

# 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<sub>2</sub> than portland cement. Contact your representative for LEED values and environmental 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 cold mix water or Rapid Set® SET Control retarding admixture from the Rapid Set® Concrete Pharmacy®. 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

## 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

### MasterFormat® 2016

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:

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applied in 6 hours. Solvent based 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 Rapid Set® SET Control retarding admixture from the Rapid Set® Concrete Pharmacy® 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 0.44 ft<sup>3</sup> (0.012 m<sup>3</sup>).

**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](http://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](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, 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](http://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.



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