



Hydraulic Cement

Rapid-Setting Hydraulic Patch

DESCRIPTION

Hydraulic Cement is a blend of hydraulic cement and proprietary admixtures used for plugging and stopping water or fluid leaks in concrete structures and masonry walls. When mixed to a thick consistency and hand-formed, **Hydraulic Cement** will set in 3-5 minutes to seal out water for the life of the structure. **Hydraulic Cement** is a non-corrosive and non-rusting material.

USES

Hydraulic Cement is ideal for interior and exterior applications to stop the seepage of water through cracks and faults in concrete and masonry structures such as:

- Dams, basements, swimming pools, manholes
- Cisterns, water tanks, underground electric vaults
- Elevator pits, mines, tunnels, sewers, culverts
- Water pipe joints
- Any situation requiring a fast, durable long lasting repair

BENEFITS

- Durable: Provides lifetime repairs
- Color: Consistent color match for concrete
- Resistant: Withstands freeze/thaw cycles
- Fast Setting: Sets in 3-5 minutes
- Performance: Instantly stops seepage
- Vertical and overhead applications
- Consistent: Strict Quality Control testing and standards

SURFACE PREPARATION

All surfaces in contact with **Hydraulic Cement** shall be free of dirt, oil, grease, laitance and other contaminants that may act as bondbreakers. All unsound concrete should be removed to ensure a good bond. Best results will be obtained by undercutting the area to be filled. Small cracks should be enlarged to maximize bonding area. ACI recommends that the area to be patched should be saturated for 24 hours before placement. Remove any standing water. Surface should be saturated, surface dry (SSD). Always apply a test patch. Maintain contact areas between 40°F (4°C) and 90°F (32°C) prior to repair and during initial curing period.

MIXING

Pre-wet mixing container and empty excess water. Add a sufficient amount of water to achieve a putty consistency when mixed. Mix only enough material that can be placed within working time. Do not blend excess water as this will cause bleeding and segregation. Do not use any other admixtures or additives.

PLACING

For general repairs, force material into the area to be repaired by hand or with a trowel. Fill to full depth and trowel to final level without overworking the material. To stop running water, mold material by hand into a ball or wedge shape and hold **Hydraulic Cement** in hand or on a trowel until material becomes warm. Press firmly into opening and maintain pressure on the patch until material stops the leak or approximately 3-5 minutes. Trowel material into final shape without damaging plug. For sealing cracks in walls or floors, force **Hydraulic Cement** into the crack by starting at the area with the least amount of pressure. Hold into place and maintain pressure until the material has hardened.

Compressive Strength (ASTM C-109*)

1 DAY	3 DAYS	7 DAYS	28 DAYS
2,000 psi (13.78 MPa)	3,500 psi (24.13 MPa)	4,000 psi (27.57 MPa)	5,500 psi (37.92 MPa)

See reverse side for additional test data information

STORAGE

Normal cement storage and handling practices should be observed. Store material in an interior, cool, dry place. Shelf life is one year in original, unopened container.

LIMITATIONS

In addition to limitations already mentioned, please note the following. Do not apply when the surface or ambient temperature is below 40°F (4°C) or when the temperature is expected to fall below 40°F within 48 hours. Do not apply over surfaces that are frozen or contain frost. Do not apply over any active faults or cracks in the substrate without addressing any movement that may occur. **Hydraulic Cement** will not permanently repair cracks and joints subjected to thermal or structural movement. Allow concrete to fully cure for 28 days before use of this product. This material is not intended for use as a horizontal wearing surface. Setting time will speed up in hot weather and slow in cold weather. For hot and cold weather applications, contact your US SPEC manufacturer's representative.

REGULATORY

Read and follow application information, precautions and Material Safety Data Information.

Right-to-know

This product contains Portland Cement (CAS#65997-15-1) and Crystalline Silica (CAS# 14808-60-7)

HMIS

Health 1, Fire 0, Reactivity 0

Prop 65

Warning! This product contains Crystalline Silica, a chemical known to the State of California to cause cancer or reproductive toxicity.

VOC Content

0 g/L

CAUTION

EYE AND SKIN IRRITANT

Contains Portland Cement (CAS# 65997-15-1) and Crystalline Silica (CAS# 14808-60-7). Do not allow contact with eyes or skin. Avoid breathing dust - silica may cause serious lung problems. There is limited evidence silica is a carcinogen. The use of gloves, goggles, dust masks and other protective clothing is recommended. If cement or sand particles get into eyes, rinse immediately with clean water and seek prompt medical attention.

TECHNICAL SERVICE

Contact your US SPEC manufacturer's representative for the most current product information.

US MIX Co.

112 South Santa Fe Drive

Denver, CO 80223

Tel: 303.778.7227 Fax: 303.722.8426

Web Site: www.usspec.com

Packaging: 50 lb (22.7 kg) pail, 36 pails per pallet



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PHYSICAL PROPERTIES*

Rate of Set (ASTM C-266)

WORKING TIME	INITIAL	FINAL
:01	:03	:05

Chloride Ion Content (ASTM C-1152/ASTM C-1218)

CHLORIDE ION CONTENT	
WATER SOLUBLE	.003 / .005
ACID SOLUBLE	.001 / .018

Density (ASTM C-138)

DENSITY
128 lb/ft ³ (2,050 kg/m ³)

Modulus of Elasticity (ASTM C-469)

MoE
2.8 x 10 ⁶ @ 28 days (19 Gpa)

Coefficient of Thermal Expansion (CRD-C 39)

CoTE
7.8 x 10 ⁻⁶ in/in°F (14.04 x 10 ⁻⁶ cm/cm°C)

Scaling Resistance (ASTM C-672)

AGE	SCALED MATERIAL
after 25 F/T cycles	0 kg/m ² (0 lb/ft ²)

*Notes: 73°F (22.8°C) 55% humidity
Water Ratio = 7.0 qts

NOTICE OF LIMITED WARRANTY US MIX Co. (manufacturer) warrants to buyer that this product at the time and place of shipment is of good quality and conforms to the manufacturer's specifications in force on the date of manufacture when used in accordance with the instructions hereon. Manufacturer cannot warrant or guarantee any particular method of use, application or performance of the product under any particular condition. This limited warranty cannot be extended or amended by manufacturer's sales, people, distributors or representatives or by any sales information, specifications of anyone other than the manufacturer. Liability under this warranty is expressly limited to refund of the purchase price.

LIMITATION OF WARRANTIES AND LIABILITY Buyer assumes all risks associated with the use of this product. Manufacturer expressly disclaims all warranties expressed or implied including the warranties of merchantability and fitness for a particular purpose and all other warranties otherwise arising by operation of the law, course of dealing, custom, trade or otherwise. Buyer's exclusive remedy if this product is proven to be defective is limited to refund of purchase price by the manufacturer. Refund shall only be available if the buyer notifies manufacturer in writing within thirty days following discovery of any defect. Written notice shall be forwarded to US MIX Co. at 112 South Santa Fe Drive, Denver, Colorado 80223. No claim can be made twelve months after purchase of the product. Twelve months after the purchase manufacturer's duties with respect to the product and limited warranty shall be presumed to have been satisfied. Manufacturer in no event is liable for consequential damages.

Yield: 50 lbs (22.7 kg) will fill approximately 0.43 ft³ (0.012 m³) when 7.0 qts mixing water is used.