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This product guide specification is based on the Construction Specifications Institute (CSI) *Project Delivery Guide*, *Construction Specifications Practice Guide*, *MasterFormat®*, *SectionFormat™*, and *PageFormat™*. This product guide specification is a manufacturer-specific proprietary product specification using the proprietary method of specifying applicable to master guide specifications and project specifications. Text requiring decisions are indicated by brackets [ ]; delete unused text in the final copy of the specification.

Revise the section number and title to suit project requirements, specification practices and section content. Refer to CSI *MasterFormat®* for other section numbers and titles.

## SECTION 03 54 16

### HYDRAULIC CEMENT UNDERLAYMENT

#### PART 1 - GENERAL

##### 1.1 SUMMARY

- A. Section Includes: Cement-based underlayment for use under floor coverings.

##### 1.2 SUBMITTALS

- A. Product Data: Manufacturer's technical product data including manufacturer's installation instructions.
- B. Special Manufacturer Warranty: Copy of specified warranty.

##### 1.3 QUALITY ASSURANCE

- A. Installer's Qualifications: Company with not less than 5 years' experience in performing specified Work similar to scope of this Project, and with a record of successful in-service performance, and sufficient production capability, facilities and personnel, to produce required Work.
- B. Preinstallation Meeting: Conduct preinstallation meeting prior to commencing work to verify project requirements, substrate conditions and coordination with other building products, and to review manufacturer's installation instructions and manufacturer's warranty requirements.
  - 1. Representatives of the owner, architect, contractor, tile installer, and any other parties who are involved in the scope of this installation shall attend the meeting.

#### 1.4 DELIVERY, STORAGE, AND HANDLING

- A. Deliver and store packaged materials in original containers with seals unbroken and labels intact until time of use.
- B. Store materials on elevated platforms, under cover, and in a dry location.

#### 1.5 FIELD CONDITIONS

- A. Environmental Limitations: Do not install materials until construction in spaces is complete and ambient temperature and humidity conditions are maintained at the levels indicated in referenced standards and manufacturer's written instructions.

#### 1.6 WARRANTY

- A. Special Manufacturer Warranties: Furnish manufacturer's standard warranty executed by authorized company official.

**Specifier Note:** Retain one of the following two subparagraphs.

**Specifier Note:** Retain following subparagraph for extended warranty if a preparation or setting material manufactured by Bostik will also be used for the installation. Refer to the Warranty Duration Table that is a part of the online manufacturer's warranty.

1. System Installation Warranty: Materials will be free from manufacturing defects from the time of purchase and conform to manufacturer's written specifications under normal usage for a period of [five] [ten] [twenty-five] years when applied according to manufacturer's written installation instructions and industry standard guidelines. If the nature of the defects of the products specified by this Section warrants, the warranty will include materials and labor for the replacement of the installation. Refer to manufacturer's warranty for specific details.

**Specifier Note:** Retain following subparagraph if preparation and other setting materials used for the installation will not be manufactured by Bostik.

2. Underlayment Only Warranty: Materials will be free from manufacturing defects from the time of purchase and conform to manufacturer's written specification under normal usage for a period of one year when applied according to manufacturer's written installation instructions and industry standard guidelines. If the nature of the defects of the products specified by this Section warrants, the warranty will include materials and labor for the replacement of the installation. Refer to manufacturer's warranty for specific details.

### PART 2 - PRODUCTS

#### 2.1 MANUFACTURER

- A. Manufacturer: Bostik, Inc., 11320 West Watertown Plank Road, Wauwatosa, WI 53226, Telephone: 800.726.7845, Fax: 414.774.8775, Inquiry: [inquiry@bostik-us.com](mailto:inquiry@bostik-us.com), Website: [www.bostik.com/us](http://www.bostik.com/us).

#### 2.2 HYDRAULIC CEMENT UNDERLAYMENT

**Specifier Note:** Retain paragraph below for proprietary method specification. Use of such phrases as "or equal" or "or approved equal" or similar phrases may cause ambiguity in specifications. Such phrases

require verification (procedural and regulatory) and assignment of responsibility for determining “or equal” products.

- A. Underlayment: SL-175™, Premium Self-Leveling Underlayment and Wear Layer.
  - 1. Description: Cement-based, self-leveling underlayment that can be used to create smooth, flat, or level surface that can be used for floor coverings, or left as a wear layer.
  - 2. VOC Content: 0 g/L as calculated according to SCAQMD Rule 1168.

