

SECTION 09960  
HIGH PERFORMANCE COATINGS

## PART 1 GENERAL

## 1.1 SECTION INCLUDES

- A. Non Skid Floor Coatings
- B. Industrial Floor Coatings
- C. Clear Coats

## 1.2 RELATED SECTIONS

- A. Section 03300 Cast-in-Place Concrete
- B. Section 09600 Flooring
- C. Section 09900 Paints & Coatings

## 1.3 REFERENCES

- A. ASTM D4541-95 Pull Off Adhesion Tests.
- B. ASTM-F-510 Wear Testing.
- C. ASTM-D-2794 Impact Resistance.
- D. ASTM-F-609 Coefficient of Friction Test.
- E. South Coast Air Quality Management District (SCAQMD)

## 1.4 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: Manufacturer's data sheets including:
  - 1. Installation Guide
  - 2. Product Data Sheet
  - 3. MSDS
- C. Selection Samples: Provide (2) sets of applicable color charts or chips representing all standard colors available from the manufacturer.
- D. Verification Samples: Provide verification samples of each product specified on a minimum size of 6" square showing actual products, colors, and texture.
- E. Installer Qualifications: Submit list of successfully completed projects with references of same or similar scope of work.

## 1.5 QUALITY ASSURANCE

- A. Qualifications: Successful experience with other projects of the scope and scale of the work described in this section.
- B. Training: Confirmation by manufacturer that the installer has successfully completed an authorized training workshop of the flooring system(s).
- C. Mock-up: Provide a mock-up demonstrating actual surface preparation methods to be used then produce actual finishes to confirm acceptable appearance and workmanship.
- D. Area to be determined by architect.
- E. Approvals of each completed phase must be accepted prior to proceeding.

F. Refinish, if applicable to receive final approvals.

## 1.6 DELIVERY, STORAGE & HANDLING

- A. Delivery: Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.
- B. Storage & Protection: Store materials protected from exposure to harmful environmental conditions and at a minimum temperature of 50 degrees F and at a maximum temperature of 90 degrees F. Do not freeze!
- C. Handling: All containers must be tightly closed when not in use to prevent accidental contamination by foreign elements.

## 1.7 PROJECT/SITE CONDITIONS

Maintain environmental conditions (temperature, humidity, ventilation) according to the manufacturer's instructions. Do not install an exterior project when rain is imminent within the first 24 hours.

## 1.8 WARRANTY

- A. Project Warranty: Refer to Conditions of the Contract for project warranty provisions.
- B. Manufacturer's Warranty: Submit for Owners acceptance, manufacturer's standard limited warranty against manufacturer defects executed by authorized company official. Manufacturer's warranty is in addition to, and not a limitation of, other rights Owner may have under contract documents.

## PART 2 PRODUCTS

### 2.1 MANUFACTURER

Acceptable Manufacturers:

Eco Safety, Inc. d/b/a Eco Safety Products  
2921 W Culver Street, #4B, Phoenix, AZ. 85009  
Telephone: 602.305.9397 Fax: 602.305.6431  
Email: [info@buildwithesp.com](mailto:info@buildwithesp.com) Website: [www.buildwithesp.com](http://www.buildwithesp.com)

### 2.2 PRODUCT SUBSTITUTIONS

Substitutions: No substitutions permitted.

### 2.3 LEED CONSIDERATIONS

Products to conform to one or more of the following categories which may assist with USGBC LEED submittals:

- A. MR Credit 1.1 Building Reuse-Walls, Floors, Roof
- B. MR Credit 1.2 Building Reuse- Interior Nonstructural
- C. MR Credit 4 Recycled Content
- D. MR Credit 5 Regional Materials

- E. MR Credit 6 Rapidly Renewable Material
- F. IEQ Credit 4.1 Low Emitting Materials-Sealants
- G. IEQ Credit 4.2 Low Emitting Materials-Paints & Coatings
- H. ID Credit 1 Innovation in Design

