



V/O REPAIR MIX

Vertical Overhead Repair Material



Highlights:

- Self-curing technology (SCT)
- Integral corrosion inhibitor
- Fiber reinforced
- Freeze-thaw resistant
- Concrete gray color
- Polymer modified
- Excellent bond
- Structural strength in 2 hours
- 25 minute working time

MANUFACTURER:

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PRODUCT NAME:

Rapid Set® V/O REPAIR MIX

DESCRIPTION:

Rapid Set V/O REPAIR MIX is a high performance, polymer-modified blend of Rapid Set® Cement with additives and specially graded fine aggregate. V/O REPAIR MIX has been specially formulated to match the color of typical portland cement concrete. Cutting-edge self-curing technology (SCT) means wet curing is not required in most applications. V/O REPAIR MIX is non-metallic and no chlorides are added. Combine V/O REPAIR MIX with water to produce a high quality repair material that is ideal where rapid strength gain, high durability, and low shrinkage are desired. Integral corrosion inhibitor is already added to increase protection of embedded reinforcement. **V/O REPAIR MIX has a working time of up to 25 minutes and achieves structural strength in 2 hours.**

RECOMMENDED USE:

Use V/O REPAIR MIX for general horizontal concrete and spall repairs, including vertical and overhead applications.

APPLICATIONS:

Apply V/O REPAIR MIX in thicknesses from 1/32" to 2" (0.1 to 5.1 cm). For vertical applications and small spot repairs, thicknesses up to 6" (15.2 cm) are acceptable.

ENVIRONMENTAL ADVANTAGES:

Use V/O REPAIR MIX 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 LEED values and environmental information.

SURFACE PREPARATION:

Surface must be clean, sound, and free of oil, curing compound, dust, mastic and other bond-breakers. Surface shall be prepared to a minimum profile of ICRI CSP 3. Mechanically abrade surface and remove all unsound material. Apply V/O REPAIR MIX to a thoroughly saturated surface with no standing water.





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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 personnel and equipment are in place before mixing. Use clean potable water. **Rapid Set® V/O REPAIR MIX may be mixed using 3.5 to 4.0 quarts (3.3 to 3.8 L) of water per 50-lb (22.7-kg) bag. Use less water to achieve higher strengths. DO NOT exceed 4 quarts (3.8 L) of water per bag.** Place the desired quantity of mix water into the mixing container. While the mixer is running, add material. Mix for the minimum amount of time required to achieve a lump-free, uniform consistency (usually 2 to 3 minutes). Do not retemper. Avoid mixers that entrap large amounts of air.

PLACEMENT:

V/O REPAIR MIX may be placed using traditional methods. Place and consolidate 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. V/O REPAIR MIX may be troweled, floated, shaved or broom finished. Do not install on frozen surfaces. To extend working time, use Rapid Set® SET Control® set retarding admixture.

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 shorten 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 set retarding admixture will help offset the effects of high temperatures.

CURING:

V/O REPAIR MIX does not require water curing or curing compound under moderate conditions at 70°F (21°C). In dry, windy or hot conditions, mist with water to maintain a continuously wet surface until the product has achieved sufficient strength.

YIELD & PACKAGING:

One 50-lb (22.7-kg) bag of V/O REPAIR MIX will yield approximately 0.37 cubic foot.

SHELF LIFE:

One year when stored in cool, dry conditions, out of direct sunlight.

USER RESPONSIBILITY:

Before using Rapid Set products, read current technical data sheet, bulletins, product label and material safety data sheet at www.ctscement.com. It is the user's responsibility to review instructions and warnings for any Rapid Set product in current technical data sheet, bulletins, product label and material safety data sheet 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.

PHYSICAL DATA

Typical Set Time, ASTM C191

Initial set	45 minutes
Final set	60 minutes
Compressive Strength, ASTM C109 Mod.	
2 hours	2000 psi (13.79 MPa)
1 day	4000 psi (27.6 MPa)
28 days	6000 psi (41.4 MPa)

Data obtained at 4.0 quarts of water
All data produced at 70°F (21°C)

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 concrete, 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 concrete splashes into eyes, rinse eyes with clean water for at least 15 minutes and go to the hospital for further treatment.

PROPOSITION 65 WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Please refer to the MSDS 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's 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.

