

# Sample Specification Guideline for Installing Underlayment Using Rapid Set<sup>®</sup> LevelFlor<sup>®</sup> Self-Leveling Underlayment

## **PART 1 - GENERAL**

### **1.1 SUBMITTALS**

- A. Submit the following in accordance with Division \_\_\_\_\_ Section “Submittal Procedures”.
- B. Product data for the Rapid Set LevelFlor Self-Leveling Underlayment to include physical characteristics, product limitations, and manufacturer’s installation instructions to include recommended mix designs for the intended application.
- C. Product data for the Rapid Set Cement All™ and Rapid Set Concrete Mix to include physical characteristics, product limitations, and manufacturer’s installation instructions to include recommended mix designs for the intended application.

### **1.2 QUALITY ASSURANCE**

- A. Manufacturer to provide confirmation of installation procedures.
- B. Place field sample (mock up) panel of surface repair materials, topping material, and all other finishes to required specification. Accepted field sample shall remain in place and shall be the guide to acceptance of balance of installation.
- C. Manufacturer’s Training Course Completion: Provide a letter of training completion from all equipment and material manufacturers that require training confirming that the installer is a trained applicator and is familiar with proper procedures and installation requirements.

### **1.3 ENVIRONMENTAL LIMITATIONS/REQUIREMENTS**

- A. Comply with manufacturer’s written instructions for substrate temperature and moisture content, ambient temperature and humidity, ventilation and other conditions affecting product performance.
- B. Flatness and levelness:
  - 1. Installed and finished underlayment shall meet flatness and levelness requirements as specified.
  - 2. Installed underlayment shall be cured a minimum of six (6) hours or at which point equipment can be put on the slab and does not cause indentation.
- C. Protection measures listed below shall begin immediately after the concrete slab is poured:
  - 1. All hydraulic-powered equipment shall be diapered to avoid staining of the concrete.
  - 2. All vehicle parking shall be prohibited on the finished slab area.

3. If necessary to complete their scope of work, drop cloths shall be placed under vehicles at all times.
  4. No pipe-cutting machine shall be used on the finish floor slab.
  5. Steel shall not be placed on the finish slab to avoid rusting.
  6. Acids and acidic detergents will not come in contact with slab.
  7. All painters will use drop cloths on the concrete. If paint gets on the concrete, it must be immediately removed.
  8. All trades will be informed that the slab must be protected at all times.
- D. Installed topping area shall be closed to traffic during finish floor application and after application for the length of time recommended by the manufacturer.

#### **1.4 DELIVERY, STORAGE AND HANDLING**

- A. Deliver all materials in original containers.
- B. Maintain records of manufacturer's product lot numbers.
- C. Store all materials in a dry, climate-controlled environment at a minimum of 50°F and a maximum of 85°F.

#### **1.5 SITE CONDITIONS**

- A. Rapid Set® LevelFlor® is a hydraulic cement-based product. The ideal temperature at time of installation is 70°F for both the surface and air temperatures. Warmer material will set faster than expected and cooler material will have slower strength gain. Control the mixed temperature by protecting the bags of material from temperature extremes and adjust the mix temperature by using hot or cold water. For further information contact Rapid Set at 800-929-3030.
- B. Existing concrete must have a minimum compressive strength of 3000 psi and a minimum density of 100 pcf (pounds per cubic foot).
- C. Close off areas during the installation of Rapid Set LevelFlor from all traffic and stop excessive air movement across the top of the surface until Rapid Set LevelFlor has reached final set.
- D. Moisture vapor and alkalinity of the substrate and Rapid Set LevelFlor must conform to the finished topping manufacturer's recommendation.

## **PART 2 - PRODUCTS**

### **2.1 INSTALLATION MATERIALS**

- A. Concrete Repair Materials and Toppings
  1. Self-Leveling Underlayment shall be Rapid Set LevelFlor.
  2. Surface defect material shall be from one of the following products: Rapid Set LevelFlor (0.25-1 inches in depth), Rapid Set Cement All (0-4 inches in depth), Rapid Set Mortar Mix (0.5-6 inches in depth), Rapid Set Concrete Mix (2-24 inches in depth).
  3. Primer shall be Rapid Set Acrylic Primer or Rapid Set TXP™ Epoxy Primer.
  4. Utilize manufacturer's recommended specifications, proportions, mix ratios, additives and proprietary components as required for specific applications, and as approved by Architect/Engineer.

5. Water shall be clean and potable.

## **PART 3 - EXECUTION**

### **3.1 PREPARATION**

- A. Installer shall examine and approve concrete substrate for conditions affecting performance of finish. Installer shall correct conditions that are found to be out of compliance with the requirements of this section to include installing a pre-leveling layer as recommended by CTS Cement Manufacturing Corporation.
- B. All surface defects shall be repaired using materials described in 2.1 A.
- C. Provide a concrete substrate surface that has been mechanically prepared to an ICRI CSP 3 and is clean of all contaminants and debris.
- D. If application includes divider/terrazzo strips, level and set strips to appropriate heights prior to the pour of the LevelFlor.
- E. Pin or otherwise mark all existing joint locations to ensure they can be located and re-saw cut after placement of topping.
- F. Prime the prepared concrete using Rapid Set® Acrylic Primer in accordance with manufacturer's recommendations and time restrictions.

### **3.2 TOPPING APPLICATION**

Install Rapid Set LevelFlor® in accordance with manufacturer's instructions to include careful monitoring of the amount of mix water being used, with allowance for the following special designs:

- A. Any aggregates used and the loading shall be as recommended and approved by the manufacturer.
- B. Batch mixers by CS Unitec (Hippo Mixer) or Strong Manufacturing are the preferred methods of mixing the LevelFlor.
- C. If Barrel Mixing, use a 1/2" heavy-duty drill (12 mm) with a minimum of 650 rpm. Mix two (2) bags of LevelFlor with the specified amount of water in a mixing barrel using a "helix style" mixing paddle. Mix thoroughly for 3-5 minutes to obtain a lump-free mixture.
- D. Clean barrels/mixers periodically or use a 1/8" screen (#8 Classifier) to remove any unmixed and/or hardened material prior to placing the mixed LevelFlor onto the floor.
- E. Place LevelFlor to grade levels required and to conform to details on drawings.
- F. Pour, trowel or pump materials.
- G. Place LevelFlor up to 1" inch deep in a neat pour.
- H. Alternately, for thicknesses greater than 1", extend each 50-pound bag of material with 25 pounds of clean 3/8" pea gravel.

### **3.3 JOINT SAWING, PREPARATION AND FILLING**

- A. Allow topping to cure for a minimum of sixteen (16) hours prior to saw cutting joints.

- B. Locate original joint locations and saw cut through topping into the original joint. Saw blade shall penetrate to depth of original joint or 2" deep, whichever is the lesser.
- C. Ensure saw-cut joint is completely free of dust/debris/laitance.
- D. Apply stain prevention film or other masking agent along surface on both sides of the joint if residual staining may be a concern.