# WATERPLUG®

## One-component, cement-based, fast-setting water stop repair mortar

### Advantages

- Stops running water
- Develops high strength quickly, minimizes downtime
- Mixes with water only
- Durable nonmetallic, nongypsum formula
- Can be topcoated in 15 minutes with appropriate product
- Sets above or below water
- NSF approved for use with potable water
- Waterplug® H available for cold weather applications

### Where to Use Waterplug®

- Nonmoving (static) cracks and holes with running water or moisture seepage
- Basements
- Foundations
- Retaining walls
- Sewers
- For immersion service
- For anchoring vertical bolts in walls
- Above or below grade
- Interior or exterior

### How to Apply Waterplug®

#### Mixing Instructions

Mix Waterplug® powder with clean potable water, use powder neat without adding any aggregates, chemical additives, or admixtures. Add just enough water to mix rapidly by hand to a stiff, low slump, putty consistency Mix no longer than 30 seconds. Mix only enough Water plug® that can be successfully placed within 3 minutes under normal conditions (seeTemperature). **Do not** retemper material after initially mixing. Clean mixing vessel and tools immediately after each use.
Keep container tightly sealed after opening to maintain shelf life freshness of unused portion of the remaining powder.

#### Temperature

Cold or hot air, surface and material temperatures will retardor quicken Waterplug® setting time. Special attention must be given when both mixing and applying. The Waterplug® and mixing water should feel neutral to the touch, normally 70°F (21 °C). On average Waterplug® will set in approximately 3 - 5 minutes.

#### Hot weather use

From 86°F to 100°F (30°C to 37°C), Waterplug® will set very quickly Material temperature should not be above 80°F (26°C) and mixing water over 100°F (37°C); otherwise set begins immediately and structural strength lessens when applying during these extreme conditions. Waterplug® should always be placed within 30 - 60 seconds after mixing. If appropriate, use ice water when mixing to slow down the setting action.

#### Cold Weather Use

Waterplug® should be stored at or brought up to normal room temperatures, 40°F to 70°F (4°C to 21 °C), before mixing and use. Do not apply Waterplug® if the ambient air and/or surface temperatures are 40°F (4°C) or less, or are expected to fall below 40°F (4°C) within 12 hours after initial placement.For quicker set times at normal temperatures or applications down to 40°F (4°C), Waterplug® H may be used.

#### Application

Place Waterplug® with minimum working, kneading, or rubbing. Force Waterplug® repair mortar into cracks or holes and hold in place (without twisting) until set is fully achieved. Just prior to final hard set, Waterplug® may be "shaved" with a trowel until flush with the surrounding surface. Always shave from the center out, in the direction of the bond line. If the application is in a dry condition at the time of placement, keepdamp for 15 minutes minimum, using a fine spray misting of water, before and after placement.

### Sealing Junctions

To seal static cracks at the junction of floors and walls, rout or cut out the crack at least 3/4" (19 mm) wide and deep, slightly undercutting if possible. Flush away all loose debris, dust, and dirt with clean water. Force Waterplug® into the prepared crack with a round tool, or margin trowel until a set is fully achieved and smooth out to form a cove at wall-to-floor junctions. Keep damp for at least 15 minutes.

V-cut (wrong) | Square cut | Undercut (Best cut)

### Stopping Running Water

To stop active water from running through concrete and masonry, cut out crack or hole to a minimum depth and width of 3/4" (19 mm). Always square cut or undercut when possible; do not "V" cut. Start at top and force Waterplug® into crack. In areas of great pressure, do not place Waterplug® into opening immediately Hold Waterplug® in hand or on trowel until a slight warming occurs. Then press Waterplug® firmly into opening. Do not remove trowel or hand pressure too soon. Do not twist Waterplug® during placement or disturb during set time (5 minutes). After placement to stop the active water flow, carefully cut and "trowel shave" the patch level with the surrounding surface.

### Sealing Leaks in Joints and Cracks

To stop leaking mortar joints or static cracks in below-grade masonry and concrete walls, cut out defective mortar joints or cracks to a minimum width and depth of 3/4" (19 mm). Undercut when possible. Force Waterplug® into opening and keep damp for at least 15 minutes or until a set is fully achieved.

### Repairing Construction Faults

For patching holes and voids, etc., in concrete walls, remove all tie wires, wood or steel separators by cutting back from surface to a minimum depth of 3/4" (19 mm). When there is no active water present, the Thorite® family of repair mortars may be used more appropriately.

