

CEMENT ALL

Multi-Purpose Repair Material & Non-Shrink Grout



PRODUCT DATASHEET

DESCRIPTION: Rapid Set® CEMENT ALL® is a high-performance, fast-setting, multi-purpose concrete repair material and non-shrink grout. Durable in wet environments, CEMENT ALL is a blend of Rapid Set hydraulic cement and specially graded fine aggregates. CEMENT ALL is non-metallic and no chlorides are added. Mix CEMENT ALL with water to produce a workable, high quality material that is ideal where rapid strength gain and high durability are desired. CEMENT ALL sets in 15 minutes and achieves structural strength in 1 hour.*

USES: Use CEMENT ALL for general and structural concrete repair, doweling and anchoring, industrial grouting, formed work, vertical and horizontal trowel applications. CEMENT ALL is ideal for airport, highway, industrial and marine applications.

ENVIRONMENTAL ADVANTAGES: Use CEMENT ALL to reduce your carbon footprint and lower your environmental impact. Production of Rapid Set cement emits far less CO₂ than portland cement. Contact your CTS representative for EPD, LEED values and other sustainability information.

APPLICATION: Apply CEMENT ALL in thicknesses from featheredge to 4" (10 cm). For heavy loads and vehicle traffic, minimum thickness will vary. For deeper sections, use Rapid Set® Mortar Mix or Rapid Set® Concrete Mix. Not intended for extended exposure over 212°F (100°C). For overlay applications, a minimum of one test section should be prepared to evaluate the suitability of the materials and procedures.

SURFACE PREPARATION: For repairs, application surface must be clean, sound and free from any materials that may inhibit bond, such as oil, asphalt, curing compound, acid, dirt and loose debris. Roughen surface and remove all unsound material. Apply CEMENT ALL to a surface that is thoroughly saturated with no standing water.

MIXING: The use of a power-driven mechanical mixer, such as a mortar mixer or a drill-mounted mixer, is recommended. Organize work so that all personnel and equipment are in place before mixing. Use clean potable water. **CEMENT ALL may be mixed using 3 to 3.75 quarts (2.8 L to 3.5 L) of water per 55-lb (25 kg) bag or pail for Department of Transportation projects and other critical applications. For general purpose and high fluidity applications, a maximum of 5 quarts (4.7 L) may be used. Use less water to achieve higher strengths.** For increased fluidity and workability, use Rapid Set® FLOW Control plasticizing admixture. Place the desired quantity of mix water into the mixing container. While the mixer is running, add CEMENT ALL. Mix for the minimum amount of time required to achieve a lump-free, uniform consistency (usually 1 to 3 minutes). Do not retemper.

PLACEMENT: CEMENT ALL may be placed using traditional construction methods. Organize work so that all personnel and equipment are ready before placement. Place, consolidate and screed quickly to allow for maximum finishing time. Use a method of consolidation that eliminates air voids. Do not wait for bleed water; apply final finish as soon as possible. CEMENT ALL may be troweled, floated or broom finished. On flat work, do not install in layers. Install full-depth sections and progress horizontally. Do not install on frozen surfaces. To extend working time, use Rapid Set® SET Control retarding admixture or use cold mix water. CEMENT ALL may be applied in temperatures ranging from 45°F to 90°F (7°C to 32°C). Under dry ambient conditions, water based coatings such as latex paint can be applied after 4 hours. Solvent based and impermeable coatings such as oil based paint and epoxy can be applied after 16 hours.

OVERVIEW

Highlights:

Fast: Sets in 15 minutes, structural strength in 1 hour*

Durable: Formulated for long life in freeze-thaw environments and critical applications

Excellent Bond: Superior adhesion to concrete, stone, brick, block, stucco and more

Structural: For repair and new construction

Multi-Purpose: Use for concrete repair, grouting, anchoring, casting, underlayment and more

Conforms to:

ASTM: C1107[†], C928 R3, C387

Army Corps of Engineers CRD C621

LA Research Report 24654

Approved:

State (DOT) and local approvals

MasterFormat® 2016

03 01 30	Maintenance of Cast-in-Place Concrete
03 01 40	Maintenance of Precast Concrete
03 01 60	Maintenance of Grouting
03 01 70	Maintenance of Mass Concrete
03 53 19	Concrete Overlayment
03 54 16	Hydraulic Cement Underlayment
03 60 00	Grouting
03 61 00	Cementitious Grouting
03 62 13	Non-Metallic Non-Shrink Grouting
04 01 00	Maintenance of Masonry

Manufacturer:

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CURING: Water cure all CEMENT ALL installations by keeping exposed surfaces wet for a minimum of 1 hour. Begin curing after the material starts to harden and before the surface starts to lose its moist sheen. The objective of water curing is to maintain the moist sheen on the entire surface until the product has achieved sufficient strength. When experiencing extended setting time due to cold temperature or the use of retarder, longer curing times may be required.