## 2.4 W.B. ACRYLIC-URETHANE RUBBERIZED NON-SKID COATING

- A. Product: Eco-Tuff Rubberized Non Skid Coating
  - 1. Formulation Options: Standard (concrete) Flex (wood, fiberglass) AQ (submersible)
  - 2. Texture Options: Standard and Fine
- B. Description: A high performance interior/exterior 0 VOC water-based acrylic-urethane safety coating utilizing a resilient recycled EPDM rubber for a slip resistant, yet non abrasive texture. Engineered for high traffic and extreme weather environments. Available in 12 standard colors with custom colors available.
- C. Surface Preparation: Remove all bond breakers and prepare substrate for optimum bonding and penetration by mechanical grinding and/or chemical etching and cleaning.
  - 1. EE3-8000 Eco-Etch Pro Etch & Clean Concentrate
- D. Primer/Sealer: Required for optimum moisture protection and bonding of topcoats for all high traffic, weathering, and submersible applications.
  - 1. ET2-6500-10 Eco-Tuff W.B. 2-Part Epoxy Primer/Sealer
  - 2. ET2-6501-10 Eco-Tuff W.B. Metal Primer
- E. Finish Material: ET2-6000-100 Eco-Tuff Rubberized Non Skid, Std, Std Aggregate
- F. Finish Material: ET2-6010-100F Eco-Tuff Rubberized Non Skid, Flex, Std Aggregate
- G. Finish Material: ET2-6020-100AQ Eco-Tuff Rubberized Non Skid, AQ, Std Aggregate
- H. Finish Material: ET2-6001-40 Eco-Tuff Rubberized Non Skid, Std, Fine Aggregate
- I. Finish Material: ET2-6011-40F Eco-Tuff Rubberized Non Skid, Flex, Fine Aggregate
- J. Finish Material: ET2-6021-40AQ Eco-Tuff Rubberized Non Skid, AQ, Fine Aggregate

## 2.5 W.B. ACRYLIC-URETHANE INDUSTRIAL FLOOR COATING

- A. Product: Eco-Tuff Industrial Floor Coating
  - 1. Formulation Options: Standard (concrete) Flex (wood, fiberglass) AQ (submersible)
- B. Description: A high performance interior/exterior 0 VOC water-based acrylic-urethane floor coating engineered for high traffic and extreme weather environments Available in 12 standard colors with custom colors available.
- C. Surface Preparation: Remove all bond breakers and prepare substrate for optimum bonding and penetration by mechanical grinding and/or chemical etching and cleaning.
  - 1. EE3-8000 Eco-Etch Pro Etch & Clean Concentrate
- D. Primer/Sealer: Required for optimum moisture protection and bonding of topcoats for all high traffic, weathering, and submersible applications.
  - 1. ET2-6500-10 Eco-Tuff W.B. 2-Part Epoxy Primer/Sealer
  - 2. ET2-6501-10 Eco-Tuff W.B. Metal Primer
- E. Finish Material: ET2-6030-25 Eco-Tuff Industrial Floor Coating, Standard
- F. Finish Material: ET2-6031-25F Eco-Tuff Industrial Floor Coating, Flex
- G. Finish Material: ET2-6032-25AQ Eco-Tuff Industrial Floor Coating, AQ

## 2.6 W.B. ACRYLIC-URETHANE HIGH TRAFFIC CLEAR COAT

A. Product: Eco-Tuff High Traffic Clear Coat

1. Formulation Options: Standard (concrete) and AQ (submersible)

B. Description: A high performance interior/exterior 0 VOC water-based acrylic-urethane clear coat for concrete and masonry surfaces engineered for high traffic and extreme weather environments.

C. Surface Preparation: Remove all bond breakers and prepare substrate for optimum bonding and penetration by mechanical grinding and/or chemical etching and cleaning.

1. EE3-8000 Eco-Etch Pro Etch & Clean Concentrate

D. Primer/Sealer: Required for optimum moisture protection and bonding of topcoats for all high traffic, weathering, and submersible applications.

1. ET2-6500-10 Eco-Tuff W.B. 2-Part Epoxy Primer/Sealer

E. Finish Material: ET2-6030-25CC Eco-Tuff High Traffic Clear Coat, Standard

F. Finish Material: ET2-6032-25AQCC Eco-Tuff High Traffic Clear Coat, AQ

## 2.7 W.B. ACRYLIC-URETHANE FLEXIBLE HIGH TRAFFIC WOOD FINISH

A. Product: Eco-Tuff High Traffic Flex Clear Wood Finish

B. Description: A high performance interior/exterior 0 VOC water-based acrylic-urethane flexible clear coat for wood surfaces engineered with enhanced elongation for typical expansion and contraction of substrates. Also suitable for high traffic and extreme weather environments.

