

SECTION 09670

FLUID APPLIED SURFACING

PART 1 – GENERAL

1.01 SUMMARY

- A. Section includes: Cleaning, preparation and color finishing of specified concrete surfaces. This work shall include providing and applying special concrete Natural Finish coloration system in accordance with the provisions of the plan documents and other sections of the project specifications.
- B. Related Documents: The conditions of the Contract apply to this section as fully as if repeated herein.
- C. Related Work: Section 9700

1.02 SUBMITTALS

- A. Submit proposed construction material SDS sheets for materials to be used for the coloring, and/or etching of concrete surfaces.

1.03 TEST PANEL (S)

- A. The Contractor shall demonstrate his workmanship by constructing test panel(s) for coloring types specified using approved coloring materials.
- B. The architectural surface treatments of the finished work shall achieve the same final effect as demonstrated on the approved test panel(s).
- C. The material used in construction of the jobsite test panel(s) shall comply with the related concrete specification sections applicable to the project work. The mix utilized for the test panel(s) shall be same pounds per square inch (PSI) concrete mix as specified for the project work. The color shall produce the same color intended for use on the finished surface and shall be incorporated into the final work. The test panel(s) shall be un-reinforced concrete; constructed to determine the surface coloring result by use of approved coloring materials. The size of the concrete test panel(s) shall be three (3) feet wide by three (3) feet long, (unless noted otherwise). Unsatisfactory panel(s) shall be removed and replaced with satisfactory panel(s). Disposal of test panel(s) when work is complete to be done by General Contractor.

1.04 QUALITY ASSURANCE

- A. Quality Standards: The standards named herein are specified to establish standards of quality, performance, and compliance with the design concept which is to duplicate the color of the approved “referee sample”.
- B. Test Panels: Provide a minimum of two test panels utilizing the same concrete materials as provided at the project site with the same finish as concrete areas to receive coloring and etching. Each panel will be a minimum of 9 square feet in size (unless noted otherwise), and found in unobtrusive location as selected by the Architect’s representative, to demonstrate color and texture of the designed surface. Obtain the Architect’s representative’s acceptance of visual qualities of the test panels before start of the project coloring. Retain test panels during construction as standards for judging completed work.
- C. Experience and Qualifications:
 - 1. The products and work shall be supplied by a subcontractor having experience in sandblast etching and coloring, being a Licensed and Certified Contractor by the manufacturer, and having two (2) years experience with the “X-BOND” System, preparation, coloring and finish systems.
 - 2. Contractor shall furnish evidence to the satisfaction of the Architect that proposed products have been successfully used in other similar scale coloring applications.
- D. System Performance shall meet the following requirements:
 - 1. Standard Guide for Testing Industrial Protective Coatings:
ASTM – D6577-00a
 - 2. Standard Test Method for chipping resistance of coatings:
ASTM _ D3170-03
 - 3. Standard Test Method for bond strength adhesive systems used with concrete as measured by direct tension:
ASTM – C1404/C1404M-98(2003)
 - 4. Standard Test Method for pull off strength of coatings using portable adhesion testers:
ASTM – D541-02
 - 5. Determination of depth of penetration of clear penetrating water repellents on concrete.
ASTM – WK5956
 - 6. Standard Test Method Volatile Organic Content
ASTM D-3960
 - 7. Standard Test Method Water Content
ASTM D-3792
 - 8. Standard Test Method Solvent Content
ASTM D-4457

9. Standard Test Method Non Volatile Residue
ASTM D-2369
10. Standard Test Method Density
ASTM D-1457

1.05 WARRANTY

- A. SEMCO provides a standard five year warranty on the X-Bond System against delamination when installed by an approved installer or installer that has received a training course for use by SEMCO Surfaces Inc.,

