



SECTION 096119

CONCRETE FLOOR STAINING

PART 1 GENERAL

1.01 SUMMARY

- A. Section includes: Provide a complete stained concrete floor system 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 099723 – Concrete Sealers and Coatings
- C. Section 030130 – Maintenance of Cast-In-Place Concrete
- D. Section 099723 – Concrete Sealers

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 samples, representing manufacturer's full range of colors.

1.04 QUALITY ASSURANCE

- A. All materials used on the stained concrete 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 concrete 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.
- 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. Cleaning.
7. Protection of coating system.
8. Repair of coating system.
9. 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), contact the manufacturer before application.
- 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.

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.

2.02 MATERIALS

- A. As basis of design Westcoat Acid Stain Grind and Seal System (no substitutions will be accepted): A process of grinding interior concrete and applying acid based stain and sealer.

2.03 COMPONENTS

- A. Acid Stain Grind and Seal System: Acid-based concrete stain and seal.
 1. Stain: SC-30 Acid Stain 200 to 400 square feet per gallon.
 2. Rinse: Once surface has reacted and dried, scrub, mop, and rinse with water to remove residue. Repeat rinse on stained surface 2-3 times until all residue is removed.
 3. Topcoat: SC-65G WB Gloss Polyurethane Sealer 300-500 square feet per gallon.

2.04 ACCESSORIES

- A. Supplemental Materials:
 1. Patching materials shall be TC-29 Concrete Patch

2. Concrete repairs can be made with TC-23 Mortar Mix as needed.
3. Optional aggregate shall be CA-30 Small Safe Grip, CA-31 Large Safe Grip, or other sand designed to meet the owners skid resistance requirements.

Optional Topcoats:

4. EC-11 Water Based Epoxy may be used IN LIEU of SC-65G Gloss when a two-component, chemical resistant, medium gloss and medium durability epoxy is required.
5. EC-32 High Build Clear Epoxy Topcoat may be used IN LIEU of the SC-65G Gloss when a two-component, 100% solids, high-build, chemical resistant epoxy is required.
7. SC-65SG WB Semi-Gloss Polyurethane may be used IN LIEU of SC-65G Gloss. It may also be applied over the EC-11 or EC-32 when a low odor, solvent free, mar and chemical/UV resistant semi-gloss finish is required.
8. SC-65F WB Flat Polyurethane may be applied OVER the EC-11, EC-32, SC-65G Gloss or SC-65SG Semi- Gloss when a low odor, solvent free, mar and chemical/UV resistant flat finish is required.
9. EC-95G Gloss Polyurethane may be used IN LIEU of the SC-32G Gloss. It may also be applied over the EC-32 when a chemical/UV resistant, solvent-based gloss finish is required.
10. EC-95F Flat Polyurethane may be applied OVER the EC-32 or EC-95G when a chemical/UV resistant, solvent-based flat finish is required.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verification of Conditions.
 1. Inspect all surfaces to receive stained concrete flooring. Concrete must be clean, dry and free of grease, paint, oil, dust, curing agents, laitance or any foreign material that will prevent proper adhesion.
 2. 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. Create a surface profile by mechanically diamond grinding the surface with 60-80 grit tools to achieve a clean uniform surface.
- C. Sweep and vacuum surfaces entirely prior to installation.
- D. Rout and clean moving cracks and joints: patch with manufacturer's recommended concrete patch 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 coverage rates recommended by the manufacturer.
- E. Broadcast aggregates in accordance with the specified system and manufacturer's instructions.
- F. Adhere to all limitations, instructions, and cautions for stained concrete floor 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 coverage rates shall receive additional material until specified coverage 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. Allow 12-18 hours at 70 degrees between coats and 24 hours before light foot traffic. Normal foot traffic may be permitted after 48 hours. For vehicular traffic, allow a minimum of 72 hours.
- 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 manufacture'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.