C. Surface Preparation: Remove all bond breakers including but limited to tannins, stain residue, oils, dust, etc.

D. Primer/Sealer: Recommended for enhanced protection, life span and bonding especially for exterior high traffic or where excessive moisture may be present.

1. ET2-6500-10 Eco-Tuff W.B. 2-Part Epoxy Primer/Sealer

E. Finish Material: ET2-6031-25FCC Eco-Tuff High Traffic Flex Clear Wood Finish

## PART 3 EXECUTION

### 3.1 MANUFACTURER'S INSTRUCTIONS

A. Comply with the instructions and recommendations of the flooring surface manufacturer.

### 3.2 EXAMINATION

A. Site Verification of Conditions: Verify that substrate conditions are suitable for installation of the flooring surface system.

B. Do not proceed with installation until unsuitable conditions are corrected.

### 3.3 SURFACE PREPARATION

A. Degreasing: It is very important when using a degreaser that the clean up is absolutely thorough and complete and that no dissolved residue, fat, oils, grease, dust, etc. is left on the surface. This is further achieved by repeating rinses of water.

1. STE-4002-5 Soy-It Industrial Degreaser Concentrate

## 2. EE3-8000 Eco-Etch Pro Etch & Clean Concentrate

B. Concrete: The concrete surface should be hand troweled or with a brush/broom finish to ensure optimum porosity for adhesion. Otherwise proper surface profiling is required. New concrete needs at least 28 days to cure properly, prior to primer application. Unless the new concrete is dry, adhesion problems will be experienced.

1. Profile and clean the concrete for maximum bonding and penetration by using Eco Etch Pro Concentrate in full strength or 1:1. If performing mechanical abrasion, be sure the surface texture does not alter expected results. Very dense surface still may require an Eco Etch Pro application to open the pores adequately. Test for optimum porosity prior to proceeding.
2. Concrete should be completely clean and dry.
3. Patch all imperfections, cracks, etc with concrete patch filler and flexible joint fillers. **DO NOT USE SILICONE PRODUCTS.** The product will not adhere to silicone.
4. Prime with ET2-6500-10 as per manufacturer instructions. When primer has properly cured, perform test patch to ensure adhesion.

C. Wood: Inspect thoroughly for excessive moisture and tannin bleed. All wood species must be completely dry and free from bleed.

1. Sand wood if necessary to remove all bond breakers, loose particles and other surface contaminants.
2. Degrease with Soy-It Degreaser to remove surface oils, grime. Ensure that all residue and dust is completely removed.
3. Wood should be completely clean and dry before applying coating materials.

D. Metal: Prime applicable metals with Eco-Tuff W.B. Metal Primer to inhibit rust and corrosion prior to coating application. High traffic areas with steel grates, diamond plate ramps, etc. should be acid washed and/or grind to provide optimum profile for coating adhesion prior to a prime coat.

## 3.4 INSTALLATION

### A. Types of Applications

#### 1. Roller Application

- A. Use only the Foam Textured Rollers available from Eco Safety Products when applying the Eco-Tuff Rubberized Non Skid Coating. Other rollers will not pick up and spread the product evenly. The roller must be capable of lifting the rubber crumb within the product to the surface. All other products are suitable use traditional and applicable sized nap for the intended substrate and texture.
- B. Soak roller in water – remove excess water prior to application.
- C. Pour product into paint tray or hang roller grid into 5 gallon bucket. Make sure to completely saturate roller with product, leaving no bare spots on roller.
- D. Apply the first coat as a thin coat. Resaturate roller after each pass. Make 4-5 consecutive passes in the same direction, with each pass right next to the other. When applying, roll in one direction first, then roll in the opposite direction in order to properly blend the product and create a uniform surface.
- E. Once an area is covered, run the roller very lightly over it to ensure even distribution of color and rubber crumb if applicable.
- F. When dry to the touch, apply 2<sup>nd</sup> coat. Repeat if a 3<sup>rd</sup> coat is desired.

