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Guide Specification

Specifier Notes: This guide specification is written in Construction Specifications Institute (CSI) 3-Part Format in accordance with *The CSI Construction Specifications Practice Guide, MasterFormat, SectionFormat, and PageFormat.*

This Section must be carefully reviewed and edited by the Architect or Engineer to meet the requirements of the Project and local building code. Coordinate this Section with Conditions of the Contract, Division 01, other specification sections, and the Drawings. Delete all Specifier Notes after editing this Section.

Section numbers and titles are based on *CSI MasterFormat 2018 Edition.*

SECTION 07 92 26

SEMI-RIGID POLYUREA JOINT-FILL COMPOUND

Specifier Notes: This Section covers VeloBond, Inc. "Velo 85" semi-rigid, polyurea joint-fill compound for concrete floors. Consult VeloBond, Inc. for assistance in editing this Section as required for the Project.

Use of "Velo 85" semi-rigid, polyurea joint-fill compound contributes to LEED credits. Consult VeloBond, Inc. for more information.

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Semi-rigid, polyurea joint-fill compound for concrete floors.

1.2 RELATED REQUIREMENTS

Specifier Notes: Edit the following list of related sections as required for the Project. Limit the list to sections with specific information that the reader might expect to find in this Section, but is specified elsewhere.

- A. Section 03 30 00 – Cast-in-Place Concrete.
- B. Section 07 92 00 – Joint Sealants.

1.3 REFERENCE STANDARDS

Specifier Notes: List reference standards used elsewhere in this Section, complete with designations and titles. Delete reference standards from the following list not used in the edited Section.

- A. ASTM International (ASTM) (www.astm.org):
 1. ASTM D 412 – Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers—Tension.
 2. ASTM D 624 – Standard Test Method for Tear Strength of Conventional Vulcanized Rubber and Thermoplastic Elastomers.
 3. ASTM D 2240 – Standard Test Method for Rubber Property—Durometer Hardness.
 4. ASTM D 4016 – Standard Test Method for Viscosity and Gel Time of Chemical Grouts by Rotational Viscometer (Laboratory Method).
 5. ASTM D 7997 – Standard Practice for Polyurethane Raw Materials: Gel Tests for Polyurethane Non-Foam Formulations.
 6. ASTM D 4541-17 - Standard Test Method for Pull-Off Strength of Coatings Using Portable Adhesion Testers
- B. California SCAQMD, Rule 1168 – Adhesive and Sealant Applications.

1.4 PREINSTALLATION MEETINGS

Specifier Notes: Edit the Preinstallation Meetings article as required for the Project. Delete this article if not required.

- A. Convene preinstallation meeting [1 week] [2 weeks] before start of installation of polyurea joint-fill compound.
- B. Require attendance of parties directly affecting Work of this Section, including Contractor, Architect, Engineer, installer, and manufacturer's representative.
- C. Review the Following:
 1. Materials.
 2. Examination of concrete joints.
 3. Preparation.
 4. Mixing.

5. Installation.
6. Field quality control.
7. Protection.
8. Coordination with other Work.

1.5 SUBMITTALS

Specifier Notes: Edit the Submittals article as required for the Project. Delete submittals not required.

- A. Submittals: Comply with Division 01.
- B. Product Data: Submit manufacturer's product data, including surface preparation and installation instructions.

Specifier Notes: Edit the Samples paragraph as required for the Project.

- C. Samples: Submit manufacturer's:
 1. Chart of standard colors.
 2. Cured samples of standard colors.
- D. Manufacturer's Certification: Submit manufacturer's certification that materials comply with specified requirements and are suitable for intended application.
- E. LEED Certification: Submit LEED certification letter that materials are in compliance with indoor air quality requirements to obtain points for LEED certification.
- F. Installer's Project References: Submit installer's list of 10 successfully completed projects of similar size and scope to this Project, including project name and location, name of architect, and type and quantity of polyurea joint-fill compound installed.
- G. Warranty Documentation: Submit manufacturer's standard warranty.

1.6 QUALITY ASSURANCE

- A. Installer's Qualifications:
 1. Installer regularly engaged in installation of polyurea joint-fill compound of similar type to that specified for a minimum of 5 years.
 2. Use persons trained for installation of polyurea joint-fill compound.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Delivery Requirements: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
- B. Storage and Handling Requirements:
 1. Store and handle materials in accordance with manufacturer's instructions.

2. Keep materials in manufacturer's original, unopened containers and packaging until installation.
3. Store materials in clean, dry area indoors.
4. Store materials between 60 degrees F and 85 degrees F.
5. Do not store materials directly on floor or ground.
6. Store materials out of direct sunlight.
7. Keep materials from freezing.
8. Protect materials during storage, handling, and installation to prevent contamination or damage.