### Anchoring Hardware

To anchor steel bolts or posts in vertical concrete or masonry, drill a hole deep enough to properly secure bolt or post and large enough so there is at least 1/2" (13 mm) on all sides of bolt or post. Fill hole with Waterplug® and tamp so that entire hole is full. Immediately center bolt or post over hole and force into the putty-like Waterplug®. Tamp Waterplug® firmly around bolt or post; keep continuously moist for 15 minutes. Apply no pressure or stress to bolt or post for a minimum of 5 hours after placement. For horizontal anchoring applications use Thorogrip®. (See Thorogrip® Technical Bulletin for further details.)

### Topcoating

Cured Waterplug® repairs can be topcoated with Thoroseal® or Thoroseal® Plaster Mix, both modified with Acryl 60®, as soon as an initial set is reached. Cured Waterplug® repairs can also be topcoated with various alkali-resistant acrylic coatings, or in conjunction with Thorocoat®, Thorocoat® 200 and Thorosheen®. May also be used with preformed, water - proof sheet membranes after approximately 6 - 7 days cure.

### Clean Up

Clean tools and equipment immediately with water. Cured material must be removed mechanically.

### For Best Performance

- Do not apply to frozen or frost-covered surfaces.
- Do not apply to dynamic (moving) cracks.
- Do not use to fill expansion joints or control joints.
- Do not remix (retemper) hardened material.
- Do not use as a surface applied coating or as a parging material.
- Do not expose cured patches to harsh environments, such as sewage tanks.
- Do not use if hard lumps have developed in the powder.
- Make certain the most current version of this data guide is being used; cal Customer Service (1-800-433-9517) to verify the most current version.
- Proper application is the responsibility of the user. Field visits by ChemRex® personnel are for the purpose of making technical recommendations only and are not for supervising or providing quality control on the jobsite.

## Technical Data

| Physical or Performance Property | Test Method | Result (Average) |
|---|---|---|
| Compressive strength | ASTM C 109 | 20 minutes = 1800 psi (12.4 MPa)<br>1 day =4000 psi (27.6 MPa)<br>7 days = 5000 psi (34.5 MPa)<br>28 days = 5500 psi (37.9 MPa) |
| Tensile strength | ASTM C 190 | 7 days = 300 psi (2.1 MPa)<br>28 days = 350 psi (2.4MPa) |
| Flexural strength | ASTM C 348 | 7 days = 600 psi (4.1 MPa)<br>28 days =1500 psi (10.3 MPa) |

Test results are averages obtained under laboratory conditions. Reasonable variations can be expected.

## Order Information

### Packaging

**Waterplug®**

- 2-1/2 lb. (1.13 kg) can
- 10 lb. (4.5 kg) can
- 50 lb. (22.7 kg) pail

**Shelf Life**

Minimum 1 year in unopened, undamaged containers, when properly shipped and stored.

Coverage

1 lb. (0.45 kg) will fill 15.6 cu.in (254 cm3) or a static crack 3/4" x 3/4" x 28" (1.9 cm x 1.9 cm x 70 cm)

## Caution

Waterplug® contains calcium hydroxide, crystalline silica, calcium carbonate, Portland cement, calcium aluminate

**Risks**

Product is alkaline on contact with water and may cause injury to skin or eyes. Ingestion or inhalation of dust may cause irritation. Contains a small amount of free respirable quartz, which has been listed as a suspected human carcinogen by NTP and IARC. Repeated or prolonged overexposure to free respirable quartz may cause silicosis or other serious and delayed lung injury.

**Precautions**

KEEP OUT OF THE REACH OF CHILDREN. Avoid contact with skin, eyes and clothing. Prevent inhalation of dust. Wash thoroughly after handling. Keep container closed when not in use. DO NOT take internally Use only with adequate ventilation. Use impervious gloves, eye protection and if the TLV is exceeded or used in a poorly ventilated area, use NIOSH/MSHA approved respiratory protection in accordance with applicable state and local regulations.

**First Aid**

In case of eye contact, flush thoroughly with water for at least 15 minutes. In case of skin contact, wash affected areas with soap and water. If irritation persists, SEEK MEDICAL ATTENTION. Remove and wash contaminated clothing. If inhalation causes physical discomfort, remove to fresh air, If discomfort persists or any breathing difficulty occurs or if swallowed, SEEK IMMEDIATE MEDICAL ATTENTION.

Refer to Material Safety Data Sheet (MSDS) for further information.

**Proposition 65**

This product contains material listed by the state of California as known to cause cancer, birth defects or other reproductive harm.

**VOC Content**

This product contains 0 g/L or 0 lbs./gallon less water and exempt solvents.

***For medical emergencies only, call ChemTrec (1/800/424-9300).***

**Limited warranty Notice**

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