GUIDE SPECIFICATION

SECTION 03366

WATER-BASED, NON-REACTIVE, SOLID (OPAQUE) COLOR STAINED CONCRETE FLOOR

PART 1 – GENERAL

1.1 SUMMARY

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification sections, apply to Work of this Section.

B. Section Includes:
   1. Water-based, non-reactive, non-acrylic solid color stained concrete floor finish.

C. Related Sections:
   1. Division 3 Section "Cast-In-Place" for general applications of concrete.

1.2 SUBMITTALS

A. Product Data: Manufacturer's technical data sheets, MSDS and installation instructions for each product specified.

B. Samples for Initial Selection or Custom Color Samples Provided by Manufacturer per Specifier's Requirements: Manufacturer's color charts showing full range of colors available.

C. Qualification Data: For firms indicated in "Quality Assurance" Article, including lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.

1.3 QUALITY ASSURANCE

A. Manufacturer Qualifications: Manufacturer of stain products shall have minimum [15-] [_____] years experience in the production of chemical stains.

B. Installer Qualifications: Minimum [3-] [_____] years experience in staining applications and successfully completed not less than [5] [_____] projects comparable in scale and complexity.

C. Substitutions: The use of any products other than those specified shall be considered providing that the [Contractor] [Construction Manager] requests its use in writing within 14 days prior to bid date. This request shall be accompanied by:

1. A certificate of compliance from the material manufacturer stating that the proposed products meet or exceed the product requirements specified.
2. Documented proof that the proposed material has at least a 20 year proven record of performance for staining concrete substrates, confirmed by at least 5 local projects that the [Architect] [_____] can examine.
3. Documented proof that Slip Index Testing ASTM F 609-96 has been conducted on the proposed material in both dry and wet conditions and the material has an average Slip Index Reading that is greater than 8.0.

D. Regulatory Requirements:
1. Products shall comply with the United States Clean Air Act for maximum Volatile Organic Compound (VOC) content as specified in PART 2 of this section.

E. Source Limitations: Obtain each specified material from same source and maintain a high degree of consistency in workmanship throughout Project.

F. [Mockups]:
1. Provide under provisions of Division 1 Section ["Quality Control."] [_____.]
2. At location on Project selected by [Architect] [_____], prepare [mockup] [4 by 4 feet (1.2 by 1.2 m)] [_____] for review and approval.
3. Construct [mockup] using processes and techniques intended for use on permanent work, including curing procedures. Include samples of control, construction, and expansion joints in [mockup] panels.
4. [Mockup] shall be stained by the individual workers who will actually be performing the work for the Project.
5. Obtain written approval of the [mockup] from Architect [_____] before start of work.
6. Retain approved [mockup] through completion of the Work for use as a quality standard for finished work.
7. Approved [mockup] may become part of the completed Work if undisturbed at time of Substantial Completion.
8. Remove [mockup] when directed by using NewLook EasyStrip™ 1000, a biodegradable, environmentally-friendly, non-corrosive coating remover.

1.4 DELIVERY, STORAGE AND HANDLING

A. Deliver the specified products in original, unopened containers with legible manufacturer's identification and information.

B. Store specified products in conditions recommended by the manufacturer.

1.5 PROJECT CONDITIONS

A. Environmental Conditions: Maintain an ambient temperature between 50° (and rising) and 90° F (and cooling) during application and at least 24 hours after application.

B. Protection: Precautions shall be taken to avoid damage or contamination of any surfaces near the work zone. Protect completed stain work from moisture or contamination for at least 24 hours after application.

1.6 PRE-JOB CONFERENCE

A. One week prior to the placement of water-based, non-reactive, non-acrylic NewLook Solid Color Stain™ a meeting will be held to discuss the project and application of materials.

B. It is suggested that the [Architect,] [_____] [General Contractor,] [Construction Manager,] and Subcontractor to be present.

PART 2 – PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

A. Manufacturer: NEWLOOK INTERNATIONAL, INC.
Salt Lake City, Utah
(801) 886-9495.

2.2 MATERIALS

A. Water-based, Non-Reactive, Solid Color Stains: SOLID COLOR STAIN™ by NEWLOOK INTERNATIONAL, INC., a multi-component, water-based, non-reactive, non-corrosive, penetrating, breathable, non-acrylic based staining product that mechanically bonds with cured concrete or cementitious toppings to produce solid (completely opaque) color effects and does not necessarily need to be sealed, but is compatible with acrylic-based and solvent-based sealers.
1. Colors: As selected by [Architect] [_____].

2. Colors: As indicated on the NewLook International, Inc. Color Chart(s).

PART 3 – EXECUTION

3.1 EXAMINATION

A. Verification of Conditions: [Contractor] [Construction Manager] shall examine areas and conditions under which work will be performed and identify conditions detrimental to proper and timely completion of work. Do not proceed until unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. New Concrete:
1. Newly placed concrete shall be sufficiently cured a minimum of 28 days.

