Bldg. AS124
Amendment Specification
January 11, 2011

SECTION 03 35 00

CONCRETE FINISHING SEALER
08/2018

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:
1. Precautions for avoiding staining concrete before and after application.

1.2 REFERENCES

A. American National Standards Institute (ANSI):
1. ANSI B101.1 Test Method for Measuring Wet SCOF of Common Hard-Surface Floors.
2. ANSI B101.3 Test Method for Measuring Wet DCOF of Common Hard-Surface Floors.
B. ASTM International (ASTM):
1. ASTM C779 Standard Test Method for Abrasion Resistance of Horizontal Concrete Surfaces.
2. ASTM C805 Standard Test Method for Rebound Number of Hardened Concrete.
3. ASTM C1028 Standard Test Method for Determining the Static Coefficient of Friction of Ceramic Tile and Other Like Surfaces by the Horizontal Dynamometer Pull-Meter Method.
4. ASTM D3359 Standard Test Methods for Measuring Adhesion by Tape Test.
5. ASTM G23 Practice for Operating Light-Exposure Apparatus (Carbon-Arc Type) With and Without Water for Exposure of Nonmetallic Materials (Withdrawn 2000).
C. National Floor Safety Institute (NFSI):
1. Certified as High Traction by the National Floor Safety Institute (NFSI), Phase 2 testing.

1.3 SUBMITTALS

A. General: Submit listed submittals in accordance with Conditions of the Contract and Section 01 33 00 - Submittal Procedures.
B. Product Data: Submit product data, including manufacturer's Spec-Data sheet, installation instructions and technical bulletins for specified products.
C. Certificates: Manufacturer's certification that the installer is acceptable.
D. Maintenance Data: Maintenance instructions, including precautions for avoiding staining after application.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: Acceptable to the manufacturer.

1.5 DELIVERY, STORAGE & HANDLING

A. General: Comply with Division 01 Product Requirements section.
B. Delivery: Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.
C. Storage and Protection: Store materials protected from exposure to harmful environmental conditions and at temperature and humidity conditions recommended by the manufacturer.
D. Handling: Protect materials from dirt, corrosion, oil, grease and other contaminants.

PART 2 PRODUCTS - MATERIALS

2.1 SEALER

A. Provide Cure-Seal Hardener as specified.

1. Basis of design is Curecrete Distribution, Inc., Ashford Formula, Telephone:(800) 998-5664, Email: info@ashfordformula.com; Website: www.ashfordformula.com.
2. Equal products by other manufacturers are acceptable.

B. Cure-Seal-Hardener: Shell be a water-based, chemically reactive penetrating sealer and hardener that densifies concrete to seal against water molecules, but allows air and water vapor to pass, so that concrete can achieve full compressive strength for minimized surface crazing and elimination of dusting.

1. Abrasion Resistance to Revolving Disks: At least a 32.5% improvement over untreated samples when tested in accordance with ASTM C779.
2. Surface Adhesion: At least a 22% increase in adhesion for epoxy when tested in accordance with ASTM D3359.
3. Hardening: As follows when tested in accordance with ASTM C39:
a. After 7 Days: An increase of at least 40% over untreated samples.
b. After 28 Days: An increase of at least 38% over untreated samples.
4. Coefficient of Friction: 0.86 dry, 0.69 wet when tested in accordance with ASTM C1028.
5. Rebound Number: An increase of at least 13.3% over untreated samples when tested in accordance with ASTM C805.
6. Light Exposure Degradation: No evidence of adverse effects on treated samples when tested in accordance with ASTM G23.
7. Test Method for Measuring Wet SCOF of Common Hard-Surface Floors in accordance with ANSI B101.1.
8. Test Method for Measuring Wet DCOF of Common Hard-Surface Floors in accordance with ANSI B101.3.
9. Certified as High Traction by the National Floor Safety Institute (NFSI), Phase 2 testing.

10. Certified Compliant according to California Department of Public Health CDPH/EHLB/Standard Method Version 1.2, 2017.

2.2 JOINT FILLER

Provide Joint Filler in concrete joints as specified herein.

A. Polyurea joint filler:
Rapid setting two-component polyurea elastomer joint filler with the physical properties listed below.

