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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 03 01 30.62

### CONCRETE REPAIR AND GROUT COMPOUND

Specifier Notes: This Section covers VeloBond, Inc. "Bond 45" concrete repair and grout compound for concrete floors. Consult VeloBond, Inc. for assistance in editing this Section as required for the Project.

Use of "Bond 45" concrete repair and grout compound contributes to LEED credits. Consult VeloBond, Inc. for more information.

#### PART 1 GENERAL

##### 1.1 SECTION INCLUDES

- A. Concrete repair and grout 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 03 60 00 – Grouting.

## 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](http://www.astm.org)):
  1. ASTM C 579 – Standard Test Methods for Compressive Strength of Chemical-Resistant Mortars, Grouts, Monolithic Surfacing, and Polymer Concretes.
  2. ASTM D 412 – Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers—Tension.
  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 7234 – Standard Test Method for Pull-Off Adhesion Strength of Coatings on Concrete Using Portable Pull-Off Adhesion Testers.
  6. ASTM D 7997 – Standard Practice for Polyurethane Raw Materials: Gel Tests for Polyurethane Non-Foam Formulations.
- 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 concrete repair and grout 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 floor.
  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.
  3. Cured samples of specified custom 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 concrete repair and grout 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 concrete repair and grout compound of similar type to that specified for a minimum of 5 years.
  2. Use persons trained for installation of concrete repair and grout 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 concrete repair and grout 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](http://www.velobond.com). [sales@velobond.com](mailto:sales@velobond.com).

Specifier Notes: Specify if substitutions will be permitted.

- B. Substitutions: [Not permitted] [Comply with Division 01].

### 2.2 MATERIALS

- A. Concrete Repair and Grout Compound: "Bond 45".
  1. Description: Two-component, rapid-curing, heavy-duty, repair product 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 concrete repair and grout 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: [Gray] [\_\_\_\_\_].
4. VOC Content: 0.
5. Solids: 100 percent.
6. Viscosity, ASTM D 4016:
  - a. Component A: 110 cps.
  - b. Component B: 160 cps.
  - c. Mixed: 135 cps.
7. Gel Time, ASTM D 7997: 5 minutes.

8. Tack Free, 74 Degrees F: 5 to 6 minutes.
9. Shore D Hardness, ASTM D 2240: 70 to 73.
10. Tensile Strength, ASTM D 412, 7 Days: 6,150 psi.
11. Elongation, ASTM D 412: 1 to 1.5 percent.
12. Compressive Strength, ASTM C 579, 7 Days:
  - a. Without Aggregate: 11,970 psi.
  - b. With Aggregate: 8,070 to 9,340 psi.
13. Adhesion to Concrete, ASTM D 7234: 890 psi, concrete failure.

Specifier Notes: Consult VeloBond, Inc. for information regarding aggregate, cement, and cement colorants to be added to the concrete repair and grout compound.

- B. Aggregate:
  1. Silica Sand: Clean, dry, various gradations to best match final class of exposed aggregate.
  2. Large Aggregate: Clean, dry, various gradations to best match final class of exposed aggregate.
- C. Cement: Same cement used for concrete floor.
- D. Cement Colorants: Charcoal and Dark Brown.

## **PART 3 EXECUTION**

### **3.1 EXAMINATION**

- A. Examine areas of concrete floor to receive concrete repair and grout 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 concrete repair and grout compound.
- B. Concrete Preparation:
  1. Prepare concrete in accordance with manufacturer's instructions.
  2. Ensure concrete floor is clean and dry, exposing open pores of concrete.
  3. Provide sound and uniform substrate, suitable for installation of concrete repair and grout compound.

### **3.3 MIXING**

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

### **3.4 INSTALLATION**

- A. Install concrete repair and grout compound in accordance with manufacturer's instructions.
- B. Install concrete repair and grout compound at locations in concrete floor as indicated on the Drawings.
- C. Allow concrete to cure a minimum of 30 days before installation of concrete repair and grout compound.
- D. Ensure floors and joints are clean and dry.

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

- E. Color:
  - 1. Install concrete repair and grout compound to a consistent color.
  - 2. Color match concrete repair and grout compound to final color of polished floor.

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

- F. Test patching procedures and finishes for best color and aggregate match in inconspicuous areas, approved by Architect, before proceeding with entire installation.
- G. Polishing: Polish concrete floor in accordance with manufacturer's instructions.

### **3.5 FIELD QUALITY CONTROL**

- A. Inspect concrete floor after installation of concrete repair and grout compound.
- B. Repair areas of concrete floor not in accordance with manufacturer's instructions.

### **3.6 PROTECTION**

- A. Allow concrete repair and grout compound to cure in accordance with manufacturer's instructions before opening to traffic.
- B. Protect installed concrete repair and grout compound from damage until Substantial Completion.

**END OF SECTION**