



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 to 5 minutes to seal out water. **Hydraulic Cement** is a non-corrosive and non-rusting material.

USES

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

- 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 to 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.

COVERAGE/YIELD

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

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

PLACING (continued)

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 to 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.

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 expected to fall below 40°F (4°C) 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.

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



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PHYSICAL PROPERTIES

All Physical Property testing performed in laboratory conditions of $73.5 \pm 3.5^\circ\text{F}$ ($23 \pm 2^\circ\text{C}$) and a relative humidity no less than 50% unless otherwise determined by the test method or specification. All results represent **Hydraulic Cement** with 7.0 quarts water unless listed otherwise. Tests are conducted under standardized conditions for comparative purposes, and results may not be representative of performance under field conditions.

Property and Test Method	Results			
Compressive Strength ASTM C109	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)
Rate of Set ASTM C266	Working Time	Initial	Final	
	:01	:03	:05	
Density ASTM C138	128 lb/ft ³ (2,050 kg/m ³)			
	Modulus of Elasticity ASTM C469			
2.8 x 10 ⁶ @ 28 days (19.0 GPa)				
Scaling Resistance ASTM C672	Cycles	Scaled Material		
	25	0 kg/m ² (0 lb/ft ²)		
Coefficient of Thermal Expansion CRD C39	7.8 x 10 ⁻⁶ in/in [°] F (14.04 x 10 ⁻⁶ cm/cm [°] C)			

DANGER

This product contains Crystalline Silica (CAS# 14808-60-7) and Portland Cement (CAS# 65997-15-1). Harmful if swallowed. Causes skin irritation. Causes serious eye damage. May cause an allergic skin reaction. May cause cancer. May cause respiratory irritation. Causes damage to organs through prolonged or repeated exposure. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection. Use only outdoors or in a well-ventilated area. Do not breathe dust. Keep away from children. Store locked up. Store in a well-ventilated place. Keep container tightly closed. Dispose of contents/container in accordance with local/regional/national/international regulations.



WARNING: Cancer and Reproductive Harm -
www.P65Warnings.ca.gov

FIRST AID

If swallowed: Immediately call a poison center/doctor. Rinse mouth. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. If on skin: Wash with plenty of water. Take off contaminated clothing and wash it before reuse. If skin irritation or rash occurs: Get medical advice/attention. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell.

MANUFACTURER/TECHNICAL SERVICE

Contact your US SPEC manufacturer's representative for the most current product information. Always read and follow the warnings and instructions on the most current technical data sheets and safety data sheets (SDS), available online at www.usspec.com.

US MIX

112 South Santa Fe Drive
Denver, CO 80223

Tel: 303.778.7227 Fax: 303.722.8426

Web Site: www.usspec.com

LIMITED WARRANTY: The manufacturer warrants that this product is free from defects in material and workmanship, and will perform per the manufacturer product literature in effect at the time of purchase. This warranty is for one (1) year from the date of purchase. Any implied warranty of merchantability or fitness for a particular purpose is limited to the duration of this express warranty. This warranty applies only if the product is used, in strict accord with the manufacturer published instructions. The sole and exclusive remedy under this warranty is replacement of the defective product or refund of the purchase price, at the manufacturer's option. CONSEQUENTIAL, SPECIAL, AND INCIDENTAL DAMAGES ARE NOT RECOVERABLE UNDER THIS WARRANTY. All claims under this warranty must be submitted to the manufacturer by calling 303-778-7227. This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.