1. Shore "A" hardness ASTM D-2240 85-87 A
2. Viscosity (mixed) Self Leveling
3. Mix Ratio (by volume) 1:1
4. Initial Cure 15 minutes
5. Tack Free (thin film)@ 77°F 3 minutes
6. Final Cure 60 minutes
7. Tensile Strength, psi ASTM D-412 960 minimum
8. 100% Solids acceptable for use in USDA applications
9. Contains no VOC's

B. Basis of design is Curecrete, Ashford Formula, CreteFill Pro 85MI Control Joint Filler, phone 800-998-5664. Equal products by other manufacturers are acceptable.

C. Surface defects, spall repair: provide Spall Repair, Low viscosity rigid Urethane, with the physical properties listed below and by same manufacturer as joint filler.

1. Viscosity (Mixed) 250 cps
2. Hardness, durometer (ASTM D2240) 57- 62
3. Tensile Strength, PSI (ASTM D412) 4600
4. Tear Strength (ASTM D624) -lb/mil 489
5. Elongation % (AST D412) 6% to 8%
6. Compressive Strength (neat) 3900 psi
   (ASTM C109) (With Sand) 4950 psi
7. Bond Strength (ASTM 882-99) 3450 psi
8. Contains no VOC's

D. Crack Repair Extremely low viscosity modified polymer repair material with the physical properties listed below.

1. Viscosity (Mixed) 100-130 cps
2. Hardness, durometer (ASTM D2240) 50 D
3. Tensile Strength, PSI (ASTM D412) 4900
4. Elongation % (AST D412) 10% to 12%
5. Compressive Strength (neat) 4100 psi
   (ASTM C109) (With Sand) 3000 psi
6. Bond Strength (ASTM 882-99) 4000 psi

7. Low odor

PART 3 EXECUTION

3.1 MANUFACTURER'S INSTRUCTIONS

A. Compliance: Comply with manufacturer's product data, including product technical bulletins, product catalog installation instructions and product carton instructions for installation.

3.2 EXAMINATION

A. Do not begin installation until substrates have been properly prepared and are suitable for application of product.
B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.3 PREPARATION

A. Clean surfaces thoroughly prior to installation.
B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
C. Do not use frozen material. Thaw and agitate prior to use.
D. If construction equipment must be used for application, diaper all components that might drip oil, hydraulic fluid or other liquids.

3.4 INSTALLATION

A. New Concrete: Apply cure-seal hardener to new concrete as soon as the concrete is firm enough to work on after troweling; with colored concrete, wait a minimum of 30 days before application.
Apply in accordance with manufacturer's written instruction.
1. Spray on at rate of 200 ft2/gal (5 m2/L) or as per manufacturer's written instructions if different.
2. Keep surface wet with cure-seal-hardener for a minimum soak-in period of 30 minutes without allowing it to dry or become slippery. If slipperiness occurs before the 30 minute time period has elapsed, apply additional cure-seal-hardener, as needed, to keep the entire surface in a non-slippery state for the first 15 minutes; for the remaining 15 minutes, mist the surface as needed with water to keep the material in a non-slippery state. In hot weather conditions, follow manufacturer's special application procedures.
3. When the treated surface becomes slippery after this period, lightly mist with water until slipperiness disappears.
4. Wait for surface to become slippery again, and then flush entire surface with water to remove all cure-seal-hardener residue.
5. Squeegee surface completely dry, flushing any remaining slippery areas until no residue remains.

6. Wet vacuum or scrubbing machines can be used in accordance with manufacturer's instructions to remove residue.

B. Existing Concrete: Prepare floor, must be clean and bare. Strip or remove all curing agents, dirt, paints, coatings, bondbreakers, oil spills, and other contaminates.
Apply in accordance with manufacturer's written instruction.
Follow same instructions for New Concrete steps 1 through 6 above.

3.5 PROTECTION

A. Protect installed floors for at least 3 months until chemical reaction process is complete.
1. Do not allow traffic on floors for 3 hours after application.
2. Do not allow parking of vehicles on concrete slab.
3. If vehicles must be temporarily parked on slab, place drop cloths under vehicles during entire time parked.
4. Do not allow pipe cutting using pipe cutting machinery on concrete slab.
5. Do not allow temporary placement and storage of steel members on concrete slabs.
6. Clean up spills immediately and spot-treat stains with degreaser or oil emulsifier.
7. Clean floor regularly in accordance with manufacturer's recommendations.

End of Section