

GUIDE SPECIFICATION FOR MEADOW-PATCH® 5: VERY FAST-SETTING, GENERAL PURPOSE CEMENTITIOUS REPAIR MORTAR AND HYDRAULIC WATERSTOP

SECTION 03 01 30

MAINTENANCE OF CAST-IN-PLACE CONCRETE

Specifier Notes: This guide specification is written according to the Construction Specifications Institute (CSI) format. The section must be carefully reviewed and edited by the architect or engineer to meet the requirements of the project. Coordinate this section with other specification sections and the drawings.

Specifier Notes: W. R. MEADOWS® MEADOW-PATCH 5 is a one-component, cementitious, very fast-setting restoration/repair mortar and water plug. This product has a light gray color and is designed for vertical, overhead, and horizontal applications, as well as for stopping active fluid seepage. This very fast-setting, low slump repair mortar may be troweled, shaped, molded, and shaved before taking final set. MEADOW-PATCH 5 is an excellent patching solution for difficult vertical/overhead applications without using expensive and intricate forming techniques.

MEADOW-PATCH 5 is easy to mix and apply. This very fast-setting, low slump mortar is designed to minimize downtime. Because of its versatility, MEADOW-PATCH 5 can be used vertically, horizontally, or overhead. Whether the installation is interior or exterior, MEADOW-PATCH 5 is an excellent choice for fast repairs above-grade, below-grade or on-grade. Typical applications include repairs to curb and gutters, precast concrete elements, tie-rod holes, concrete pipe, columns, beams, or any other general purpose repair. MEADOW-PATCH 5 may also be used as a water plug to effectively stop minor active fluid seepage.

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Surface preparation.
- B. Application of one-component, fast setting repair mortar to vertical, overhead, and horizontal surfaces by trowel application.

1.02 RELATED SECTIONS

Specifier Notes: Edit the list of related sections as required for the project. List other sections dealing with work directly related to this section.

- A. Section 03 30 00 - Cast-in-Place Concrete.
- B. Section 03 40 00 - Precast Concrete.

1.03 REFERENCES

- A. International Concrete Restoration Institute (ICRI) Technical Guidelines No. 03730.
- B. American Society for Testing and Materials (ASTM)
 - 1. ASTM C109/C109M-02 - Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2" or [50-mm] Cube Specimens).
 - 2. ASTM C191-01a - Standard Test Method for Time of Setting of Hydraulic Cement by Vicat Needle.
- C. American Concrete Institute (ACI)
 - 1. ACI 305-R89 - Standard on Hot Weather Concreting.
 - 2. ACI 306-R88 - Standard on Cold Weather Concreting.

3. ACI 308 - Standard Specification for Curing Concrete.
4. ACI 347-88 - Guide to Formwork for Concrete.

1.04 SUBMITTALS

- A. Comply with Section 01 33 00 - Submittal Procedures.
- B. Submit manufacturer's product data and application instructions.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
- B. Store materials in a clean, dry area in accordance with manufacturer's instructions.
- C. Protect materials during handling and application to prevent damage or contamination.

1.06 ENVIRONMENTAL REQUIREMENTS

- A. Do not apply below 35° F (1.7° C) or above 90° F (32° C) or when rain is imminent.
- B. Protect from conditions that may cause early water loss: high winds, low humidity, high temperature and direct sunlight.
- C. Protect from freezing for a minimum of 24 hours.

PART 2 PRODUCTS

2.01 MANUFACTURER

- A. W. R. MEADOWS, INC., PO Box 338, Hampshire, Illinois 60140-0338. (800) 342-5976. (847) 683-4500. Fax (847) 683-4544. Web Site www.wrmeadows.com.

