

ALL-PURPOSE POLYMER-MODIFIED PATCHING COMPOUND

DESCRIPTION

PENETRON® ACRYLIC PATCH is a cementitious compound with a special polymer additive for all purpose patching and repairing. PENETRON® ACRYLIC PATCH is a precisely proportioned, ready-to-use, patching compound that is fast setting, self-bonding and stronger than regular concrete. The fast setting property of PENETRON® ACRYLIC PATCH can be extremely advantageous in situations where downtime must be minimized, as in urgent highway or industrial repair work. PENETRON® ACRYLIC PATCH achieves nearly half its ultimate strength in 24 hours and can accept loads as quickly as one hour after initial placement. The adhesive properties of PENETRON® ACRYLIC PATCH assure secure, resilient, and long lasting repairs of holes, cavities, and cracks in all kinds of concrete or stucco surfaces. The bonding enhancer in PENETRON® ACRYLIC PATCH is a synthetic polymer which provides an impermeable shield against normal hydrostatic pressure. PENETRON® ACRYLIC PATCH consists of synthetic polymers for high surface adhesion, strength, and uniformity; selected silicates to provide patching medium and long life; Portland cement for high compressive, tensile, and flexural strength; catalysts for quick setting and expansion; and plasticizers for mix consistency, easy application, and extended working life.

RECOMMENDED FOR

- ▶ Bridges
- ▶ Ceilings
- ▶ Columns
- ▶ Concrete pipes (bells, corners, and joinings)
- ▶ Culverts
- ▶ Curbs
- ▶ Handrail anchoring
- ▶ Honeycombed surfaces
- ▶ Loading docks
- ▶ Parking garages and ramps
- ▶ Parapets
- ▶ Post tension holes
- ▶ Precast vaults
- ▶ Steps
- ▶ Swimming pools, tanks, etc.

PENETRON® ACRYLIC PATCH can be used for water-resistant repairs, patching concrete pipe, and other underwater applications.

ADVANTAGES

- ▶ Scientifically tested and formulated for high compressive, tensile and flexural strength
- ▶ Plasticizers for easy application, workability and tuck pointing
- ▶ Quick setting - initial set in only 15 minutes. Final set in 30 to 45 minutes
- ▶ Eliminates need for form work
- ▶ Self bonding
- ▶ Resistant to chemical attack
- ▶ Lasting surface adhesion
- ▶ Contains zero volatile organic content (VOC) and is safe for use both outdoors and in indoor spaces

TECHNICAL CHARACTERISTICS

Characteristics	Test Results		
	Elapsed time	Water cure	Air cure
Compressive strength (ASTM-C109)	1 hour	220 psi (1157 kPa)	225 psi (1551kPa)
	24 hours	2800 psi (19305 kPa)	3340 psi (23028 kPa)
	7 days	6525 psi (44988 kPa)	5050 psi (34819 kPa)
	28 days	6600 psi (45505 kPa)	5800 psi (39987 kPa)
Flexural strength (ASTM-C348)	28 days	900 psi (6205 kPa)	
Shear bond to concrete	28 days	Exceeds 250 psi (1724 kPa)	
Freeze-Thaw stability (ASTM-C290)	N/A		
Compressive - 300 cycles	6000 psi (41369 kPa)		
Flexural - 300 cycles	1200 psi (8274 kPa)		
Volume change - 300 cycles	Expands 0.2% of volume		

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Chemical Resistance Good against de-icing salts, and mild acids. Low porosity

Set Time (Gillmore) 15-30 min initial. 30-45 min final at 73°F (23°C)

Abrasion Resistance (Local Test) Less than 1/5th as much weight loss, as unmodified concrete (1200 passes)

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: To assure the strongest bond, surface area should be free of all potential contaminants, such as oil, grease, form release agents, dust or any other foreign matter. When bonding onto steel or other metal surfaces, remove all scale, rust, and paint and place wire laths around metal surface. Remove any loose or weakened concrete. Optimum bonding conditions require rough jagged concrete surfaces. Surface preparation involving acid etching, power hammering or sandblasting should be implemented. Areas roughened by acid etching should be neutralized with a thorough cleaning operation. In high traffic and heavy loading repair areas, the sides of the cavity should be square cut or undercut to a minimum depth of 2" (5 cm). Cracks should be dug out and widened for the best results [minimum ¼" (0.6 cm) wide and 1" (2.5 cm) deep]. Immediately prior to all applications, surface areas must be predampened. Puddled water should be removed prior to placement of PENETRON® ACRYLIC PATCH.