PART 2 – PRODUCTS

1.06 MATERIALS

- A. Specifications are based on products as manufactured by SEMCO, Inc.
3620 W. Reno Ave Suite J, Las Vegas, Nevada 89118. Phone: (702) 222-9495
Fax: (702) 222-1788.
- B. X-BOND SYSTEM with integral color to match final approved surface color.
Superior Adhesion, UV Resistance, Waterproof seamless stone system.
TT-P-001411 (Waterproofing below grade). Integration of SEMCO X-Bond
Liquid Membrane and Reinforcing Fabric to meet ANSI 118-10 -
Waterproofness ASTM D4068-01
- C. Use of the X-Bond Seamless Stone, Liquid Membrane, and Reinforcing Fabric
can be used over interior joints to create a continuous surface. Expansion joints,
cold joints and/or submerged joints in an exterior environment should be honored
due to continuous fluctuations in temperatures and other exterior conditions.
- D. In accordance with the desired thickness, the use of the SEMCO X-BOND
BROWN COAT will be necessary as a rapid 24 hour cure surface filler/level.
SEMCO Brown Coat forms a mechanical cross link with the substrate enabling a
perfect bond. The Brown Coat also has an integrated waterproofing system. TT-
P-001411 (Waterproofing below grade). Application can be done up to 6 inches
in a single pour.
- E. Special surface colors shall be performed using approved colors
suitable for the purpose intended and applied in a manner consistent with the
design intent of the project. The Architects approved “test panel” shall act as the
basis for determining the appropriate color application.
- F. The color agent shall be a penetrating mix, compatible color finish
for the exterior application on new concrete with field evidence of resistance to
moisture, alkali, acid and mildew, mold and fungus, or degradation. The
coloring agent shall be breathable, allowing moisture and vapor transmission.

- G. All materials shall be furnished, prepared, applied, cured, and stored according to Product Manufacturer directions with special attention given to recommended temperature range for finish systems.

PART 3 – EXECUTION

1.07 APPLICATION OF SEAMLESS STONE AND FINISH

- A. Concrete should be at least 28 days old, free from dark alkali spots, and clean from grease, paint, oil, soap, and other foreign matter, which would prevent necessary bonding, penetration and subsequent reaction of the color with the concrete surface to be colored.
- B. Preparation: Clean concrete to ensure the surface is free of all latency, dirt, dust, grease, efflorescence, paint, and any foreign material prior to the color application in accordance with SEMCO manufacturer's recommendations. All surfaces must check pH balance and use solution to meet SEMCO manufacturer's recommendations. The subcontractor shall correct, at his own cost, any surface problems created as a direct result of the surface preparation methods used.
- C. While substrate is damp apply STONE SOAP to all areas receiving X-BOND. Use a low speed scrubber with a blue nylon concrete cleaning brush to help agitate the surface and then pressure wash clean. Mixture ratio of (4:1) for normal cleaning of newly cured concrete. Do not use hydrochloric acids or other chemicals that may react or allow discoloration of the substrate.
- D. Remove oil, wax, and grease by use of SEMCO Power Cleaner – Biodegradable Degreaser. Remove mineral or calcium deposits by use of SEMCO NuLift Cleaner – Biodegradable Mineral Cleanser
- E. X-Bond Seamless Stone Thickness FOR WATERPROOFING required: minimum 8 mm. This includes the Brown Coat. For details of the installation technique of the X-Bond, please refer to manufacturer installation instructions.
- F. Apply SEMCO X-Bond System to achieve desired texture; according to approved sample; only to areas or graphics intended to receive color. Apply color to provide coverage as recommended by manufacturer or to achieve the colors selected and to match the approved "test panel" for coloration. Apply each coat thin and evenly. ALWAYS TEST A SMALL AREA FIRST. Allow PRE STAIN SYSTEM to completely dry.

1.08 SEALER

- A. Consult SEMCO Surfaces Inc for the best suitable sealer. number (702) 222-9495, info@semcosurfaces.com

1.09 CLEAN-UP

- A. During the progress, and at the completion of work, Contractor is to remove all trash, debris, and all other foreign objects from the project site and leaves the site clean and in an orderly condition.

1.10 PROTECTION

- A. Protect applied colors from adverse climatic conditions during application and curing stages. Apply only if weather conditions are between 50 and 100 degrees. Do not store in excessive heat or leave containers in direct sunlight.
- B. All special finishes and surfaces shall be protected prior to and up until final acceptance of the project.

END OF SECTION