D310322-01

EN 1504-3

QUICK PATCH

Products and systems for structural and non-structural  
protection and repair of concrete structures

Compressive strength: Class R4 ( $\geq 45$  MPa)Chloride ion content:  $< 0.20$  % by mass

Adhesive bond: NPD

Restrained shrinkage, expanding: NPD

Elastic modulus: NPD

Thermal compatibility (Part 1): NPD

Carbonation resistance: deemed to have no corrosive effect

Dangerous substances: NPD

Reaction to fire: NPD

## 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.