PART 1   GENERAL

1.1 SUMMARY
   A. Section includes: Provide a complete interior, self-leveling, cementitious coating 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 in accordance with industry standards.

1.2 RELATED SECTIONS
   A. Section 03 01 00 - Maintenance of Concrete
   B. Section 03 01 40 - Maintenance of Precast Concrete
   C. Section 03 30 00 - Cast-in-Place Concrete
   D. Section 03 40 00 - Precast Concrete
   E. Section 07 91 29 - Joint Fillers
   F. Section 09 61 00 - Flooring Treatments

1.3 REFERENCES
   B. ASTM C348 Standard Test Method for Flexural Strength of Hydraulic-Cement for Curing Concrete
   D. ASTM F710 Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring
   E. ASTM F1869 Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride
   F. ASTM F2170 Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes

1.4 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.
      5. Safety Data Sheets.
   C. Qualification Data: Provide documentation from manufacturer that applicator is a qualified applicator and qualifies for manufacturer’s warranty.
   D. Selection Samples: For each system specified, provide two sets of samples and color charts, representing manufacturer’s full range of colors and patterns.
1.5 QUALITY ASSURANCE

A. Manufacturer:
All materials used in the cementitious coating system shall be manufactured, provided or approved by Westcoat Specialty Coating Systems, to ensure compatibility and proper bonding.

B. Applicator:
1. Use adequate numbers of skilled applicators that are thoroughly trained and experienced in the necessary crafts and are completely familiar with the specified requirements and methods needed for proper performance of the work of this section.
2. Contractor shall have a minimum of three years experience installing cementitious coatings similar to that which is required for this project and who is acceptable to the manufacturer.
3. Applicator shall designate a single individual as project foreman who shall be on site at all times during installation.
4. 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.

C. Samples:
1. Cured samples for reference and approval. Cured samples should be similar to the materials that are specified. These samples should correctly depict the desired the desired color, texture, etc for the project.
2. Approved samples should be ready and available onsite, during the application process and for final review of completed work.
3. Mock-up: Prior to starting the application, an on-site mock-up must be performed using the same application team, materials and equipment that will be used during the application. This mock-up should be thoroughly reviewed and if approved, left in place for the duration of the application and used for final approval.

D. Pre-Installation Meeting: Convene a meeting before the start of surface preparation and the 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.

1.6 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.

1.7 PROJECT SITE CONDITIONS

A. Maintain environmental conditions (temperature, humidity, ventilation, etc.) within the limits recommended by the manufacturer.
B. Concrete shall be tested for moisture before applying cementitious coating. Comply with manufacturer’s written instructions and guidelines for substrate temperature, acceptable moisture content levels and temperature.

C. Concrete must be at least 2500 psi and prepared to a surface profile equal to CSP 3-5, per ICRI Standards.

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 contaminates. 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.

G. Substrate and Installed Coating Protection:
   1. Ensure that substrates and installed coatings are protected against oil, dirt, debris, metal, excessive water, marking paint, hydraulic or any equipment fluids, or any other agents that may negatively affect the coating.
   2. All trades must protect the substrate and installed coating at all times. Failure to do so can negatively affect the finished surface.
   3. Pipe-cutting and metal storage should not be allowed over surfaces.
   4. Application areas should be closed to traffic during installation process and for a period of time after application is complete, as recommended by the manufacturer.

1.8 SCHEDULING AND SITE COORDINATION
   A. Coordination with all other trades should occur to ensure that other installations and construction are not interfering with the application of the cementitious topping.
   B. Ensure that adequate staffing and personnel are onsite to properly apply materials.

PART 2 PRODUCTS

2.1 MANUFACTURERS

2.2 MATERIALS
   A. As basis of design Westcoat Level-It Polish System: Interior self-leveling flooring system that can be installed from 3/8 inch to 2 inches, then mechanically polished. Acceptable products include:
      1. Primer
         EC-12 Epoxy Primer: a two component, 100% solids, low viscosity, moisture tolerant, fast drying, high strength and multi-purpose epoxy primer.
      2. Cementitious Polishable Overlay
         TC-27 Gray Self-Leveling Cement: a professional grade, pourable, self-leveling, cementitious topping that features an “aggregate appearance”.
      3. Densifier
         SC-21 Lithium Silicate: an easy to apply, ready to use concrete densifier. SC-21 is zero VOC and will help create a dense, hard surface which will minimize any future dusting, improve the sheen, strength of the surface.
      4. Concrete Dye Stain (Optional)
         SC-36 Fast Stain: a solvent soluble, deep penetrating, fast drying, drop in powder stain.
      5. Polish Guard
         SC-24 Guard: a single component finish designed for polished concrete and polished overlays. SC-24 is burnishable, water-based, VOC compliant and low odor.

2.4 ACCESSORIES
A. Supplemental Materials:

1. Patching and crack treatment
   EC-72 Epoxy Patch Gel: a high viscosity, two component, 100% solids epoxy patching compound.
2. Integral Colorant (optional)
   TC-40 Liquid Colorant: Westcoat TC-40 Liquid Colorant is a water-based slurry formulated with high pigment levels of 60-70% and is designed to tint Westcoat cements to a variety of colors.
3. Optional Cements
4. Patching/Grouting Material
   TC-29 Concrete Patch: a Westcoat TC-29 Concrete Patch is a specially formulated proprietary cement blend that is used to patch and fill holes, spawls and minor cracks for interior concrete floors.
5. Silica Sand
   #20 grit silica sand: Silica Sand is broadcasted over the wet EC-12 prior to the application of the cementitious polishable overlay.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verification of jobsite conditions should comply per Section 01 00 00.
B. Follow manufacturer’s installation instructions.
C. Protect substrate and adjacent areas from other trade and do not permit water or debris exposure.
D. Moisture Vapor Transmission Rate
   1. Conduct calcium chloride testing according to ASTM F1869.
   2. Up to 5 lbs per 1000 square feet is acceptable. If moisture vapor rates exceed this value, please contact your Westcoat Representative for acceptable MVTR methods.
E. Relative Humidity
   1. Perform RH Reading in accordance with ASTM F2170.
   2. Up to 85% is acceptable. If RH exceeds this value, please contact your Westcoat Representative.
F. Alkalinity Testing
   1. Test concrete in accordance with ASTM F710 to measure pH.
   2. Concrete substrates should be between 8 and 14 pH.

3.2 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 equal to CSP 3-5 per ICRI.
C. Clean Surfaces thoroughly prior to installation.
D. Rout and clean moving cracks and joints: fill with manufacturer’s recommended filler.
E. Repair any non-moving surface deviations with manufacturer’s recommended material.

3.3 INSTALLATION

A. Install coatings in accordance with manufacturer’s instructions.
B. Mix all 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.
E. Adhere to all limitations, instructions, and cautions for cementitious coating as stated in the manufacturer’s published literature.

3.4 FIELD QUALITY CONTROL

A. Verify coatings and other materials are as specified.
B. Verify coverages and finish of the system as work progresses.
C. Manufacturer’s representative shall provide technical assistance and guidance for surface preparation and application of coating systems.

3.5 PROTECTION AND CLEAN-UP

A. Installation areas must be kept free from traffic and other trades during the application procedure and cure time.
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.
E. Protect cementitious coating from damage with appropriate covering, until 72 hours after competition of installation.
F. Protect coatings as needed to prevent damage.

3.6 MAINTENANCE

A. Contractor shall provide to owner, maintenance and cleaning instructions for the cementitious coating 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.