Mixing: Mix 5 to 5¼ quarts (4.7 to 5 Lt) of fresh uncontaminated water for every 50 lbs (22.7 kg) of PENETRON® ACRYLIC PATCH. Mix thoroughly using a trowel or mortar mixer, for one to two minutes. Do not add more than the recommended amount of water.

NOTE: Never mix more than can be applied within 15 minutes.

Application: Using a steel trowel or putty knife, place PENETRON® ACRYLIC PATCH mortar into cavity. Cavities should be completely filled and compacted. Pack until approximately level with surrounding surface. Do not overwork before initial set. After surface sheen has disappeared, finish to desired texture; dry brush for rough surface, shave with edge of trowel. For large cavities, PENETRON® ACRYLIC PATCH must be extended by adding clean, dampened 3/8" (1 cm) diameter gravel. The amount of aggregate must not exceed 25% of the weight of PENETRON® ACRYLIC PATCH material. Do not add additional water. For a smoother surface and higher strength, the upper layer of the deep cavity should be filled with unextended PENETRON® ACRYLIC PATCH mortar. Large cavities can also be filled with successive layers as the mixer readies PENETRON® ACRYLIC PATCH for each placement. On smooth surfaces which cannot be prepared (roughened), Penetron recommends thin applications of PENETRON® ACRYLIC BONDCRETE™ to increase adhesion of patching material to surface. For resurfacing and dressing non load-

bearing concrete such as columns, panels, retaining wall, etc., thoroughly clean and pre-dampen surface. For underwater applications, mix only small quantities at a time using the least amount of water consistent with placement. As with other applications, all surfaces must be cleaned. Surface film and algae must be removed and surface must be mechanically roughened. Sufficient PENETRON® ACRYLIC PATCH must be thoroughly packed into all repair areas.

NOTE: Place immediately after mixing. In case priming is needed to increase bonding, with a layer of PENETRON® ACRYLIC PATCH on wet substrate, the surface must be damp during application of the first layer. When using PENETRON® ACRYLIC BONDCRETE™ as a primer, wait minimum 40 min, until surface is dry to touch (not "tacky"), prior to PENETRON® ACRYLIC PATCH application. PENETRON® ACRYLIC BONDCRETE™ will retain its bonding properties for up to 2 weeks, if the surface remains dry and clean.

Curing: PENETRON® ACRYLIC PATCH should be cured immediately upon finishing. Penetron recommends a membrane curing agent, such as PENEKURE™. Curing is especially critical in high temperature, high evaporation rate or low humidity environments.

Coverage: PENETRON® ACRYLIC PATCH coverage is about 0.42 ft³ (0.012 m³) per 50 lb (22.7 kg) bag.

SPECIAL CONSIDERATIONS

Higher compressive, tensile, adhesive, and flexural strength makes PENETRON® ACRYLIC PATCH an excellent choice for repair work on a great variety of surfaces and conditions.

PENETRON® ACRYLIC PATCH should not be used to repair non-concrete surfaces such as asphalt and latex modified concrete.

The use of air-entraining agents, retarding agents or water reducing agents is not recommended. PENETRON® ACRYLIC PATCH is not a satisfactory remedy for moving cracks or cracks involving "rocking slabs".

DO NOT use as a self-leveling, topping material.

At temperatures below the freezing point, surface temperature must be raised above freezing and must not be predampened. Low temperatures will lengthen setting time.

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Excessive water or retempering can seriously diminish the strength and adhesive properties of the material.

Mixing equipment should be cleaned frequently to avoid product build-up.

Contact your PENETRON HELLAS S.A. for further details regarding your project.

PACKAGING

PENETRON® ACRYLIC PATCH is available in 50 lb (22.7 kg) multi-wall bags with tear resistant, moisture proof, polyethylene liner.

STORAGE / SHELF LIFE

PENETRON® ACRYLIC PATCH 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.

SAFE HANDLING INFORMATION

Contains Portland cement, which is alkaline. Avoid skin and eye contact. If contact is made, flush areas with lots of water and seek medical advice. Protective gloves should be worn. Breathing apparatus is advised if applied in enclosed environments. 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.

. FOR PROFESSIONAL USE ONLY. KEEP OUT OF REACH OF CHILDREN.

CERTIFICATION

1085-CPR-0040

EN 1504-3

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ACRYLIC PATCH

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

Compressive strength: Class R3 (≥ 25 MPa)

Chloride content: < 0.05% by mass

Adhesive bond: NPD

Restrained shrinkage, expanding: NPD

Elastic modulus: NPD

Thermal compatibility (Part 1): NPD

Corrosion behaviour: 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 are 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.

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