## 2. Spray Applications

- A) Mask off areas as needed
  - i. When spray applying Eco-Tuff Rubberized Non Skid, use a hopper type Graco brand “Tex-Spray Compact” or equivalent.
  - ii. When spray applying Eco-Tuff Industrial or Eco-Tuff Clear Coats, use a standard airless with a #13-#17 tip.
- B) Attach spray gun to a compressor air line giving pressure of at least 40 psi.
- C) Spray all water out of the gun to prime.
- D) Before starting the job, spray a few short bursts away from the surface to test that everything is working properly.
- E) Holding gun approximately 12-24” away from surface, spray an even, light coat over the entire surface. **DO NOT APPLY TOO THICK.**
- F) Keep spray gun at a 90 degree angle to the surface.
- G) The hopper spray gun should make a slight “spitting” sound. This is a characteristic of the guns and is necessary for an even texture. The product will self level.
- H) When surface becomes touch dry, spray subsequent coats.
- I) While spraying the Eco-Tuff Rubberized Non Skid, be careful not to blow rubber crumb away from the area you are working on as this can accumulate in other areas of the job that will prevent the coating from bonding with the substrate.
- J) If the rubber crumb is bouncing back at you, lower the pressure or hold gun further from the surface. The further away from the surface you hold the gun, the greater the texture, the closer, the finer.
- K) Remove any over spray immediately with cloth and water.

## 3. Application Temperature and Curing Time

- A. Under normal working conditions, the product will be dry to the touch within 1 hour and can be subjected to light foot traffic within 24 hours. Full curing time only affects the amount of time required to wait before subjecting the surface to cleaning, heavy loads and chemical exposure. Surface can be subjected to normal loads well before this minimum time requirement.
- B. The coating should not be subjected to cleaning, heavy loads, or chemical exposure until fully cured after 7 days, less in hot-humid conditions, more in cold, dry weather. Dry times in this manual are based on a temperature of 77 degrees F and 50% humidity. The product should not be used under 40 degrees F. Do not allow product to freeze.
- C. **DO NOT USE ANY SOLVENTS, SOLVENT BASED ALCOHOLS, THINNERS OR LACQUERS TO THIN PRODUCT.**

### 3.5 PROTECTION

Protect the installed surface from damage resulting from subsequent construction activity on the site.

### 3.6 STORAGE AND REPAIR

- A. To store partially used cans, seal can well (airtight) and place in cool, dry place. The contents should be useable for at least 12 months.
- B. The evaporation of the water within the product will cause the product to cure. If some water content has evaporated, reconstitution with clean water may restore product viability if the curing process within the can is not too advanced.

### 3.7 REPAIRING

In the event that the product is damaged, it can easily be repaired or over-coated, due to self bonding.

- A. Remove all damaged product. Use a sharp knife such as a utility knife to make a well-defined area such as a square and eliminate uneven edges.
- B. Sand area with 36 or 40 grit sandpaper so that the new application can get a good grip. Slightly bevel the edges of the existing product so that the new product can fill in the cutout area and go slightly onto the existing.
- C. Clean area with water.
- D. Test for adhesion first, before completing job. Then apply the product to the affected area.

### 3.8 MAINTENANCE

- A. Most general neutral pH floor cleaners have been tested and will work well. We recommend Soy-It Degreaser Concentrate.
- B. **DO NOT USE BLEACH, BLEACH PRODUCTS OR CAUSTICS.**
- C. For best results on the Eco-Tuff Rubberized Non Skid textured coating, use a stiff bristle deck brush to agitate cleaner on the surface. Rinse thoroughly to remove all residue. All others use a wet/dry microfiber mop.
- D. Surfaces can also be cleaned with the use of automatic scrubbers. These are machines which, in one pass, put down the washing solution, scrub the floor with a light pad, and vacuum up the dirty water. It should be pointed out that the pad pressure used in the scrubber must be light and need only be sufficient for the pad to make light contact with the floor.
- E. Heavy scrubbing will negatively affect the coated surface over time.

END OF SECTION