1.8 AMBIENT CONDITIONS

- A. Do not install polyurea joint-fill compound under ambient conditions outside manufacturer's limits.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturer: VeloBond, Inc., 1308 Monte Vista Avenue, Suite 9, Upland, California 91786. Phone 909-360-4977. www.velobond.com. sales@velobond.com.

Specifier Notes: Specify if substitutions will be permitted.

- B. Substitutions: [Not permitted] [Comply with Division 01].
- C. Single Source: Provide materials from single manufacturer.

2.2 MATERIALS

- A. Semi-Rigid Polyurea Joint-Fill Compound: "Velo 85".
 1. Description: Two-component, fast-setting, solvent-free, UV-inhibited, heavy-duty, semi-rigid, polyurea joint filler for concrete floors.
 2. Compliance:
 - a. LEED IEQ4.1 Low-Emitting Adhesives and Sealants.
 - b. California SCAQMD, Rule 1168.

Specifier Notes: Specify color of the semi-rigid, polyurea joint-fill compound. Standard color is VB Gray. Consult VeloBond, Inc. for availability of standard colors and custom-color matching using VeloBond liquid pigment dispersion color packs.

3. Color: [VB Gray] [_____].
4. VOC Content: 0.
5. Solids: 100 percent.
6. Viscosity, ASTM D 4016:
 - a. Component A: 800 cps.

- b. Component B: 800 cps.
- 7. Gel Time, ASTM D 7997: 30 to 50 seconds.
- 8. Tack Free, 74 Degrees F: 4 to 5 minutes.
- 9. Shore A Hardness, ASTM D 2240: 85 – 87.
- 10. Tear Strength, ASTM D 624, Die C: 110 pli.
- 11. Tensile Strength, ASTM D 412, 7 days: 1,800 psi.
- 12. Elongation, ASTM D 412: 162 percent.
- 13. Adhesion, ASTM D 4541-17: 422 – 454 psi.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine joints to receive polyurea joint-fill compound.
- B. Notify Architect of conditions that would adversely affect installation or subsequent use.
- C. Do not begin surface preparation or installation until unacceptable conditions are corrected.

3.2 PREPARATION

- A. Protection of In-Place Conditions: Protect adjacent surfaces from contact with polyurea joint-fill compound.
- B. Concrete Joint Preparation:
 - 1. Prepare joints in accordance with manufacturer's instructions.
 - 2. Ensure joint side walls are clean and dry, exposing open pores of concrete.
 - 3. Ensure concrete joint and slab corners are square, not tooled or rounded.
 - 4. Provide dry, sound, and uniform substrate, suitable for installation of polyurea joint-fill compound.

3.3 MIXING

- A. Mix components in accordance with manufacturer's instructions.

3.4 INSTALLATION

- A. Install polyurea joint-fill compound in accordance with manufacturer's instructions.
- B. Install polyurea joint-fill compound at joint locations in concrete floor as indicated on the Drawings.

Specifier Notes: ACI 302.1R – Guide to Concrete Floor and Slab Construction recommends installation of joint-fill compound be deferred as long as possible to allow for maximum slab shrinkage and joint widening. Consult ACI 302.1R and VeloBond, Inc. for guidance in specifying the minimum number of days to allow the concrete to cure before installation of the polyurea joint-fill compound.

Edit the following sentence as required for the Project.

- C. Allow concrete to cure a minimum of [30] [60] [90] [120] days before installation of polyurea joint-fill compound.
- D. Ensure floors and joints are clean and dry.
- E. Saw Cut Control Joints: Completely fill joints full depth.
- F. Construction Joints: Fill joints 2 inches in depth or as indicated on the Drawings.
- G. Slightly overfill/crown polyurea joint-fill compound above joints.
- H. Do not entrap air in polyurea joint-fill compound during installation.

Specifier Notes: Edit the following sentence as required for the Project.

- I. Color: Install polyurea joint-fill compound to color approved by Architect.
- J. After polyurea joint-fill compound has cured, scrape or shave excess compound flush with floor surface in accordance with manufacturer's instructions.
- K. Polishing: Polish concrete floor in accordance with manufacturer's instructions.

3.5 FIELD QUALITY CONTROL

- A. Inspect filled joints.
- B. Repair low spots of polyurea joint-fill compound in accordance with manufacturer's instructions.

3.6 PROTECTION

- A. Allow polyurea joint-fill compound to cure in accordance with manufacturer's instructions before opening to traffic.
- B. Protect installed polyurea joint-fill compound from damage until Substantial Completion.

END OF SECTION