

# LOW-P™ REPAIR MORTAR

Rapid-Setting Repair Mortar for Low Permeability Applications



## PRODUCT DATASHEET

**DESCRIPTION:** Rapid Set® LOW-P™ REPAIR MORTAR is a specialty mortar that produces a low permeability, corrosion resistant, fast setting concrete repair material that allows for early opening to traffic. No chlorides are added.

**USES:** Full and partial depth repair of concrete pavements, bridge deck overlays, elevated deck repairs, parking structures, new slab construction, formed concrete work, and grouting.

**ENVIRONMENTAL ADVANTAGES:** Use LOW-P REPAIR MORTAR to reduce your carbon footprint and lower your environmental impact. Production of Rapid Set cement emits far less CO<sub>2</sub> than portland cement. Contact your CTS representative for EPD, LEED values and other sustainability information.

**SURFACE PREPARATION:** Concrete bonding surfaces must be clean, sound, and free from any materials that may inhibit bond such as oil, asphalt, curing compounds, acids, dirt and loose debris. Complete surface preparation in accordance with project specifications. Roughen surface and remove all unsound concrete. Immediately prior to placement the repair surface should be thoroughly saturated with water. Standing water and puddles should be removed from the surface.

**MIXING:** The use of a power-driven mechanical mixer, such as a mortar mixer or a drill-mounted mixer, is required. Organize work so that all personnel and equipment are in place before mixing. Use clean potable water and mix whole bags only. **LOW-P REPAIR MORTAR may be mixed using 2.75 to 4.0 quarts of water per 55-lb bag or 3.5 to 5 quarts of water per 70-lb bag.** Use less water to achieve higher strengths. For cold weather applications, use warm water. **CAUTION: Do not add portland cement, lime, fly ash or any other admixtures unless approved by CTS.**

**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:** LOW-P REPAIR MORTAR is available nationwide in 55-lb or 70-lb bags. One 70-lb bag of LOW-P REPAIR MORTAR will yield approximately 0.7 ft<sup>3</sup>. When extended with 50 lbs of 3/8" aggregate yields approximately 0.9 ft<sup>3</sup>.

**SHELF LIFE:** LOW-P REPAIR MORTAR 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](http://www.CTScement.com). It is the user's responsibility to review instructions and warnings for any CTS products prior to use.

## OVERVIEW

### Highlights:

Low Permeability: Less than 1000 coulombs

Fast: Minimizes downtime; ready for traffic in 1 to 3 hours

Durable: Non-metallic, no added chlorides, sulfate resistant, ASR resistant, and freeze-thaw resistant

Ease of Use: Easy to place, high slump, non-segregating formula

Corrosion Protection: Integral corrosion inhibitor to protect embedded metals

### Approved:

State (DOT) and local approvals

### MasterFormat® 2016

03 01 30 Maintenance of Cast-in-Place Concrete

03 01 50 Maintenance of Cast Decks and Underlayments

03 01 70 Maintenance of Mass Concrete

### Manufacturer:

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**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](http://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**  
CANCER and REPRODUCTIVE HARM - [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

## TYPICAL PHYSICAL DATA

### Set Time, ASTM C191 Mod.

Initial set	20 – 25 minutes
Final set	30 – 40 minutes

### Compressive Strength

ASTM C109 Mod.: Neat	ASTM C39: Extended
3 hours 4000 psi (26.6 MPa)	3 hours 3500 psi (24.1 MPa)
24 hours 5000 psi (34.5 MPa)	24 hours 4500 psi (31.0 MPa)
7 days 6500 psi (44.8 MPa)	7 days 6000 psi (41.4 MPa)
28 days 7500 psi (51.7 MPa)	28 days 7000 psi (48.3 MPa)

### Bond Strength, ASTM C882 per C928

Neat	Extended
24 hours 200 psi (8.3 MPa)	24 hours 1500 psi (10.3 MPa)
7 days 1400 psi (9.7 MPa)	7 days 1700 psi (11.7 MPa)
28 days 1500 psi (10.3 MPa)	28 days 2100 psi (14.5 MPa)

### Rapid Chloride Permeability, ASTM C1202

28 days	< 1000 coulombs
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### Shrinkage, ASTM C157 per C928

28 days	< 0.03%
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### Freeze-Thaw, ASTM C666 (Procedure A)

300 cycles	Dynamic modulus: 111.9%
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All data produced at 70°F (21°C). Performance will vary based on actual aggregate properties and project variables. Complete trial batches to verify performance.



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