

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
Website www.nox-crete.com
E-mail customerservice@nox-crete.com

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 07 19 00

PIGMENTED WATER REPELLENT SEALER/STAIN

Specifier Notes: This section covers the following Nox-Crete Products Group pigmented water repellent sealer/stain for improving the appearance and protecting vertical, exterior, precast and cast-in-place concrete and concrete masonry surfaces from the damaging effects of wind-driven rain, deicing salt penetration, and freeze/thaw-related scaling damage:

“Nox-Carb SP”: Standard performance.

“Nox-Carb HP”: High performance.

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

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Pigmented water repellent sealer/stain.

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.
- B. Section 03 40 00 – Precast Concrete.
- C. Section 04 20 00 – Unit Masonry.

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. ASTM C 642 – Standard Test Method for Density, Absorption, and Voids in Hardened Concrete.
- B. ASTM D 1653 – Standard Test Methods for Water Vapor Transmission of Organic Coating Films.
- C. ASTM D 4541 – Standard Test Method for Pull-Off Strength of Coatings Using Portable Adhesion Testers.
- D. ASTM D 6489 – Standard Test Method for Determining the Water Absorption of Hardened Concrete Treated With a Water Repellent Coating.

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. Samples: Submit manufacturer's samples of standard colors of pigmented water repellent sealer/stain.
- D. Manufacturer's Certification: Submit manufacturer's certification that materials comply with specified requirements and are suitable for intended application.
- E. Manufacturer's Project References: Submit manufacturer's list of successfully completed pigmented water repellent sealer/stain projects, including project name and location, name of architect, and type and quantity of pigmented water repellent sealer/stain furnished.
- F. Warranty Documentation: Submit manufacturer's standard and extended warranties.

1.5 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: Manufacturer regularly engaged, for past 5 years, in manufacture of pigmented water repellent sealer/stain 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 pigmented water repellent sealer/stain 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 pigmented water repellent sealer/stain.

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 pigmented water repellent sealer/stain.
 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 pigmented water repellent sealer/stain 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. Substrate Temperatures: Apply pigmented water repellent sealer/stain at substrate temperatures between 40 and 90 degrees F (5 and 32 degrees C).
- B. Do not apply pigmented water repellent sealer/stain in direct sunlight.

1.8 WARRANTY

Specifier Notes: Specify warranty. Consult Nox-Crete Products Group for information regarding extended warranties.

- A. Manufacturer's Warranty: [Standard] [5-year extended] [10-year extended].

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 "Nox-Carb SP (Standard Performance)" or "Nox-Carb HP (High Performance)". Delete material not required. Consult Nox-Crete Products Group for assistance in determining appropriate pigmented water repellent sealer/stain for the specific application.

- A. Pigmented Water Repellent Sealer/Stain: "Nox-Carb SP (Standard Performance)".
1. Description: Breathable, pigmented, water repellent sealer/stain containing a reactive silane for exterior, vertical, concrete and masonry surfaces.
 2. Flash Point: Greater than 100 degrees F (38 degrees C).
 3. Flash Point, Low VOC Version: Greater than 50 degrees F (10 degrees C).
 4. Vapor Pressure: Less than 5 mm Hg at 20 degrees C.
 5. Vapor Pressure, Low VOC Version: 39.2 mm Hg at 20 degrees C.
 6. VOC: Less than 600 g/L.
 7. VOC, Low VOC Version: Less than 400 g/L.
 8. Adhesion Test, ASTM D 4541: 600 psi.
 9. Water Absorption:
 - a. After 48 Hours, ASTM C 642: Less than 0.40 percent.
 - b. ASTM D 6489:
 - 1) 24 Hours: Greater than 95 percent reduction.
 - 2) 48 Hours: Greater than 94 percent reduction.
 - c. RILEM Tube Method:
 - 1) Concrete Block: 95 percent reduction.
 - 2) Precast Concrete: 96 percent reduction.
 10. Water Vapor Transmission, ASTM D 1653, Method B, Condition A: 2.4 grains/ft²/hr (40.3 g/m²/24 hrs).
 11. Water Vapor Permeance, ASTM D 1653, Method B, Condition A: 5.8 perms (3.8 metric perms).
- B. Pigmented Water Repellent Sealer/Stain: "Nox-Carb HP (High Performance)".
1. Description: Breathable, pigmented, water repellent sealer/stain containing a reactive silane for exterior, vertical, concrete and masonry surfaces.
 2. Flash Point: Greater than 100 degrees F (38 degrees C).

