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Product Guide Specification

Specifier Notes: This product guide specification is written according to the Construction Specifications Institute (CSI) 3-Part Format, including *MasterFormat*, *SectionFormat*, and *PageFormat*, as described in *The Project Resource Manual* □ *CSI Manual of Practice, Fifth Edition*.

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 other specification sections and the Drawings. Delete all □Specifier Notes□after editing this section.

Section numbers are from *MasterFormat 2010 Update*.

SECTION 03 05 00

CONCRETE CURING AND SEALING COMPOUNDS

Specifier Notes: This section covers the following Nox-Crete Products Group concrete curing and sealing compounds for interior and exterior concrete floor surfaces:

- Cure & Seal 150 E□ Water based, 15 percent solids, acrylic type.
- Cure & Seal 250 E□ Solvent based, 25 percent solids, acrylic type.
- Cure & Seal 1315 A□ Solvent based, 25 percent solids, acrylic type.

Consult Nox-Crete Products Group for assistance in editing this section for the specific application.

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Concrete curing and sealing compounds.

1.2 RELATED REQUIREMENTS

Specifier Notes: Edit the following list of related sections as required. 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.

1.3 REFERENCE STANDARDS

Specifier Notes: List standards referenced in this section, complete with designations and titles. Delete standards not included in the edited section. Including a standard here does not require compliance with that standard.

- A. AASHTO M 148 □ Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete.
- B. ASTM C 309 □ Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete.
- C. ASTM C 1315 □ Standard Specification for Liquid Membrane-Forming Compounds Having Special Properties for Curing and Sealing Concrete.

1.4 SUBMITTALS

Specifier Notes: Edit submittal requirements as required. Delete submittals not required.

- A. Comply with Section 01 33 00 □ Submittal Procedures.
- B. Product Data: Submit manufacturer's product data, including surface preparation and application instructions.
- C. Manufacturer's Certification: Submit manufacturer's certification that materials comply with specified requirements and are suitable for intended application.
- D. Warranty Documentation: Submit manufacturer's standard warranty.

1.5 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: Manufacturer regularly engaged, for past 5 years, in manufacture of concrete curing and sealing compounds of similar type to that specified.

Specifier Notes: Edit site test application as required. Delete site test application if not required.

- B. Site Test Application: Construct site test application of concrete curing and sealing compounds for evaluation of surface preparation techniques and application workmanship.
 1. Construct site test application using same materials for use in the Work.
 2. Construct site test application at locations determined by Architect.
 3. Do not proceed until workmanship of site test application is approved by Architect.

4. Approved Site Test Application: Standard for workmanship of concrete curing and sealing compounds.

Specifier Notes: Edit preinstallation meeting as required. Delete meeting if not required.

C. Preinstallation Meeting:

1. Convene preinstallation meeting 2 weeks before start of application of concrete curing and sealing compounds.
2. Require attendance of parties directly affecting work of this section, including Contractor, Architect, applicator, and manufacturer's representative.
3. Review surface preparation, mixing, application, protection, and coordination with other work.

1.6 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:

1. Store and handle materials in accordance with manufacturer's instructions.
2. Keep materials in manufacturer's original, unopened containers and packaging until application.
3. Store concrete curing and sealing compounds between 40 and 100 degrees F (4 and 38 degrees C).
4. Store materials in clean, dry area indoors, out of direct sunlight.
5. Protect materials from freezing.
6. Protect materials during storage, handling, and application to prevent contamination or damage.

1.7 AMBIENT CONDITIONS

A. Air and Substrate Temperatures: Do not apply concrete curing and sealing compounds when air or substrate temperatures are at or below 40 degrees F (4 degrees C) during application or within 6 hours after application.

B. Material Temperature: Do not apply concrete curing and sealing compounds when material temperature is below 50 degrees F (10 degrees C).

PART 2 PRODUCTS

2.1 MANUFACTURER

A. Nox-Crete Products Group, 1444 South 20th Street, PO Box 8102, Omaha, Nebraska 68108. Toll Free 800-669-2738. Phone 402-341-1976. Fax 800-329-6733. www.nox-crete.com. customerservice@nox-crete.com.

2.2 MATERIALS

Specifier Notes: Specify Nox-Crete Products Group [Cure & Seal 150 E] [Cure & Seal 250 E] or [Cure & Seal 1315 A] Delete materials not required. Consult Nox-Crete Products Group for assistance in determining appropriate concrete curing and sealing compound for the specific application.

