FPP CONCRETE MIX

Form, Pour & Pumpable Concrete Mix

PRODUCT DATASHEET

DESCRIPTION: Rapid Set® FPP CONCRETE MIX is a high-performance, form and pour, pumpable, self-consolidating concrete repair material. Durable in wet environments, FPP CONCRETE MIX is a blend of Rapid Set hydraulic cement, high performance additives and quality aggregates. FPP CONCRETE MIX is non-metallic and no chlorides are added. Mix FPP CONCRETE MIX with water to produce a workable, pumpable concrete material that is ideal where high durability and low shrinkage are desired. Integral Rapid Set® Corrosion Inhibitor is already added to increase protection of embedded reinforcement.

USES: Use FPP CONCRETE MIX for general and structural concrete repair, construction of pavements, formed work, footings, balconies, tunnels, roadways, elevated concrete slabs, parking decks and industrial floors.

ENVIRONMENTAL ADVANTAGES: Use FPP CONCRETE MIX to reduce your carbon footprint and lower your environmental impact. Production of Rapid Set cement emits far less CO_2 than portland cement. Contact your CTS representative for EPD, LEED values and other sustainability information.

APPLICATION: Apply FPP CONCRETE MIX in thicknesses from 2" to 24" (5 cm to 61 cm).

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. Mechanically abrade surface and remove all unsound material. If applicable, apply FPP CONCRETE MIX to a thoroughly saturated surface with no standing water.

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. **FPP CONCRETE MIX may be mixed using 3.25 to 3.75 quarts (3.08 L to 3.55 L) of water per 60-lb (27.2-kg) bag. Use less water to reduce slump for sloped applications and to achieve higher strengths. Do not exceed 3.75 quarts (3.55 L) of water per bag.** Place the desired quantity of mix water into the mixing container. While the mixer is running, add FPP CONCRETE MIX. Mix for the minimum amount of time required to achieve a lump-free, uniform consistency (usually 1 to 3 minutes). Do not retemper.

PLACEMENT: FPP CONCRETE MIX may be placed using traditional construction methods. When placing with a concrete pump, pump continuously and clean out equipment immediately after completion. Organize work so that all personnel and equipment are ready before placement. Place, consolidate and screed quickly to allow for maximum finishing time. FPP CONCRETE MIX is a self-consolidating concrete, so traditional methods of consolidation such as vibration are not necessary. The mix may appear to have reached a plastic consistency within the first 30 minutes, but rodding or stirring will return the mix to a fluid and highly workable consistency. Do not wait for bleed water; apply final finish as soon as possible. FPP CONCRETE MIX may be troweled, floated or broom finished. On flatwork, do not install in layers. Install full-depth sections and progress horizontally. To extend working time, use Rapid Set® SET Control retarding admixture or use cold mix water. Do not install on frozen surfaces. FPP CONCRETE MIX may be applied in temperatures ranging from 45°F to 90°F (7°C to 32°C). Under dry conditions, water based coatings such as paint can be applied in 6 hours. Solvent based

OVERVIEW

Highlights:

- Self-Consolidating: Surrounds reinforcement and fills formwork
- Pumpable: Extended working time for maximum flow life
- Fast: Structural strength in 4 hours
- Polymer Modified
- Low Permeability: Resistant to chloride ion penetration
- Integral Corrosion Inhibitor: Corrosion resistance for embedded reinforcement
- Durable: Formulated for long life in critical applications
- Structural: For repair and new construction
- Multi-Purpose: General and structural concrete repair, formed work, and more

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03 01 30	Maintenance of Cast-in-Place Concrete
03 01 40	Maintenance of Precast Concrete
03 01 70	Maintenance of Mass Concrete
03 33 00	Architectural Concrete - Cast-In-Place Concrete

Manufacturer:

CTS Cement Manufacturing Corp.
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and impermeable coatings such as oil based paint and epoxy can be applied in 16 hours. Follow the coating manufacturer's recommendations for surface condition.

CURING: Placements must be protected from loss of moisture until material has reached structural strength. For exposed surfaces, apply a curing compound that conforms to ASTM C309, or water cure until structural strength is achieved. For formed work, keep forms in place to protect from moisture loss. 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: Rapid Set® FPP CONCRETE MIX is available in 60-lb (27.2-kg) bags. One 60-lb (27.2-kg) bag of FPP CONCRETE MIX will yield approximately 0.48 ft^3 (0.014 m^3).

SHELF LIFE: FPP CONCRETE MIX 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 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, within one year from date of sale, will replace material proven defective or refund purchase price thereof, and such replacement or refund 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

TYPICAL PHYSICAL DATA

Slump Spread, ASTM C1611	
Slump spread	27 in to 33 in
Spread after 30 min	>15 in

Compressive Strength, ASTM C39	
4 hours	2500 psi (17.2 MPa)
24 hours	3500 psi (20.7 MPa)
7 days	6000 psi (41.4 MPa)
28 days	6500 psi (44.8 MPa)

Data obtained using 3.75 quarts at 70°F (21°C). Results may vary depending on jobsite and environmental conditions.