3. Flash Point, Low VOC Version: Greater than 50 degrees F (10 degrees C).
4. Vapor Pressure: Less than 5 mm Hg at 20 degrees C.
5. Vapor Pressure, Low VOC Version: 39.2 mm Hg at 20 degrees C.
6. VOC: Less than 600 g/L.
7. VOC, Low VOC Version: Less than 400 g/L.
8. Adhesion Test, ASTM D 4541: 650 psi.
9. Water Absorption:
 - a. After 48 Hours, ASTM C 642: Less than 0.25 percent.
 - b. ASTM D 6489:
 - 1) 24 Hours: Greater than 98 percent reduction.
 - 2) 48 Hours: Greater than 97 percent reduction.
 - c. RILEM Tube Method:
 - 1) Concrete Block: 99 percent reduction.
 - 2) Precast Concrete: 99 percent reduction.
10. Water Vapor Transmission, ASTM D 1653, Method B, Condition A: 2.4 grains/ft²/hr (40.3 g/m²/24 hrs).
11. Water Vapor Permeance, ASTM D 1653, Method B, Condition A: 5.8 perms (3.8 metric perms).

Specifier Notes: Specify the desired standard color. Delete colors not desired. Consult Nox-Crete Products Group for availability of custom colors.

- C. Colors: [Antique White] [Buff] [Burnt Red] [Concrete Gray] [Iron Red] [Light Sky Gray] [Medium Cardstock Brown] [Mission White] [Mocha] [Riverside Medium Gray] [_____].

2.3 ACCESSORIES

Specifier Notes: If the use of a texture additive is required to be added to the pigmented water repellent sealer/stain, specify the desired texture option. Delete texture option not desired. Consult Nox-Crete Products Group for additional information regarding the texture additive.

- A. Texture Additive for Pigmented Water Repellent Sealer/Stain: [50 mesh] [100 mesh].
- B. Repair Mortar: "Panel Patch".
 1. Description: Fast-drying, smooth-textured, non-grit containing, portland-cement-based, polymer-modified, concrete patching, resurfacing, and finishing compound.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine surfaces to receive pigmented water repellent sealer/stain.
- 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, glass, glazed tile, painted surfaces, and vegetation from contact with pigmented water repellent sealer/stain.
- B. Surface Preparation:
 - 1. Prepare surfaces in accordance with manufacturer's instructions.
 - 2. Clean surfaces of dirt, dust, debris, oil, grease, curing compounds, bond breaking membrane, sealers, laitance, efflorescence, paint, and other contaminants which could adversely affect pigmented water repellent sealer/stain application.
 - 3. Apply joint sealants before pigmented water repellent sealer/stain application.
- C. Concrete: Ensure concrete is a minimum of 28 days old before application of pigmented water repellent sealer/stain.
- D. Repair Mortar:
 - 1. Apply repair mortar in accordance with manufacturer's instructions before application of pigmented water repellent sealer/stain.
 - 2. Use repair mortar to repair minor surface defects on concrete and masonry wall surfaces including, air voids, honeycombs, spalls, gouges, chips, and scratches.
 - 3. Use repair mortar to achieve smooth, featheredged, transition repairs.
 - 4. Maximum Thickness: 1/2 inch (13 mm).
 - 5. Do not apply repair mortar over dynamic cracks, control joints, expansion joints, and isolation joints.

3.3 MIXING

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

3.4 APPLICATION

- A. Apply pigmented water repellent sealer/stain in accordance with manufacturer's instructions at locations indicated on the Drawings.
- B. Apply pigmented water repellent sealer/stain to clean and dry substrates.
- C. Uniformly apply pigmented water repellent sealer/stain at application rate in accordance with manufacturer's instructions.
- D. Do not apply pigmented water repellent sealer/stain to substrates subjected to:
 - 1. Hydrostatic pressure.
 - 2. Immersion in water.

3.5 PROTECTION

- A. Protect applied pigmented water repellent sealer/stain from damage during construction.

END OF SECTION