



## SECTION 099656

### EPOXY FLOOR COATINGS

#### PART 1 GENERAL

##### 1.01 SUMMARY

- A. Section includes: Provide a complete epoxy floor system for concrete surfaces that meet the requirements for specific use indicated in the contract documents. Include all applicable substrate testing, surface preparation, and detail work.

##### 1.02 RELATED SECTIONS

- A. Section 033000 – Cast-In-Place Concrete
- B. Section 090000 - Finishes

##### 1.03 SUBMITTALS

- A. Submit under provisions of Section 013300.
- B. Product Data: Submit manufacturer's product data sheets on each product and system to be used including:
  - 1. Preparation instructions and recommendations.
  - 2. Storage and handling requirements.
  - 3. Installation methods.
  - 4. Maintenance requirements.
- C. Selection Samples: For each system specified, provide two sets of samples and color charts, representing manufacturer's full range of colors and patterns.

##### 1.04 QUALITY ASSURANCE

- A. All materials used in the epoxy floor system shall be manufactured and provided by a single manufacturer to ensure compatibility and proper bonding.
- B. Use adequate numbers of skilled workmen thoroughly trained and experienced in the necessary crafts and completely familiar with the specified requirements and methods needed for proper performance of the work of this section.
- C. Contractor shall have a minimum of 3 years experience installing epoxy floor coatings similar to that which is required for this project and who is acceptable to the manufacturer.
  - 1. Applicator shall designate a single individual as project foreman who shall be on site at all times during installation.
  - 2. Contractor must show and have QCA Qualified Contractor/Applicator paperwork from the manufacturer of the coating system, as required to obtain a long-term jobsite specific warranty.
- D. Convene a pre-application meeting before the start of application of coating system. Require attendance of parties directly affecting work of this section, including: Architect, contractor, applicator, and authorized representative of the coating system manufacturer and interfacing trades. Review the following:
  - 1. Drawings and specifications affecting work of this section.
  - 2. Protection of adjacent surfaces.
  - 3. Surface preparation and substrate conditions.
  - 4. Application.
  - 5. Field quality control.
  - 6. Protection of coating system.

7. Repair of coating system.
8. Coordination with other work.

#### 1.05 DELIVERY, STORAGE & HANDLING

- A. Delivery: Materials shall be delivered to the job site in sealed, undamaged containers. Each container shall be clearly marked with manufacturer's label showing type of material, color, and lot number.
- B. Storage: Store all materials in a clean, dry place with a temperature range in accordance with manufacturer's instructions.
- C. Handling: Handle products carefully to avoid damage to the containers. Read all labels and Material Safety Data Sheets prior to use.

#### 1.06 PROJECT SITE CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within the limits recommended by the manufacturer.
- B. All concrete should be tested for moisture before applying a seamless coating. If moisture emissions exceed 5 lbs/1000 square feet (ASTM F1869) or if the relative humidity (RH) exceeds 75% (ASTM F2170), see EC-15 Moisture Vapor Barrier product specification.
- C. Concrete must be at least 2500 psi.
- D. Concrete must be cured for a minimum of 28 days before coating is applied.
- E. Schedule coating work to avoid excessive dust and airborne contaminants. Protect work areas from excessive dust and airborne contaminants during coating application.
- F. Before any work is started, the applicator shall examine all surfaces for any deficiencies. Should any deficiencies exist, the architect, owner or general contractor shall be notified in writing and any corrections necessary shall be made.

#### 1.07 WARRANTY

- A. Upon completion of the work in this section provide a written warranty from the manufacturer against defects of materials for a period of 1 (one) year. To obtain project specific warranty the coating system applicator must be a Westcoat Qualified Contractor/ Applicator and apply for warranty.

### **PART 2 PRODUCTS**

#### 2.01 MANUFACTURERS

- A. Acceptable manufacturer: Westcoat Specialty Coatings; 4007 Lockridge Street, San Diego, CA 92102. Telephone 800-250-4519. Fax 619-255-7187. Website: [www.westcoat.com](http://www.westcoat.com).

#### 2.02 MATERIALS

- A. As basis of design Westcoat Epoxy Slurry (no substitutions will be accepted): Multi-component 100% solids epoxy floor coating, blended with slurry powder or graded silica.

#### 2.03 MATERIALS

- A. Epoxy Slurry System: 100% Solids High Build Epoxy Slurry.
  1. Primer: EC-12 Epoxy Primer 250-300 square feet per gallon.
  2. Slurry Coat: 1 ½ gallons EC-34 Epoxy Topcoat mixed with 1 ½ gallons TC-71 Slurry Filler. Apply at a rate of 25-100 square feet per mix.
  3. Top Coat: EC-34 Epoxy Topcoat pigmented 250-300 feet per gallon.

