**Section 03540: Cementitious Underlayment**

Note to Architect: The following are specifications for AccuCrete® PrePour covering a typical installation. For special conditions and other types of applications please consult with your local AccuCrete® representative.

**Part 1: General**

 **1.1 Scope**

1. Specify to meet project requirements. The conditions of the contract (General Supplementary, and other conditions) and the General Requirements (Sections of Division 1) govern the provisions of this section.
2. Work includes self-leveling underlayment for interior finish but is not limited to

1. AccuCrete® PrePour

1. Division 3 Concrete Topping
2. Division 9 Sound Control, patching and leveling underlayments

1. References
2. ASTM C472 Test method for Physical Testing of Gypsum, Gypsum Plaster and Gypsum Concrete
3. ASTM E492 Standard Test Method for laboratory Measurement of Impact Sound Transmission Through Floor-Ceiling Assemblies Using the Tapping Machine (IIC)
4. ASTM E90 Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements (STC)

**1.2 Qualifications**

1. All materials, unless otherwise indicated, shall be manufactured by Arcosa Specialty Materials and shall be installed in accordance with its current printed procedures by an AccuCrete® Authorized licensed applicator.
	1. **Delivery / Storage**
2. All materials shall be delivered in their original unopened packages and stored in an enclosed shelter providing protection from damage and exposure to the elements. Avoid ambient temperature below 40 degrees F. Do not allow bags to get wet. Products shall not be used beyond shelf life. Damaged or deteriorated materials shall be removed from the project.

**1.4 Conditions**

1. Prior to the application, the building envelope must be enclosed (all windows, doors, roofing, and other openings). AccuCrete® Prime can be poured after drywall or when needed prior to drywall installation. Consult your licensed AccuCrete® contractor for details.
2. The interior of the building must be enclosed, protected from sun and wind. Ambient and substrate temperatures must be maintained at a minimum temperature of 50 degrees F for 24 hours prior to the start of the installation and maintained during the installation for a period of seventy-two (72) hours after the installation of AccuCrete® Prime. Provide continuous ventilation and heat to remove excess moisture after installation until underlayment is dry. The absence of condensation on windows will confirm adequate ventilation.

**Part 2: Products**

* 1. **Products**
1. Cementitious Underlayment: AccuCrete® PrePour 2000 to 2600 psi compressive strength per ASTM C472 M. depending on water content and slump size. Recommended thickness 3/8” to 2” in a single lift. Minimum 3/8” depth over all wood substrates. Water per bag 5.5-6.5 US gallon per 80 lb. bag. Dry density 75-85 lbs./ cubic foot. ASTM E84- Flame Spread:0, Fuel Contribution:0, Smoke Density:0. AccuCrete® PrePour is Greenguard Gold certified.
2. Primer: AccuCrete® Primer 8818 or Manufacturer-approved primer over wood and concrete substrates. The number of coats will vary depending on primer and application.
3. Water: Potable water, free of contaminants
4. AccuQuiet® D18 Ultra Low Compression Sound Mat 3/16” Thickness. AccuQuiet® D25 Ultra Low Compression Sound Mat ¼” Thickness. AccuQuiet® DX38 Ultra Low Compression Sound Mat 3/8” Thickness. All AccuQuiet® Sounds Mats are 80% post- industrial recycled content and Greenguard Gold certified.

