Specification Document
Product: SpecFlow

Section 03 54 00
Cementitious Underlayment

Part 1 – General

1.01 **Summary**

A. This specification outlines the application of SpecChem SpecFlow, a premium self-leveling underlayment concrete, intended for interior substrate smoothing and leveling.

1.02 **Quality Assurance**

A. Manufacturer qualifications: SpecChem must have an ongoing quality assurance program, independently audited regularly.

B. Comply with all safety and environmental conditions as recommended by SpecChem and local, state, and federal regulations. Refer to Safety Data Sheets (SDS) for safety and handling practices.

1.03 **Delivery, Storage, and Handling**

A. Materials delivered in original, unopened packaging. Damaged materials removed immediately. Store materials off the ground, protected from weather extremes.

1.04 **Job Conditions**

A. Apply in dry conditions, above 50°F (10°C). Take measures to protect surrounding surfaces from spillage and misting.

1.05 **Submittals**

A. Provide Technical Data Sheet (TDS), Safety Data Sheets (SDS), and certification of approved contractor status by SpecChem.

Part 2 – Products

2.01 **Manufacturer**

A. SpecFlow is manufactured by SpecChem, conforming to the requirements of this specification.

2.02 **Materials**

A. Primary Material: SpecFlow self-leveling underlayment.

B. Primer for Absorbent Substrates: SpecPrime, designed to enhance the bond of SpecFlow to the substrate.

C. Aggregates (if required): Clean, 3/8" pea gravel for applications exceeding 2" in thickness.

2.03 **Performance Criteria**

- **Compressive Strength (ASTM C109)**:
  - 1 Day: 3,000 psi
  - 7 Days: 4,500 psi
  - 28 Days: 5,500 psi
- **Bond Strength (ASTM C882 Modified)**:
  - 14 Days with SpecPrime: 1,000 psi
- **Flexural Strength (ASTM C348)**:
  - 28 Days: 1,150 psi
- **Set Time (ASTM C266)**:
  - Initial Set: 50 minutes
  - Final Set: 80 minutes
- **Yield/Density**:

- Yield per Bag: 0.50 cu ft (125 lbs/cu ft)

- **Application Thickness**:
  - Feather edge up to 2 inches
  - Up to 5 inches with the addition of pea gravel
- **Working Time**:
  - Flow time: 20 minutes at 70°F
- **Foot Traffic**:
  - Accepts foot traffic in 2 to 4 hours depending on conditions
- **Drying Time**:
  - Primer drying time: 3 to 4 hours at 70°F and 50% relative humidity

Part 3 – Execution

3.01 Surface Preparation

A. Cleaning the Surface: Remove dirt, grease, oil, asphalt, paint, curing compounds, and loose materials. The concrete should be profiled to a minimum CSP#3, with shot blasting preferred.

B. Priming: Apply SpecPrime at 100 - 150 sq. ft. per gallon using a brush or broom (not a roller) to ensure even coverage. Porous surfaces may require a second application. Allow SpecPrime to dry completely before proceeding with SpecFlow application.

3.02 Mixing and Application

A. Mixing SpecFlow: Start with 4 quarts of water in a mixing container, then add one 50-pound bag of SpecFlow. Using a blending paddle attached to a heavy-duty drill (650 rpm), mix for 2 to 3 minutes until smooth and lump-free. Do not over-water or re-temper the mixture. For extended applications, add 25 pounds of clean 3/8" pea gravel per 50 pounds of SpecFlow during the last minute of mixing.

B. Application Instructions: For Interior Floors: Pour SpecFlow over the primed substrate, spreading it with a long-handled spreader or pump it for larger

areas. SpecFlow self-levels and requires no troweling. It can be applied from a feather edge up to 2" thick, and up to 5" with pea gravel. It typically supports foot traffic within 2 to 4 hours, depending on conditions. For Wood Floors: Ensure the wood subfloor is solid hardwood, at least ¾" thick, and free of flex. Prime with SpecPrime, possibly requiring two coats for porous surfaces. Install galvanized expanded metal lath mesh, stapling every 6 inches and overlapping adjacent pieces by 1 inch. Re-prime over the mesh and let dry thoroughly before applying SpecFlow.

3.03 **Finishing and Curing**

A. SpecFlow self-levels and requires no grinding or sanding for a smooth finish. It is self-curing under most conditions.

3.04 **Cleaning**

A. Instructions for cleaning tools and the work area with water before SpecFlow hardens, with guidelines for mechanical removal of cured material.