

PROJECT NO.:
DATE:

PROJECT NAME
PROJECT LOCATION

SECTION 03 3500

CONCRETE FINISHING

Note: *For Windows 2010, upon completion of section editing, you may turn-off "Specifier Notes as follows: Click on "File" then "Options" then "Display" and remove check-mark for "Hidden text" in two locations as necessary.*

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PART 1 GENERAL
SECTION INCLUDES

A. Liquid concrete floor sealer/densifier/hardener.

1.02 RELATED REQUIREMENTS

- A. Section 03 30 00 – Cast-in-Place Concrete.
- B. Section 09 97 23 – Masonry and concrete coatings

1.03 REFERENCE STANDARDS

- A. Ohio DOT – Spec Reference 705.24
- B. American with Disabilities Act
 - Slip Fall Resistance Test
- C. EPA – Environmental Protection Agency
 - 1. Modified EPA Test Method 300
- D. American Association of State Highway and Transportation Officials
 - 1. AASHTO T 259 Modified Crack Sealing Capabilities
- E. ASTM C 666 - Concrete Durability Test.
- F. ASTM C 672 - Scaling Resistance.
- G. ASTM C 642 - Absorption.
- H. ASTM C 779 - Abrasion Resistance
- I. ASTM E 274 – Skid Resistance

1.02 SUBMITTALS

- A. Comply with Section 01 30 00 – Administrative Requirements, for administrative and procedural requirements for processing of submittals during the construction phase.
- B. Product Data: Provide data on material characteristics, performance criteria, limitations and installation instructions.
- C. Manufacturers' Instructions: Indicate preparation and installation methods.
- D. Certificates: Certify that products meet or exceed specified requirements.
 - 1. Low emitting VOC.
- E. Sustainable Design Submittals:
 - 1. Submit invoices and documentation from manufacturer indicating Volatile Organic Compounds (VOC) content for products specified.
- F. LEED Submittals:
 - 1. LEED, IEQ Credit 4.2 – Low-Emitting Materials-Paints and Coatings: Provide documentation for performance-based standards of products to be used on project in accordance with credit requirements.
 - 2. LEED, IEQ Credit 4.3 – Low-Emitting Materials-Flooring Systems: Provide documentation for performance-based standards of products to be used on project in accordance with credit requirements.
- G. Warranty: Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.

1.03 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with not less than three years of documented experience.
- B. Applicator Qualifications: Company specializing in performing the work of this section with minimum 3 years of experience and approved by manufacturer.
- C. Pre Installation Meeting:
 - 1. Convene preinstallation meeting at the work site.

2. Require attendance of parties directly affecting work of this section, including Contractor, Architect, and applicator.
3. Review surface preparation, mixing, application, protection, and coordination with other work.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. Delivery and Acceptance 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: Store materials in clean, dry, inside area in accordance with manufacturer's instructions.

1.05 WARRANTY

- A. See Section 01 78 00 - Closeout Submittals, for additional warranty requirements.
- B. Manufacturer Warranty: Length of warranty shall be scheduled or selected by the architect from the manufacturer's standard warranties.
 1. Warranty states that the product shall meet its current specifications.
 2. Warranty shall be limited to repair of defects from faulty materials or workmanship developed during the guarantee period or replacement with new materials/components at no expense to owner.
 3. Warranty is not effective in the case of consequential or incidental damages of any kind.

PART 2 PRODUCTS

1.01 MANUFACTURER

- A. Chemtec International
 1. Contact Information: 7771 Woodstone Dr. Suite 100 Cincinnati, Ohio 45244-2855
 - a. Phone: (513) 474-2090, Fax (513) 474-2054
 - b. Website: www.concretesealer.net

1.02 CONCRETE SEALER/HARDNER/DENSIFIER

- A. Description: Water-based, chemically reactive, silicate-blend, concrete floor sealer, hardener, and densifier. For application to freshly placed, new, and existing concrete floors for both interior and exterior application.
 1. Appearance: Colorless.
 2. Total Solids: Proprietary
 3. Specific Gravity: 1.08%
 4. Toxicity: None.
 5. Flash Point: None
 6. VOC: Grams/L = 0
 7. Scale of pH: 11.3

PART 3 EXECUTION

1.01 VERIFICATION OF CONDITIONS

- A. Verify that field conditions are acceptable and are ready to receive this work.
- B. Examine substrate surfaces, with installer present for compliance with requirements for installation tolerances and other conditions effecting performance.
- C. Beginning of installation means acceptance of existing conditions.

1.02 PREPARATION

- A. New Concrete: Prepare surface by removing coatings of wax, grease, recently applied surface sealer, rubber, acrylic paint or other impervious materials that exist on the surface where this work is being applied. Allow surfaces to dry completely before application. Acid washed concrete is unacceptable.
- B. Existing Concrete: Clean all surfaces so that they are water permeable. Strip off coatings, sealers, paint or other contaminant that would prevent the process from penetrating the concrete. Surface must be completely dry before application. Acid washing is unacceptable.

- C. Protect adjacent and underlying surfaces by masking or other means. Protect asphaltic and mastic surfaces from spillage or overspray. Cover aluminum and glass.

1.03 APPLICATION

- A. Apply in accordance with architectural drawing and in accordance with manufacturer instructions.
- B. Materials are to be premixed and agitated for use according to manufacturer's instructions.
- C. Mixture will be applied by pouring, pumping or spraying using equipment recommended by manufacturer.
- D. Test Area: Contractor shall treat and area and textures to establish physical and visual effects of application and absorption level to establish coverage rates
- E. Application on steel troweled surfaces:
 - 1. Do not apply on wet concrete.
 - 2. Apply sealer in one application at manufacturers recommended rate. (Except during heavy duty use that requires two coats.)
 - 3. On new floors, can install immediately after steel troweled process has been completed and the surface is hard enough not to mark.
 - 4. Saturate substrate with sealer keeping the entire surface wet.
 - 5. Use bristle brooms or mechanical scrubbing to keep material fluid until chemical reaction is evident and material is slippery under foot.
 - 6. Do not allow surfaces to prematurely dry. Re-misting is acceptable.
 - 7. Do not let material puddle and dry on surface.

1.02 PROTECTION

- A. Penetrating concrete sealer is slightly irritating to human tissue.
 - 1. Protect skin and eyes.
 - 2. Avoid prolonged breathing of vapors and mist.
 - 3. For use in confined areas, recommend use of NIOSH approved respirator, chemical goggles or face shield, and rubber or plastic gloves.

1.03 MAINTENANCE

- A. Comply with manufacturers recommendations
- B. Immediately remove debris and residue form surface after installation.

END OF SECTION