**2.2 Manufacturer**

1. Arcosa Specialty Materials, 1550 Double Drive, Norman, OK 73069, 800-624-5963

**2.3 Substitutions**

1. Require Approval

**Part 3: Execution**

**3.1 Preparation**

1. Subfloor should be structurally sound, properly fastened and dry. Subfloor must be clean and free of all dust, mud, oil, grease, and any other contaminants prior to pouring the underlayment. All cracks or voids should be filled~~.~~
2. Wood substrate: Limit design of subfloor and framing to minimum L/360 for live and dead loads. Wood panels must be securely attached to the floor joists with approved fasteners and properly spaced. Wood should be APA rated and T&G or back blocked at joints. Other wood products such as particle board are not satisfactory as a subfloor.
3. Concrete substrate: Concrete must be structurally sound, dry and free of surface contamination and must meet the live and dead load deflection standards of L/360. If the concrete is new verify it has been properly cured for at least 28 days and is dry. In 24 hours prior to underlayment installation. The substrate should be thoroughly sealed with AccuCrete® Primer 8818 or an approved primer/sealer. In all cases where vapor emissions might be an issue, a test of the pressure must be conducted per ASTM E-1869. This test must show a minimum vapor emission rate of 5 lbs./1000 sq. ft./24 hours.
4. AccuCrete® PrePour should not be used to bridge moving cracks or expansion joints. All joints must be honored through to the surface.
5. AccuCrete® PrePour is not a wear surface and are not intended for use as a structural element. Products are for interior use only and should not be used in areas where extended or repetitive exposure to moisture is anticipated unless protected by a waterproofing system. Any material poured above a crawl space must be protected by a vapor barrier.
6. Before, during and after installation of AccuCrete® PrePour the general contractor shall be responsible for ensuring that the building shall be ventilated and heated to a minimum of 50 degrees F (10 degrees C) until subfloor and ambient temperatures have stabilized. Temperature during and after installation shall be maintained until material has completely cured.
7. Once AccuCrete® PrePour is installed and prior to the resumption of construction, place temporary wood planking over underlayment until installation of tub or shower fixtures.

**3.2 Mixing**

1. Add 5.5 to 6.5 gallons of water to one 80 lb. bag of AccuCrete® PrePour following recommendations outlined in the applicator manual.

**3.3 Application**

1. Prime all subfloors prior to the installation of AccuCrete® PrePour. Use AccuCrete® Primer 8818 or manufacturer approved primer at the recommended application rate. Over wood substrates where a bond is not anticipated, reinforcing lath is recommended.
2. When applications require a sound mat, rolls are loose laid on the subfloor, seams tightly joined and sealed. The perimeter of rooms, adjoining walls, all fixable objects and mechanical penetrations must be isolated with perimeter isolation strip. Refer to AccuQuiet® product literature or AccuCrete® Applicator manual for details
3. AccuQuiet® D18 3/16” thick. AccuCrete PrePour Thickness Recommendations:
4. Residential/Multifamily Construction 0.75”
5. Light Commercial; 1”
6. AccuQuiet® D25 ¼” thick. AccuCrete PrePour Thickness Recommendations:
7. Residential/Multifamily Construction: ¾”
8. Light Commercial: 1”
9. AccuQuiet® DX38 3/8” thick. AccuCrete PrePour Thickness Recommendations:
10. Residential/Multifamily Construction: 1”
11. Light Commercial: 1”.
12. Pour AccuCrete® PrePour to minimum depth of ¾” over all wood substrates while spreading and finishing to a smooth surface.
13. Except for authorized joints, spread product in a continuous, monolithic application, taking caution to not pour any wet slurry against any material that has already achieved an initial set.

D. General contractor shall provide continuous ventilation and adequate heat as indicated in section 3.1.E above, in order to rapidly remove excess moisture from the area of the installation, until the underlayment is dry.

E. Under ideal drying conditions, typical drying time is 5 days for installations ½” (13mm) in thickness, and 14-21 days for 1 1/2” (38mm) in thickness. Conditions such as high humidity, cool temperatures, or poor ventilation will prolong drying time.

 **3.4 Field Quality Control**

1. Slump Test. AccuCrete® PrePour should be tested for slump at the beginning of each installation. Slump tests should be conducted periodically during the installation to confirm the required slump is maintained. Slump test apparatus using a 2-inch by 4-inch cylinder. Slump tests on wood will vary from plexiglass. The acceptable patty should be 9.5 to 10.5 inches with a target of 10 inches on plexiglass. The acceptable patty should be 8.5 to 9.5 inches with a target of 9 inches on wood.