A. Concrete Curing and Sealing Compounds: [Cure & Seal 150 E]

1. Description: Transparent, water-based, copolymer-acrylic, concrete curing, sealing, and dustproofing compound.
2. Compliance:
 - a. ASTM C 309, Type 1, Class A and B.
 - b. AASHTO M 148, Type 1, Class B.
 - c. USDA compliant for incidental food contact.
3. UV resistant.
4. Gloss: Medium.
5. Solids: 15 percent.
6. VOC: Less than 350 g/L.
7. Vapor Pressure: Less than 17 mm Hg at 20 degrees C.
8. Flash Point: Greater than 200 degrees F (93 degrees C).
9. Freeze Point: 32 degrees F (0 degrees C).
10. Dry:
 - a. Dust/Tack Free: 30 to 60 minutes.
 - b. Light Traffic: 12 hours.
 - c. Normal Traffic: 24 hours.
11. Recoating Time: 1 to 2 hours.

B. Concrete Curing and Sealing Compounds: [Cure & Seal 250 E]

1. Description: Transparent, water-based, copolymer-acrylic, concrete curing, sealing, and dustproofing compound.
2. Compliance:
 - a. ASTM C 1315, Type 1, Class A and B.
 - b. ASTM C 309, Type 1, Class A and B.
 - c. AASHTO M 148, Type 1, Class B.
 - d. USDA compliant for incidental food contact.
3. UV resistant.
4. Gloss: Medium.
5. Solids: 25 percent.
6. VOC: Less than 350 g/L.
7. Vapor Pressure: Less than 17 mm Hg at 20 degrees C.
8. Flash Point: Greater than 200 degrees F (93 degrees C).
9. Freeze Point: 32 degrees F (0 degrees C).
10. Dry:
 - a. Dust/Tack Free: 30 to 60 minutes.
 - b. Light Traffic: 12 hours.
 - c. Normal Traffic: 24 hours.
11. Recoating Time: 1 to 2 hours.

C. Concrete Curing and Sealing Compounds: [Cure & Seal 1315 A]

1. Description: Solvent-based, non-yellowing, copolymer-acrylic, concrete curing, sealing, and dustproofing compound.
2. Compliance:
 - a. ASTM C 1315, Type 1, Class A and B.
 - b. ASTM C 309, Type 1, Class A and B.
 - c. AASHTO M 148, Type 1, Class B.
 - d. USDA compliant for incidental food contact.
3. UV resistant.
4. Gloss: High.
5. Odor: Solvent.
6. VOC: Less than 700 g/L.
7. VOC, Low VOC Version: Less than 350 g/L.
8. Vapor Pressure: 7.0 mm Hg at 20 degrees C.
9. Vapor Pressure, Low VOC Version: 30 mm Hg at 20 degrees C.
10. Flash Point: 90 degrees F (32 degrees C).
11. Flash Point, Low VOC Version: 44 degrees F (7 degrees C).
12. Freeze Point: Below minus 20 degrees F (minus 29 degrees C).
13. Dry:
 - a. Dust/Tack Free: 2 hours.
 - b. Light Traffic: 12 hours.
 - c. Normal Traffic: 24 hours.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine concrete surfaces to receive concrete curing and sealing compounds.
- B. Notify Architect of conditions that would adversely affect application.
- C. Do not begin surface preparation or application until unacceptable conditions are corrected.

3.2 PREPARATION

- A. Protection of In-Place Conditions: Protect adjacent surfaces from contact with concrete curing and sealing compounds.
- B. Surface Preparation of Existing Concrete:
 1. Prepare surfaces in accordance with manufacturer's instructions.
 2. Clean concrete surfaces of dirt, dust, debris, oil, grease, bond breaker residue, curing compounds, laitance, paint, and other contaminants which could adversely affect concrete curing and sealing compound adhesion.

3.3 MIXING

- A. Mix materials in accordance with manufacturer's instructions.
- B. Avoid incorporating air into materials during mixing.

3.4 APPLICATION

- A. Apply concrete curing and sealing compounds in accordance with manufacturer's instructions at locations indicated on the Drawings.
- B. Uniformly apply concrete curing and sealing compounds at application rate in accordance with manufacturer's instructions.
- C. New Horizontal Concrete Surfaces:
 - 1. Apply concrete curing and sealing compounds immediately after final finishing and disappearance of surface water sheen.
 - 2. Ensure concrete is damp, not wet.
 - 3. Apply to point of saturation and appearance of continuous surface film.
 - 4. Avoid runs, puddles, and over application.
- D. New Vertical Concrete Surfaces: Apply concrete curing and sealing compounds immediately after form removal.
- E. Sealing and Dustproofing: Apply second application of concrete curing and sealing compounds in accordance with manufacturer's instructions to provide sealing and dustproofing of concrete surfaces.
- F. Do not apply concrete curing and sealing compounds:
 - 1. Where treated surfaces will be covered with concrete or plaster.
 - 2. On concrete slabs with inadequately drained subgrade.
 - 3. On surfaces subject to hydrostatic water pressure.
 - 4. With other floor sealers, treatments, bond breakers, or adhesives without prior site test to determine compatibility and adhesion.

3.5 PROTECTION

- A. Protect applied concrete curing and sealing compounds from damage during construction.

END OF SECTION