## 2.3 AUXILIARY MATERIALS

- A. Primer: Universal Primer™ Pro, Deep Penetrating Primer.
  - 1. Description: Rapid drying, alkali resistant, high solids, one component, interior, acrylic primer.
  - 2. VOC Content: 8 g/L as calculated according to SCAQMD Rule 1168.
- B. Fiber Reinforcement: BostiMat™, Fiber Reinforcement Matrix Sheet.
  - 1. Description: Alkali resistant, non-flammable web of fiber reinforcement throughout the self-leveling matrix.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions where materials will be installed, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 PREPARATION

- A. Comply with manufacturer’s written instructions, including product technical bulletins and product package instructions.
- B. Substrates shall be clean, sound, dry, and free of contaminates that will act as a bond breaker. Do not use acids or mastic removers.

**Specifier’s Note:** Retain following paragraph when underlayment is being placed on concrete floor substrate.

- A. Moisture Vapor Emission Testing: Perform tests so that each test area does not exceed 1000 sq. ft, and perform no fewer than three tests in each installation area and with test areas evenly spaced in installation areas.
  - 1. Anhydrous Calcium Chloride Test: ASTM F 1869.
  - 2. Internal Relative Humidity Test: Using in situ probes, ASTM F 2170.
- B. Mitigating Moisture Vapor Emission: Install moisture vapor emission barrier (Slab-Coat™) over the concrete floor slab when one of the following two conditions is present:
  - 1. Locations where moisture vapor emissions exceeds 3 lb of water/1000 sq. ft. in 24 hours.
  - 2. Locations where relative humidity level is greater than 75 percent.

**Specifier Note: Retain one of the following six subparagraphs.**

A. Concrete (textured, open and porous):

**Specifier's Note: Retain one of the two bracketed options in the subparagraph below.**

1. [If substrates are weak or contaminated, clean down to solid, sound concrete by mechanical means.] [If moisture vapor emission barrier will be applied, prior to application clean down to solid, sound concrete by mechanical means if substrates are weak or contaminated.]
2. Dilute 1 part of primer (Universal Primer™ Pro) and 1 part water. Pour out or spray liberally and disperse with split tip broom to a thin film, leaving no puddles or bare spots. Allow primer to dry before placing subsequent products; if primer dries for more than 24 hours, apply additional thin coat of primer.

B. Non-Porous (burnished concrete, terrazzo, ceramic and quarry tile) Substrates:

1. Mechanically abrade substrate to a dull finish, and vacuum or mop to remove dust.
2. Apply one thin coat of undiluted primer (Universal Primer™ Pro) using a roller.
3. Allow primer to dry before placing subsequent products; if primer dries for more than 24 hours, apply additional thin coat of primer.

C. Moisture Vapor Emission Barrier (Slab-Coat™):

1. Sweep, vacuum, and wet mop to remove dust.
2. Apply one thin coat of undiluted primer (Universal Primer™ Pro) using a roller.
3. Allow primer to dry before placing subsequent products; if primer dries for more than 24 hours, apply additional thin coat of primer.

D. Wood:

1. Prepare wood by sanding down to clean bare wood.
2. Fill open seams according to manufacturer's written recommendations.
3. Apply one thin coat of undiluted primer (Universal Primer™ Pro) using a roller.
4. Allow primer to dry before placing subsequent products; if primer dries for more than 24 hours, apply additional thin coat of primer.

E. Adhesive Residue (thin, translucent non-water soluble, free of tack and well bonded):

1. Prepare surface using the wet scrape method according to RFCI.
2. Apply one thin coat of undiluted primer (Universal Primer™ Pro) using a roller.
3. Allow primer to dry before placing subsequent products; if primer dries for more than 24 hours, apply additional thin coat of primer.

F. Very Distressed Subfloors:

1. Remove all loose debris and sweep and vacuum substrate.
2. Dilute 1 part of primer (Universal Primer™ Pro) and 1 part water. Pour out or spray liberally and disperse with split tip broom to a thin film, leaving no puddles or bare spots. Allow primer to dry before placing subsequent products; if primer dries for more than 24 hours, apply additional thin coat of primer.

### 3.3 INSTALLATION

A. Fiber Reinforcement (BostiMat™) Placement Procedures:

1. Prefill cracks and sawed joints according to manufacturer's written recommendations.
  2. Roll out fiber reinforcement over primed substrate.
    - a. Place one mat for 1 inch thickness of underlayment.
    - b. Place two mats for 1 to 2 inch thickness of underlayment.
  3. Overlap seams not less than 1 inch and cut/trim to fit using scissors.
- B. Mixing of Underlayment (SL-175™): Mix underlayment with water according to manufacturer's written instructions.
- C. Underlayment (SL-175™) Placement Procedures:
1. Pour underlayment on the floor and disperse with a gauge rake followed by finishing with a smoothing tool. A porcupine or agitating roller may be required to disperse the fibers of the fiber reinforcement.
  2. Allow underlayment to dry and test progress according to ASTM D 4263.
- 3.4 PROTECTION
- A. Restrict foot traffic over installation according to manufacturer's written instructions.

END OF SECTION