2.02 MATERIALS

- A. Performance-Based Specification:
 1. Cementitious Repair Mortar: shall be a one-component, cementitious, very fast-setting restoration/repair mortar and water plug and shall have the following properties as determined by laboratory testing:
 - a. Compressive Strength, ASTM C109 20.7 MPa (3,000 psi) @ 1 day
44.8 MPa (6,500 psi) @ 28 days
 - b. Set Time, ASTM C191 Initial: 3-5 minutes
Final: 6-8 minutes
- B. Proprietary-Based Specification:
 1. MEADOW-PATCH 5 repair mortar by W. R. MEADOWS.

2.03 ACCESSORIES

- A. Concrete Curing Compound: 1100-CLEAR CURING COMPOUND, 1220-WHITE PIGMENTED CURING COMPOUND or VOCOMP®-20 CURING AND SEALING COMPOUND by W. R. MEADOWS.
- B. Acrylic Latex Bonding Agent: ACRY-LOK™ by W. R. MEADOWS.
- C. Epoxy Bonding Agent: REZI-WELD™ 1000 medium viscosity epoxy bonding agent by W. R. MEADOWS.

- D. Evaporation Retarder: EVAPRE™ by W. R. MEADOWS.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine surfaces to receive repair mortar. Notify engineer if surfaces are not acceptable. Do not begin surface preparation or application until unacceptable conditions have been corrected.

3.02 SURFACE PREPARATION

- A. Reinforcing Steel:
1. Perform reinforcing steel preparation in accordance with ICRI Technical Guideline No. 03730.
 2. Completely expose all reinforcing steel, ensuring a minimum clearance of $\frac{3}{4}$ " (19 mm) behind reinforcing steel.
 3. Remove loose scale and corrosion deposits and clean steel to white metal by abrasive blasting.
- B. Primer:
1. Apply the first coat to the cleaned steel promptly after cleaning. Let first coat dry for approximately 10-15 minutes and then apply second coat.
 2. Allow primer coat to dry and stiffen for 1 - 2 hours before application of mortar.
- C. Concrete Substrate:
1. Perform surface preparation in accordance with ICRI Technical Guidelines No. 03730.
 2. Mechanically abrade existing substrate to remove all unsound concrete, but do not use excessive force, which may cause micro-fracturing.
 3. Ensure substrate is structurally sound and free of any contaminants that will adversely affect bond of mortar.
 4. Prepared surface must be dust-free and have a sufficient profile to ensure adequate mechanical lock.
 5. Pre-soak repair zone prior to application of mortar to a saturated, surface dry (SSD) condition and free of standing water.
 6. Prime substrate with a slurry coat of two parts repair mortar to one part acrylic bonding agent.
 7. Allow slurry coat to become tacky but not tack-free.
 8. As a hydraulic plug, cut out the substrate to a minimum void dimension of $\frac{3}{4}$ " by $\frac{3}{4}$ ".
 9. Ensure this notched opening is wider than the top.

3.03 APPLICATION

- A. Mixing
1. Mix complete bags using a mortar-type mixer.
 2. Alternatively, for small repairs, mix in a clean vessel, using a variable-speed drill with a mixing paddle designed for mixing mortars (not liquids) at 400-600 rpm.
 3. Pour $\frac{3}{4}$ of the liquid component into the mixer.
 4. Slowly add dry component while mixing.
 5. Mix for 3-5 minutes or until homogeneous and lump-free.
 6. Adjust mix consistency using the remaining $\frac{1}{4}$ of container of liquid component.
- B. Placement
1. Compact mortar into properly prepared substrate prior to bulk placement.
 2. Finish surface with a wood or steel trowel, or a sponge float.
 3. Do not re-temper or over-work.
 4. Ensure maximum thickness does not exceed 2" (5 cm).
 5. Follow ACI 305-R89 "Standard on Hot Weathering", or ACI 306-R88 "Standard on Cold Weather Concreting", when applicable.

6. As a hydraulic plug, force mortar directly into crack and hold under pressure until mortar hardens.
- D. Curing
1. Cure mortar immediately following application in accordance with ACI 308.
 2. Apply a water-based curing compound at the specified rate based on manufacturer's recommendation.

END OF SECTION