

**SECTION 03 5400  
CAST UNDERLAYMENT**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Liquid-applied floor patching underlayment.
  - 1. Use Cementitious type at UZIN NC 182.

**1.02 RELATED REQUIREMENTS**

- A. Section 01 7000 - Execution and Closeout Requirements: Alteration project procedures; selective demolition for remodeling.

**1.03 REFERENCE STANDARDS**

- A. ASTM C109/C109M - Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-in. or (50-mm) Cube Specimens); 2013.
- B. ASTM C348 - Standard Test Method for Flexural Strength of Hydraulic-Cement Mortars; 2014.

**1.04 SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide manufacturer's data sheets documenting physical characteristics and product limitations of underlayment materials. Include information on surface preparation, environmental limitations, and installation instructions.
- C. Certificate: Certify that products meet or exceed specified requirements.

**1.05 QUALITY ASSURANCE**

- A. Applicator Qualifications: Company specializing in performing the work of this section, and approved by manufacturer.
- B. Installer Qualifications: An authorized representative or INSTALL® (International Standards and Training Alliance) certified installer or equal, who is trained and approved by manufacturer.

**1.06 DELIVERY, STORAGE, AND HANDLING**

- A. Store products in manufacturer's unopened packaging until ready for installation.
- B. Keep dry and protect from direct sun exposure, freezing, and ambient temperature greater than 105 degrees F (41 degrees C).

**1.07 MOCK-UP**

- A. Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
  - 1. Prepare mock-up in location designated by Architect.
  - 2. Area: 6 ft by 6 ft (2 m by 2 m).
  - 3. Do not proceed with underlayment work until workmanship of mock-up has been approved by Architect.
- B. Mock-up may remain as part of the Work.

**1.08 FIELD CONDITIONS**

- A. Do not install floor patching underlayment until floor penetrations and peripheral work are complete.
- B. Maintain minimum ambient temperatures of 50 degrees F (10 degrees C) 24 hours before, during and 72 hours after installation of underlayment.

**PART 2 PRODUCTS**

**2.01 MANUFACTURER**

- A. UZIN, a brand of Uzin Utz North America, Inc. NC 182 Cementitious Patch & Repair Compound. [www.uzin-utz.com](http://www.uzin-utz.com).

## **2.02 MATERIALS**

- A. Cementitious Patching Underlayment: Blended cement mix, that when mixed with water in accordance with manufacturer's directions will produce smoothing and underlayment with the following properties:
  - 1. Compressive Strength: Minimum 4300 psi (29.64746 MPa) after 28 days, tested per ASTM C109/C109M.
  - 2. Flexural Strength: Minimum 1000 psi (6.89476 MPa) after 28 days, tested per ASTM C348.
  - 3. Final Set Time: 15 Minutes (at 70F and 65% relative humidity).
  - 4. Thickness: Capable of thicknesses from feather edge to UNLIMITED DEPTH.
- C. Water: Potable and not detrimental to patch underlayment mix materials.
- D. Primer:
  - 1. Gypsum Concrete: Two coat application of UZIN PE 260 Primer (diluted to absorbency requirement to seal substrate).
  - 2. Standard Absorbent Concrete: UZIN PE 260 Primer (diluted to absorbency requirement to seal substrate).
  - 3. Extremely Absorbent Concrete: Two coat application of UZIN PE 260 Primer (diluted to absorbency requirement to seal substrate).
  - 4. Wood: UZIN PE 260 Primer (undiluted).
  - 5. Metal: UZIN PE 280 Primer
  - 6. Other Non-Porous Substrates: UZIN PE 280 Primer

## **2.03 MIXING**

- A. Site mix materials in accordance with manufacturer's instructions.
- B. Mix to smooth consistency without over-watering.

## **PART 3 EXECUTION**

### **3.01 EXAMINATION**

- A. Verify that substrate surfaces are clean, dry, unfrozen, do not contain petroleum byproducts, or other compounds detrimental to underlayment material bond to substrate.

### **3.02 PREPARATION**

- A. Vacuum clean surfaces.
- B. Prime substrate in accordance with manufacturer's instructions. Allow to dry.
- C. Close floor openings.

### **3.03 APPLICATION**

- A. Install patch underlayment in accordance with manufacturer's instructions.
- B. Place to required thickness \_\_\_\_\_.
- C. Place before partition installation.

### **3.04 CURING**

- A. Once patch underlayment starts to set, prohibit foot traffic until final set has been reached.
- B. Air cure in accordance with manufacturer's instructions.

### **3.05 PROTECTION**

- A. Protect against direct sunlight, heat, and wind; prevent rapid drying to avoid shrinkage and cracking.
- B. Do not permit traffic over unprotected floor underlayment surfaces.

## **END OF SECTION**