2. Do not use liquid curing materials. Cure concrete flatwork with new, unwrinkled, non-staining, high quality curing paper. Do not overlap curing paper.
3. Surfaces shall be cured using the same method and different sections (pours) chemically stained when the concrete is the same age.
4. Immediately prior to chemically staining, thoroughly clean the concrete. Sweep surfaces, then pressure wash or scrub using a rotary floor machine. Use suitable, high-quality commercial detergents to facilitate cleaning. Thoroughly rinse surfaces after cleaning until rinse water is completely clean. Allow floor to dry completely prior to application of floor stain.
5. Concrete surfaces must be uniformly slip-resistant and profiled to meet a Concrete Surface Preparation (CSP) profile of 1-2 per ICRI guidelines.
6. Some concrete may require abrading to open the surface and make it sufficiently penetrable. In these instances the concrete surface must be sanded using an 60-80 mesh-sanding screen or a grit brush. After sanding, all residues must be removed by power vacuuming. The surface should then be pressure washed or scrubbed using a rotary floor machine.
7. For preparation, the sandblaster should be capable of producing a light, uniform sandblast and be equipped with a dust collector.
8. For preparation, the pressure washer should be equipped with a fan tip and have a minimum pressure capability of 3000 psi (21 MPa). Hot water capability may facilitate cleaning of existing concrete. Pressure wash every square inch of concrete that is to be stained so as not to miss any areas that might otherwise prevent the stain from penetrating and sufficiently bonding to the concrete.
9. Acid washing may be required when the above surface preparation does not yield adequate penetration or if there are excessive alkali deposits or surface discoloration. The reacted residue must be abraded using a low-speed floor machine equipped with a 60 mesh screen or a grit brush and then thoroughly rinsed until the rinse water is clear and free of solids, a minimum of two times. After rinsing, neutralize any remaining acid residue by washing with a solution of baking soda (sodium bicarbonate) and water. (Test pH of floor should be 7 or higher.)

B. Existing Concrete:
1. Clean concrete surfaces so that surfaces are completely penetrable before receiving the initial application of chemical stain. Test surfaces 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, additional surface preparation and testing shall be performed.
2. Cleaning method used depends on the condition of the concrete surface. To remove dirt and other contaminates, detergents and other commercial grade cleaners should be considered and tested.
3. Rinse concrete substrates until rinse water is completely clean.
4. For preparation of interior floors, the rotary floor machine should be heavy duty and operate at approximately 175 rpm. With a 60-80 mesh-sanding screen or a grit brush, remove all contaminates and weak cement paste from the surface. This will also open the surface to allow the chemical stain to penetrate.
5. Acid washing may also be required. (Refer to New Concrete Preparation.)

C. Scoring: Score decorative jointing in concrete surfaces 1/8-inch (3.2 mm) deep with diamond blades. Rinse until water is completely clean.

3.3 MIXING OF WATER-BASED, NON-REACTIVE, SOLID COLOR STAIN

A. Dilute and mix the product strictly according to the Manufacturer's printed instructions included with the product. Use a power drill, mixing paddle and bristle brush to completely blend all powder and liquid pigments.

B. Product shall be mixed and used within Manufacturer's recommended time frame of three (3) hours.

3.4 APPLICATION OF WATER-BASED, NON-REACTIVE, SOLID COLOR STAIN

A. Concrete surfaces shall be dry and properly prepared as described above. Protect surrounding areas from over-spray, run-off and tracking. If the entire Project is not to be completed within the same time period divide surfaces into small work sections using wall, joint lines, or other stationary breaks as natural stopping points.

B. Apply mixed (diluted) water-based, non-reactive, Solid Color Stains at the coverage rate recommended by the manufacturer and use application equipment described in the manufacturer's printed technical literature—use the specific applicator brush recommended by and supplied by manufacturer. Re-broom and back-brush over the wet material as it dries without adding additional material to the area. When the area being stained has dried sufficiently, apply material to the next area and begin the same process of re-brooming and back-brushing the new area as it dries. The color of the liquid stain has no resemblance to the final color produced on the concrete substrate.

C. Reaction and drying time depends on wind conditions, temperatures (ambient and concrete), and humidity levels.

D. The second coat, if required, should be applied after the first coat has dried sufficiently, normally 1-2 hours after application depending on temperature and humidity. A third coat of SOLID COLOR STAIN™ should not be applied.

E. On vertical surfaces, brush SOLID COLOR STAIN™ using the specific applicators brush recommended by and supplied by manufacturer. Take extra precaution to avoid dripping and spilling material given its high viscosity.

3.5 PROTECTION

A. Protect floor from foot traffic for at least 24 hours after stain dries.

B. Do not drive on surface for at least 48 hours after stain dries.

C. Do not park vehicles on surface for at least 1 month after it dries. Place cardboard under vehicle tires if parking on surface is necessary.

D. Do not pressure-wash surface for at least 1 week after stain dries.

3.6 MAINTENANCE

A. Maintain water-based, non-reactive, solid color stained floors by sweeping. Clean spills when they occur and rinse dirt off with water. Wet-clean heavily soiled areas by mopping or by scrubbing with a rotary floor machine equipped with a soft, non-abrasive scrubbing brush and a suitable, high-quality commercial detergent.

3.7 APPLICATORS

A. For a list of contractors, contact NewLook International, Inc. at (801) 886-9495 or the local NewLook International, Inc. Authorized Distributor.

END OF SECTION

