



Product Specification for:
Rapid Set® WunderFixx®

SECTION 03 01 30 MAINTENANCE OF CAST-IN-PLACE CONCRETE
SECTION 03 01 40 MAINTENANCE OF PRECAST CONCRETE
SECTION 03 01 70 MAINTENANCE OF MASS CONCRETE
(The above were formerly Section 03930)
[Note to specifier: Delete unnecessary Sections.]

PART I GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the contract, including General and Supplementary Conditions, apply to this section.

1.2 SUMMARY

- A. This section specifies sandable, fast setting material for concrete repairs and detailing, sacking, rubbing, and skimcoating of vertical or overhead surfaces from featheredge to ½ inch thick and for filling cracks and imperfections on horizontal surfaces that will be painted or coated. Material will not re-emulsify when wet and can be painted in 4 hours.

1.3 SUBMITTALS

- A. Substitutions:
[Note to specifier: While this does not belong here, it is shown for your review and inclusion in section 01 25 13.] Requests for substitution must be received by Architect at least 14 days prior to bid opening and shall be accepted only from prime bidders. Request shall include: documentation from an approved independent testing laboratory showing compliance with this specification, record of past performance, list of similar installations, detailed comparison of the qualities of the proposed substitute with the specified product, statement of product costs showing all savings passed to owner if approved, and certification by the contractor that the proposed substitute is in every significant way equal to or better than the specified product.
- B. Submit 2 copies of product manufacturer's literature and Material Safety Data Sheets (MSDS). [Note to specifier: Add any other required submissions.]

1.4 QUALITY ASSURANCE

- A. References: Comply with the following unless modified by this specification.
1. ASTM C109/C109M-02 Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-in. Cube Specimens)
 2. ASTM C191-04 Standard Test Method for Time of Setting of Hydraulic Cement by Vicat Needle

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Delivery: Deliver materials to jobsite in original, unopened, undamaged containers that clearly show the manufacturer's name, product name, and batch number.
- B. Storage: Store material in a dry area off the ground protected from rain, snow, and other sources of moisture. Protect material from temperature extremes.

PART 2 PRODUCTS

2.1 REPAIR MATERIAL

- A. Shall be manufactured by CTS Cement Manufacturing Corp.,
11065 Knott Avenue, Suite A, Cypress, CA, 90630.
Phone: 800-929-3030 Website: www.ctscement.com
- B. Rapid Set® WunderFixx®: Cement based, fast setting, low shrink concrete repair material that can be used from featheredge to ½ inch thick.
1. Set time per ASTM C191 (Mod.) at 70°F:
Initial set 1 hour minimum. Final set 4 hour maximum.
 2. Compressive strength per ASTM C109 (Mod.):
1 day 650 psi
28 day 2000 psi
 3. Gradation requirements:

Sieve size	Maximum retained
100	2.0%
200	4.0%
270	8.0%
 4. Shall contain 4.0% (minimum) calcium sulfoaluminate.
 5. Shall not re-emulsify when wet.
 6. Shall be non-metallic with no added chlorides and shall be pre-blended

requiring only the addition of water.

- C. Rapid Set® Concrete Pharmacy®: Add these small, pre-measured packets to the repair material per manufacturer's recommendations to change the properties as shown. [Note to specifier: List only the products that you want to be used on your job.]
 - 1. Set Control® – slows down the set time
 - 2. Fast – speeds up the set time
 - 3. Light – lightens the color of the repair material
 - 4. Dark – darkens the color of the repair material

2.2 Water: Potable.

PART 3 EXECUTION

3.1 SURFACE PREPARATION

- A. Mechanically remove loose, unsound, contaminated concrete.
- B. Concrete must be free of materials such as paint, oil, curing compound, bond breaker, etc. that will inhibit bonding.
- C. Thoroughly clean extraneous material such as dirt, loose chips, and dust from concrete surface. If compressed air is used, it shall be free of oil.
- D. Concrete surface shall be dry.

3.2 MIXING

- A. Organize personnel and equipment before mixing.
- B. Use 1 part water to 2 parts of material.
- C. Mixed material should have a temperature of about 70°F. Warmer material will set faster than expected and cooler material will have slower strength gain. Control the mixed temperature by protecting the bags of repair material from temperature extremes and adjust the mixed temperature by using hot or cold water.
- D. Add potable water first then add material while mixing mechanically with a drill and mixing paddle.

- E. Do not add any other admixtures. Do not add sand, aggregate, or cement.
- F. Mix until smooth, uniform, and lump-free (usually 3 to 5 minutes).
- G. Do not re-temper.
- H. Clean mixing bucket and tools between batches.

3.3 PLACEMENT

- A. Place material onto the dry substrate.
- B. Maintain surface and ambient temperature between 45°F and 100°F during and for 4 hours after placement.
- C. Protect adjacent surfaces with drop cloths, waterproof paper, or other means to maintain them free of material splashes, water, and debris.
- D. Place material immediately after mixing.
- E. Apply material in one pass and avoid retroweling.
- F. As the material becomes stiff (usually 10 to 20 minutes) use a trowel to shave or cut the material to the desired shape.
- G. Sanding may be begun as soon as material has dried and must be completed within 24 hours.
- H. Material may be painted 4 hours after it has dried because the Ph matches the concrete Ph at that time.

3.4 CURING

- A. None required.

3.5 CLEAN UP

- A. Clean all tools immediately after use.
- B. Clean excess material from surrounding areas immediately.

END OF SECTION