

NeverStrip

FLOOR COATINGS

CONCRETE STAIN AND CLEAR TOPCOAT

PART 1 - This Section specifies a colored concrete stain incorporating NeverStrip's Concrete Stain ("Concrete Stain") with clear topcoat ("Clear Topcoat"). Concrete Stain combines with concrete to produce unique, transparent or translucent colored appearance. Concrete Stain is an ideal product for exterior or interior floors, and new or existing concrete surfaces when combined with NeverStrip Clear Topcoat. This is a nearly zero VOC-free products/system meeting the most stringent air quality management regulations. Refer to www.neverstrip.com for current NeverStrip Product Data Sheets and Installation Instructions describing materials and installation requirements. Customer service inquiries can be sent to david.beedie@neverstrip.com or 630-330-1010, respectively. GENERAL

1 SUMMARY

A. Section includes:

1. Concrete Stain floor coating
2. Clear high-performance topcoat

B. Related Sections:

Edit to suit Project requirements.

1. Section 033000 "Cast-In-Place Concrete" for general concrete applications.
2. Section 079200 "Joint Sealants" for colored sealant installed in paving joints.

2 REFERENCES

A. ASTM International (ASTM):

1. ASTM C 171: Standard Specification for Sheet Materials for Curing Concrete.
2. ASTM C 309: Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete.
3. ASTM F 1869: Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride.

3 SUBMITTALS

- #### A. Product Data:
- Manufacturer's technical data, including Material Safety Data Sheet (MSDS) and installation instructions, for each product specified.

Include LEED submittal for Credit IEQ 4.2 Low-Emitting Materials: Paints & Coatings if this project will be submitted for LEED certification.

- B. LEED Documentation, Credit IEQ 4.2: Verification of VOC content.
- C. Samples for Initial Selection: Manufacturer's color charts showing full range of colors available.
- D. Qualification Data: For manufacturer and Installer.

4 QUALITY ASSURANCE

- A. Manufacturer Qualifications: [Three} Minimum 3 years of documented experience with the specified products.
- B. Installer Qualifications: Authorized NeverStrip Dealer
- C. Regulatory Requirements:

Code of Federal Regulations 40 CFR 59, Subpart D and EPA Test Method 24 establish VOC emissions standards and test protocols for architectural coatings.

- 1. Products to comply with United States Clean Air Act for maximum Volatile Organic compound (VOC) content as specified in this Section.
- D. Material Source: Obtain each specified material from the same source.
- E. Notification: Give a minimum 7 calendar days' notice to manufacturer's authorized field representative before date established for commencement of concrete stain work.

Include provisions for a Mock-up to demonstrate finished appearance and workmanship standards, for large projects or where color and appearance are critical.

- F. Concrete Stain Mockups:
 - 1. Construct a 5-foot by 5-foot mockup at location selected by Architect.
 - 2. Provide individual mockups for each color and pattern required.
 - 3. Construct mockup using materials, processes, and techniques required for the work, including curing procedures. Incorporate representative control, construction, and expansion joints according to Project requirements. Installer for the work to construct mockup.
 - 4. Mockup to be stained and sealed by the Installer who will actually perform the work for the Project. Record the amount of chemical stain needed per square foot of application to establish coverage rates for the work.
 - 5. Notify Architect and Owner a minimum of seven calendar days in advance of the date scheduled for each mockup construction.
 - 6. Obtain the Architect and Owner's acceptance of each mockup prior to commencement of the work.
 - 7. Each mockup to remain until completion of the work to serve as a quality control standard for the work. Provide suitable protections to preclude damage to mockup.
 - 8. Demolish and remove each mockup from site when directed.

5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products in original factory unopened, undamaged packaging bearing identification of product, manufacturer, batch number, and expiration date as applicable.
- B. Store products in a location protected from damage, construction activity, and adverse environmental conditions, and away from combustible materials and sources of heat, according to manufacturer's printed instructions and current recommendations.
- C. Handle products according to manufacturer's printed instructions.

6 PROJECT CONDITIONS

- A. Environmental Conditions: Maintain an ambient temperature between 50 deg F and 90 deg F during application and at least 48 hours after application.

7 PREINSTALLATION CONFERENCE

- A. Seven calendar days prior to scheduled date of installation, conduct a meeting at Project site to discuss requirements, including application methods. Attendees to include Architect, Owner, Contractor, Installer, and manufacturer's authorized field representative.

PART 2 - PRODUCTS

1 ACCEPTABLE MANUFACTURERS

- A. Basis of Design: Provide products specified herein manufactured by NeverStrip Floor Coatings.

2 MATERIALS

- A. Colored Concrete Stain: Water-based urethane solution of metallic salts which colors concrete substrates producing attractive transparent or translucent color effects. Zero VOC content.
 - 1. Product: NeverStrip Color Concrete Stain
 - 2. Color(s):

Select one or more colors from the following standard list or choose a color from NeverStrip's broader color chart:

- a. NCS-200 Olive
- b. NCS-201 Rust
- c. NCS-205 Teak
- d. NCS-327 Sage
- e. NCS-415 Turquoise
- f. NCS-418 Bark

- g. NCS-458 Clay

Select clear topcoat from available choices below, and to suit project requirements.