#### 2.04 ACCESSORIES

- A. Supplemental Materials:

1. EC-32 Clear Epoxy Topcoat can be used instead of EC-34 when decorative quartz sand is broadcast into the slurry coat.
2. Patching materials shall be EC-72 Epoxy Patch Gel.
3. Concrete repairs can be made with TC-23 Mortar Mix as needed.
4. Optional cove base shall be EC-76 Epoxy Cove Gel.
5. Optional aggregate shall be CA-30 Small Safe Grip, CA-31 Large Safe Grip or TC-70 Silica Sand designed to meet the owners skid resistance requirements.

Optional Topcoats:

6. EC-50 Novolac may be used IN LIEU of EC-34 for extreme chemical or heat conditions.
7. SC-65G WB Gloss Polyurethane may be used OVER the EC-34 when a low odor, solvent free, mar and chemical/UV resistant gloss finish is required.
8. SC-65SG Pigmented WB Semi-Gloss Polyurethane may be used OVER the EC-34 when a low odor, solvent free, mar and chemical/UV resistant semi-gloss finish is required.
9. SC-65F WB Flat Polyurethane may be used OVER the EC-34, SC-65G Gloss, or SC-65SG Semi-Gloss when a low odor, solvent free, mar and chemical/UV resistant flat finish is required.
10. EC-95G Gloss Polyurethane may be used OVER the EC-34 when a chemical/UV resistant, solvent-based gloss finish is required.
11. EC-95F Flat Polyurethane may be used OVER the EC-34 or EC-95G when a chemical/UV resistant, solvent-based satin finish is required.
12. EC-101 Polyaspartic 100% Solids may be used OVER the EC-34 as a non-yellowing, high gloss, quick drying, high build, mar and chemical resistant finish with outstanding wear resistance.
13. EC-102 Polyaspartic may be used OVER the EC-34 when tire staining is a concern. Provides a quick drying, UV resistant, high gloss, high build, mar and chemical resistant finish.

## **PART 3 EXECUTION**

### **3.01 EXAMINATION**

- A. Verification of Conditions.
  1. Inspect all surfaces to receive epoxy flooring. The surface must be structurally sound, clean, dry and free of grease, paint, oil, dust, curing agents, laitance or any foreign material that will prevent proper adhesion.
  2. Conduct calcium chloride testing according to ASTM F1869.
  3. Before starting work, report in writing to the authority having jurisdiction any unsatisfactory conditions.

### **3.02 SURFACE PREPARATION**

- A. Prepare surfaces using methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- B. Shot blast or mechanically abrade the surface to achieve a surface profile equal to CSP of 3-5 as specified by ICRI.
- C. Clean Surfaces thoroughly prior to installation.
- D. Rout and clean moving cracks and joints: fill with manufacturer's recommended flexible epoxy filler material.
- E. Repair any non-moving surface deviations with manufacturer's recommended patching material.

### **3.03 INSTALLATION**

- A. Install coatings in accordance with manufacturer's instructions.
- B. Mix multi-component materials in accordance with manufacturer's instructions.
- C. Use application equipment, tools, and techniques in accordance with manufacturer's instructions.
- D. Uniformly apply coatings at spread rates and in number of coats to achieve specified mil thickness recommended by the manufacturer.

1. Install integral cove base where indicated on the contract drawings and according to manufacturer's instructions.
  2. Key in all drains, edges, and transition points according to manufacturer's instructions.
- E. Broadcast aggregates in accordance with the specified system and manufacturer's instructions.
- F. Adhere to all limitations, instructions, and cautions for epoxy coating as stated in the manufacturer's published literature.

#### 3.04 FIELD QUALITY CONTROL

- A. Verify coatings and other materials are as specified.
- B. Verify coverages of the system as work progresses. Areas found not to meet the required thickness shall receive additional material until specified thickness is attained.
- C. Manufacturer's representative shall provide technical assistance and guidance for surface preparation and application of coating systems.

#### 3.05 PROTECTION AND CLEAN-UP

- A. Prohibit traffic on floor for 48 hours after installation. Avoid heavy abrasion and chemical exposure for 5 days. Allow 72 hours minimum for vehicular traffic.
- B. Protect finished surfaces of coating system from damage during construction.
- C. Touch-up, repair or replace damaged flooring system after substantial completion.
- D. Clean area and remove all debris upon completion of work. Dispose of empty containers properly according to current Local, State and Federal regulations.

#### 3.06 MAINTENANCE

- A. Contractor shall provide to owner, maintenance and cleaning instructions for the floor system upon completion of work. Owner is required to clean and maintain the surfaces to maintain manufacturer's warranty.

### END OF SECTION

*This guide specification has been prepared by Westcoat Specialty Coating Systems to assist design professionals in developing a project specific specification. This guide is a template that must be reviewed and adapted by specifiers to comply with project requirements. This guide specification is not to be copied directly into a project specification manual without review.*