

## RAPID SET UNDERWATER REPAIR AND ANCHORING COMPOUND

## DESCRIPTION

WATERPLUG is a fast-setting, single-component, ready-to-use hydraulic cement scientifically designed for quick repair of concrete subject to hydrostatic pressure, active leaks, or underwater conditions. WATERPLUG sets quickly, while bonding to the surface and expanding, to rapidly block the flow of water within minutes after application. Use as a permanent patching material above or below grade. WATERPLUG's super-fast setting, nonshrink and high-bonding properties make it an excellent mortar for anchoring ornamental iron, bolts, posts and dowels. WATERPLUG expands slightly to grip the surface of the embedded item and fill every crevice of the concrete cavity. WATERPLUG, when properly conditioned, can be used as a patching material at temperatures below 32°F (0°C). At these temperatures, other patching materials are unusable or require expensive and time-consuming installation methods. The catalytic reaction, which produces the highly accelerated setting time, generates enough heat to assure a secure surface bond. Use WATERPLUG for below freezing repairs of roadways, bridge decks, cold storage rooms, etc. When properly applied, WATERPLUG will provide permanent, watertight seals that will not corrode or decompose.

## RECOMMENDED FOR

- ▶ Basements
- ▶ Piers and dams
- ▶ Tunnels
- ▶ Tanks and reservoirs
- ▶ Pipes
- ▶ Canals
- ▶ Swimming pools
- ▶ Mines
- ▶ Piling
- ▶ Wall and panel junctions and many other applications

## ADVANTAGES

- ▶ Expands and sets to cut water flow immediately
- ▶ Easy to use. Needs no special equipment
- ▶ Firmly anchors bolts, dowels, etc.
- ▶ Sets permanently in 3 to 6 minutes
- ▶ Excellent for low temperature patching and repair work
- ▶ Ready-mixed
- ▶ Zero VOC - PENETRON powdered products contain zero volatile organic compounds and are safe for use both outdoors and in confined indoor spaces
- ▶ Exceeds requirements of ASTM C494-S (Specific Performance Admixtures)

## DIRECTIONS FOR USE

**Surface Preparation:** To assure the strongest bond, surface area must be free of all potential contaminants, such as oil, grease, form release agents, dust or other foreign matter. For underwater applications, surface should be free of surface film or algae. Roughen surface area with a wire brush, chisel or other similar instrument. Remove any loose or weakened concrete and mortar. If crack is less than 1,9 cm (¾") in width or depth, widen or gouge to this dimension. The best results will be attained if the inner portion of the crack is undercut, so that the depth of the crack is wider than the surface opening. This creates an inner cavity that allows PENETRON® WATERPLUG RAPID to expand and resist high water pressure. If the hole or crack is not leaking at the time of the repair, soak area for at least 15 minutes, before applying PENETRON® WATERPLUG RAPID.

**Mixing:** Mix PENETRON® WATERPLUG RAPID in a clean container with fresh, potable water. Optimum water temperature is approximately 21 °C (70 °F) (warm). In harsh weather, water temperature should compensate for environmental extremes. At temperatures above 38 °C (100 °F), mix with ice water to prevent overly accelerated setting. At temperatures below 4 °C (40 °F), keep PENETRON® WATERPLUG RAPID at approximately 21 °C (70 °F) by using warm water. Once water has been added and material has attained a putty-like texture, or dry pack (dry earth) consistency, depending on the application, shape the material to a form similar to the crack or cavity about to be repaired.

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**Mixing ratios:** The desired mixing ratios vary between one (1) part clean water to four (4) parts PENETRON® WATERPLUG RAPID and one (1) part clean water to six and a half (6,5) parts PENETRON® WATERPLUG RAPID (by volume), depending on the type of application and water hydrostatic pressure.

**NOTE:** Use gloves. Mixing time should not exceed two minutes. Never mix more than can be used within three minutes. Do not add additional water or re-temper.

**Application:** Apply immediately after mixing. As soon as PENETRON® WATERPLUG RAPID has achieved a dry, putty texture and a compatible shape, or a dry pack (dry earth) consistency, depending on the application, force the material into the crack or cavity compressing it firmly, using a gloved palm, trowel, wood block or other flat object. Hold it in place for over a minute. If there is a strong water flow, hold for six minutes. Do not brush or trowel over surface. Shave off excess material with a knife or other similar sharp tool.

For long, leaking, vertical cracks, patch with successive small amounts of PENETRON® WATERPLUG RAPID, starting at the top of the crack. For anchoring bolts, posts, dowels, etc., drill a hole deep enough to allow 13 mm (½ ") around fixture, mix to a putty consistency and fill hole. Then tap object firmly into place. Keep damp for 15 minutes. Do not apply excessive pressure for several hours.

**Coverage:** PENETRON® WATERPLUG RAPID coverage is about 15 L (5 gal) per 25 kg (55 lb) bag.

**PACKAGING**

PENETRON® WATERPLUG RAPID is available in 25 kg (55 lb) bags and 4,75 kg (10,5 lb) pails.

**STORAGE / SHELF LIFE**

PENETRON® WATERPLUG RAPID should be stored dry at a minimum temperature of 7 °C (45 °F). When properly stored in a dry cool place in unopened and undamaged original packaging, shelf life is 12 months.

**SAFE HANDLING INFORMATION**

PENETRON® WATERPLUG RAPID contains Portland cement which is alkaline. Will irritate eyes and skin and may cause skin sensitization. Wear appropriate eye, skin and breathing protection when using this product. In case of contact with eyes, 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. KEEP OUT OF REACH OF CHILDREN.

**CERTIFICATION**

1085

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1085-CPR-0040

DOP NO: 10.30002D310322-01

EN 1504-3

WATERPLUG

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

Compressive strength: Class R3 (≥ 25 MPa)

Chloride ion content: &lt; 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

Dangerous substances: NPD

Reaction to fire: NPD

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