Coatings - choose from one of the following:

- h. NeverStrip Extreme Performance
- i. NeverStrip High Gloss
- j. NeverStrip Gloss
- k. NeverStrip Satin
- l. NeverStrip Matte

PART 3 - EXECUTION

1 EXAMINATION

- A. Examine areas and conditions under which the concrete stain work will be performed and identify conditions detrimental to the proper and timely completion of the work. Do not proceed until unsatisfactory conditions have been corrected.
- B. Interior Applications: Concrete substrates must have a moisture vapor emission rate of less than 5 lbs./1000 sq. ft. per 24 hour based on a 72 hour test period according to ASTM F 1869 or have a relative humidity reading (RH) using an in-situ probe of 85% or less.
- C. If the moisture readings exceed these prescribed levels, apply Aquaron Corporations Aquaron CPT 2000 per the manufacturer's instructions prior to application of the NeverStrip Concrete Stain and Topcoat System.

2 PREPARATION

- A. New Concrete: Comply with the following:
 - 1. Newly placed concrete is to sufficiently cure for a minimum of 14 days.
 - 2. Immediately prior to color staining, thoroughly remove any contaminants, sealers, waxes, finishes, coatings deleterious to subsequent Concrete Stain application.
 - 3. It may be desirable in order to show aggregate and other concrete patina to prepare the concrete surface wet with resinous diamond encrusted pads with a 175-rpm floor machine. Although depending on the condition of the concrete and the desired affect, the use of 50 grit diamond resin pads followed by 120 grit pads is often desirable.
 - 4. Finish the floor preparation with removal of diamond resin pad slurry with a high quality squeegee wet-vac or preferably an auto scrubber.
 - 5. Allow floor to dry completely prior to application.
- B. Surface Preparation for New or Existing Concrete:
 - 1. Concrete surfaces should be completely penetrable before applying the initial application of Concrete Stain. The surface of the concrete should be lightly mechanically abraded to remove weak cement paste and contaminants. The final

surface preparation should approximate a Concrete Surface Profile of 1, (CSP1 as designated by the International Concrete Repair Institute, Alexandria, Virginia). Methods for mechanical abrasion include:

- a. Pressure Washing: Use a pressure washer equipped with a fan tip and rated for a minimum pressure capability of 4000 psi.
- b. Scrubbing with a rotary floor machine with a Mal-Grit Brush or equivalent.
- c. Abrasion of the surface with diamond resin pads

Surfaces should be tested to receive stain by spotting with water. Water should immediately darken the substrate and be readily absorbed. If water beads and does not penetrate or only penetrates in some areas, perform additional surface preparation and testing. On denser concrete floors, abrade lightly to open up surfaces. Retest and continue surface preparation until water spots immediately darken and uniformly penetrate concrete surfaces.

2. Clean concrete with desired cleaner, such as NeverStrip's Deep Clean and rinse concrete substrates until rinse water is completely clean.

3 CONCRETE STAIN APPLICATION

- A. General: Comply with stain manufacturer's printed instructions and current recommendations.
 1. Do not mix the specified Concrete Stain with materials not designated by manufacturer.
- B. Protect surrounding areas, landscaping, and adjacent surfaces from overspray and runoff. Divide surfaces into small work sections using walls, joint lines, or other stationary breaks as natural stopping points.
- C. Apply Concrete Stain at the coverage rate recommended by the manufacturer and use application equipment according to the Concrete Stain manufacturer's printed instructions.
- D. Transfer Concrete Stain to the concrete with recommended pump-up spray equipment and immediately back roll into surface with recommended applicators.
- E. Apply multiple coats of one or more colors as desired within 24-hours of the previous coat.

4 TOPCOAT APPLICATION

- A. Concrete substrate must be completely dry. Test surface for proper pH prior to applying sealer. A pH value of 7-8 desired. If the tested pH value is less than 7, repeat neutralization step until the required pH value is achieved.
- B. Conduct a moisture vapor emission test prior to applying any sealer. Refer to the specific sealer's Technical-Data Bulletin for acceptable MVER.
- C. Apply topcoat according the topcoat manufacturer's printed instructions at a rate of 300 to 400 square feet per gallon per coat. Maintain a wet edge at all times.

- D. Allow topcoat to completely dry before applying additional coats.
- E. If second coat of topcoat is applied within 24-hours, there is no need to abrade the first coat. Conditioning of the first topcoat with a maroon conditioning pad is recommended if the second coat of topcoat is applied after 24-hours.

5 PROTECTION

- A. The General Contractor is responsible for safeguarding the surface quality of concrete slabs before and after application of Concrete Stain and topcoat(s).
- B. All concrete floors that will be not be covered by other materials will be protected throughout the project. The concrete slab must be treated as a finished floor at all times during construction.
- C. DO NOT APPLY TAPE OF ANY KIND TO COATED SURFACES AT ANY TIME AS THE TAPE MAY DAMAGE THE CONCRETE STAIN AND TOPCOAT
- D. No substitutions will be allowed.

6 MAINTENANCE

- A. Maintain color stained and top coated floors by following Cleaning and Maintenance Guidelines maintained on NeverStrip Floor Coating's website (www.neverstrip.com).
- B. END

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