

SECTION 09 93 00

STAINING AND TRANSPARENT FINISHING

Note to Specifier: This guide specification describes a method of preparing, acid staining, and sealing exterior concrete. These products are manufactured by Clemons Concrete Coatings of Nashville, Tennessee, www.ccc-usa.com.

Specification Section numbers are based on 2004 MasterFormat published by Construction Specifications Institute. Verify actual section numbers used for submittals and substitutions.

Remove all Notes to Specifier from the final document.

Inspect existing concrete to determine it is suitable for applying acid stain and seal concrete finish system. Concrete must be sound.

Require a segment of the concrete to be acid stained and sealed to the desired finish. Choose a location that will show the widest variation in surface conditions, including repairs. This mockup can be used to make everyone aware of what to expect.

Specify new concrete in Section 03 30 00 Cast-in-place Concrete. New concrete must be a minimum of 28 days old; and have reached the majority of its compressive strength. Longer curing time can improve success.

Concrete stain and seal installations can be enhanced with a variety of options, saw cuts, divider strips, engraving, stencils, logos, and special aggregates.

PART 1 GENERAL

1.1 SUMMARY

- A. This section includes degreaser neutralizer, etch and clean, acid stain, and sealers used during the process of acid staining and sealing exterior concrete.

Note to Specifier: Verify section numbers shown below.

- B. Related Sections:
 - 1. Section 01 25 00 - Substitution Procedures
 - 2. Section 01 33 00 - Submittal Procedures
 - 3. Section 03 00 00 - Cast-in-place Concrete

1.2 SUBMITTALS

- A. Submit under provisions of Section 01 33 00.
 - 1. Product Data: Submit manufacturer's data sheets for each product specified; degreaser neutralizer, etch and clean, acid stain, and sealer.
 - a. Submit color charts for initial color selection
 - 2. Samples: Submit samples of acid stain for color selection and for mockup.
 - 3. Submit LEED information if applicable.
- B. Operation and Maintenance Data – Submit manufacturer's recommendations for cleaning and maintaining stained and sealed concrete.

- C. Submit list of projects completed by the installer. Include name and location of projects within 100 mile radius of project, completed within the last three years. Identify Architect of record, and provide contact information for Architect and Owner.

1.3 QUALITY ASSURANCE

- A. Installers Qualifications: Provide personnel who have been trained by concrete coating manufacturers, and have three years documented experience.

Note to Specifier: An effective way to ensure satisfactory results is to create a mockup on the actual surface to be stained and sealed. Require a mockup of sufficient size, and select a portion of the concrete that will demonstrate the widest variety of conditions. Make everyone aware of variations that could occur in color, surface spots, cracks and crazing.

- B. Mockup: Provide mockups to illustrate desired finish, relationship with other materials and aesthetic effects.
 - 1. Locate mockup where directed by the Architect.
 - 2. When approved, mockup will become the standard by which the remaining Work will be judged and may become part of the Work.
 - 3. Do not proceed until approved by the Architect.
 - 4. Mockup Size: [4 x 8 feet] [4 x 10 feet]
- C. Pre-Installation Conference: Conduct a pre-installation conference five weeks before scheduled date to begin installation. Discuss the following;
 - 1. Access
 - 2. Temporary power
 - 3. Graphics
 - 4. Protection of adjacent areas
 - 5. Protection of finished concrete upon completion
- D. Single Source: Provide coating products including degreaser neutralizer, etch and clean, acid stain, and sealers from a Clemons Concrete Coatings.

1.4 PROJECT CONDITIONS

- A. Maintain environmental conditions during storage and application that complies with manufacturer's recommendations.
- B. Environmental Requirements:
 - 1. Apply only when surface and air temperatures are above 50 degrees F and below 90 degrees F.

PART 2 PRODUCTS

2.1 ACCEPTABLE MANUFACTURER

- A. Provide products manufactured by Clemons Concrete Coatings of Nashville, Tennessee;
Telephone: 615-872-9099
www.ccc-usa.com
 - 1. Substitutions: [Not Permitted] [Under provisions of Section 01 25 00].

2.2 MATERIALS

- A. Degreaser neutralizer: Degreaser Neutralizer, as manufactured by Clemons Concrete Coatings, with the following characteristics:

1. Biodegradable cleaner concentrate used to clean concrete and neutralize acid stain prior to sealing
 2. VOC: <250 g/L
 3. Flammability: 0
- B. Etch and clean: Provide Etch & Clean as manufactured by Clemons Concrete Coatings, with the following characteristics:
1. Phosphoric acid cleaning agent designed to lightly etch concrete and create porosity on concrete surface
 2. Prime ingredient: Phosphoric acid
 3. VOC: 0 g/L
 4. Flammability: 0
- C. Stain: Provide Acid Stain, as manufactured by Clemons Concrete Coatings, with the following characteristics:
1. Prime ingredient: Hydrochloric acid
 2. VOC: 0 g/L
 3. Flammability: 0
- D. Sealer: Provide Supreme Seal-25 as manufactured by Clemons Concrete Coatings, with the following characteristics:
1. 25% pure acrylic non-yellowing
 2. High gloss
 3. Oil-based clear sealer

2.3 ACCESSORIES

A. Supplemental Materials:

Note to Specifier: Super Grip can be added to Supreme Seal 25 for additional slip resistance.

1. Non-Skid Coating Additive: Provide Super Grip as manufactured by Clemons Concrete Coatings.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify that substrate is ready to receive concrete coating. Do not begin until deficiencies have been corrected.
- B. Verify that necessary repairs have been completed prior to start of system installation.
- C. Test substrate to receive stain by spotting concrete with water. If water beads up on the surface, the concrete must be profiled to achieve required porosity.

3.2 PREPARATION

- A. Allow concrete minimum of 28 days to cure before staining.
- B. Protect adjacent surfaces to prevent damage during concrete surface preparation, stain, and sealer application.
- C. Clean concrete with degreaser neutralizer to remove all surface contaminants.
- D. Preparation for etch and clean: ensure the surface is free of dirt, wax, grease or other contaminants.

- E. Preparation for staining: Mask adjacent columns, walls, and concrete with painter's tape and plastic sheeting. Dampen concrete with water but do not puddle.
- F. Preparation for sealing: Concrete must be fully neutralized with Degreaser Neutralizer using acid brush. Repeat. Rinse with clean water and mop up excess water. Wipe floor to ensure color is not picked up. Concrete must be completely free of residue. Once dry and no residue is present concrete can be sealed.

3.3 FIELD QUALITY CONTROL

- A. Inspection: Inspect stained concrete floors prior to application of sealer. Compare to approved mockup.
- B. Verify coverage rates of products to ensure proper application.

3.4 PROTECT AND CLEAN

- A. Protect finished concrete from foot and wheeled traffic for the remainder of the construction period.
- B. Contractor shall provide maintenance and cleaning instruction upon completion of work.

END OF SECTION