COLD WEATHER: Environmental and material temperatures below 70°F (21°C) may delay setting time and reduce the rate of strength gain. Lower temperatures will have a more pronounced effect. Thinner sections will be more significantly affected. To compensate for cold temperatures, keep material warm, use heated mix water, and follow ACI 306 Procedures for Cold Weather Concreting.

WARM WEATHER: Environmental and material temperatures above 70°F (21°C) may speed setting time and increase the rate of strength gain. Higher temperatures will have a more pronounced effect. To compensate for warm temperatures, keep material cool, use chilled mix water, and follow ACI 305 Procedures for Hot Weather Concreting. The use of SET Control retarding admixture will help offset the effects of high temperatures.

YIELD & PACKAGING: CEMENT ALL is available in a 55-lb bag or pail, and a 25-lb (25 kg, and 11.3 kg) box. One 55-lb (25 kg) bag or pail of CEMENT ALL will yield approximately 0.5 ft³ (0.01 m³). One 25-lb (11.3 kg) box of CEMENT ALL will yield approximately 0.2 ft³ (0.006 m³).

SHELF LIFE: CEMENT ALL has a shelf life of 12 months when stored properly in a dry location, protected from moisture, out of direct sunlight, and in an undamaged package.

USER RESPONSIBILITY: Before using CTS products, read current technical data sheets, bulletins, product labels and safety data sheets at www.CTScement.com. It is the user's responsibility to review instructions and warnings for any CTS products prior to use.

WARNING: DO NOT BREATHE DUST. AVOID CONTACT WITH SKIN AND EYES. Use material in well-ventilated areas only. Exposure to cement dust may irritate eyes, nose, throat, and the upper respiratory system/lungs. Silica exposure by inhalation may result in the development of lung injuries and pulmonary diseases, including silicosis and lung cancer. Seek medical treatment if you experience difficulty breathing while using this product. The use of a NIOSH/MSHA-approved respirator (P-, N- or R-95) is recommended to minimize inhalation of cement dust. Eat and drink only in dust-free areas to avoid ingesting cement dust. Skin contact with dry material or wet mixtures may result in bodily injury ranging from moderate irritation and thickening/cracking of skin to severe skin damage from chemical burns. If irritation or burning occurs, seek medical treatment. Protect eyes with goggles or safety glasses with side shields. Cover skin with protective clothing. Use chemical resistant gloves and waterproof boots. In case of skin contact with cement dust, immediately wash off dust with soap and water to avoid skin damage. In case of skin contact with wet cement, wash exposed skin areas with cold running water as soon as possible. In case of eye contact with cement dust, flush immediately and repeatedly with clean water, and consult a physician. If wet cement splashes into eyes, rinse eyes with clean water for at least 15 minutes and go to the hospital for further treatment.

Please refer to the SDS and www.CTScement.com for additional safety information regarding this material.

LIMITED WARRANTY: CTS CEMENT MANUFACTURING CORP. (CTS) warrants its materials to be of good quality and, at its option, will replace or refund the purchase price of any material proven to be defective within one (1) year from date of purchase. The above remedies shall be the limit of CTS' responsibility. Except for the foregoing, all warranties expressed or implied, including merchantability and fitness for a particular purpose, are excluded. CTS shall not be liable for any consequential, incidental, or special damages arising directly or indirectly from the use of the materials.

⚠ WARNING: Can expose you to crystalline silica, a carcinogen, and hexavalent chromium, a reproductive toxicant. See www.P65Warnings.ca.gov.

TYPICAL PHYSICAL DATA

Set Time, ASTM C191 Mod.

Initial set	15 minutes
Final set	35 minutes

Compressive Strength, ASTM C109 Mod.

1 hour*	3000 psi (20.7 MPa)
3 hours	5000 psi (34.5 MPa)
24 hours	6000 psi (41.4 MPa)
7 days	7000 psi (48.3 MPa)
28 days	9000 psi (62.1 MPa)

Slant Shear Bond, ASTM C882 per C928

24 hours	1500 psi (10.3 MPa)
7 days	2000 psi (13.8 MPa)
28 days	2500 psi (17.2 MPa)

Length Change, ASTM C157 per C928

28 days in water (max)	0.04%
28 days in air (max)	-0.03%

Scaling Resistance, ASTM C672 per 928

Max scaled material	0-1 lb/ft ² (0-5 kg/m ²)
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Flexural Strength, ASTM C348

600 psi (4.14 MPa)	7 days
800 psi (5.51 MPa)	28 days

Splitting Tensile, ASTM C496

7 days	700 psi (4.82 MPa)
28 days	880 psi (6.06 MPa)

Change in Height at Early Ages, ASTM C827†

At Final Set	< 1.0%
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Measuring Changes in Height of Cylindrical Specimens of Hydraulic Cement Grout, ASTM C1090†

28 Days	0%–0.3%
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*After final set

Data obtained at flow consistency 102 by ASTM C1437

All Data obtained at 70°F (21°C).

†Non-Shrink Grout compliance is achieved at 3.75 quarts of water per 55 lb.



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