Tennant Eco-SDS™ – Static Dissipative Urethane Specification

PART 1 – GENERAL

1.01 RELATED WORK SPECIFIED ELSEWHERE

B. Cast-In-Place Concrete, Section 03300

B. Painting, Section 09900

1.02 QUALITY ASSURANCE

A. Acceptance Sample:
   1. A minimum one ft² (0.09 m²) acceptance sample of the specified flooring system shall be prepared by the manufacturer’s representative and submitted to the Owner prior to the bidding phase of the project. All bidders shall inspect the “acceptance sample” before submitting the bids. No contractor shall submit a bid that has not seen this sample.
   2. The installed flooring system shall duplicate the acceptance sample in thicknesses of each respective film layer, color, texture and degree of overall appearance and finish.

B. The finished floor coating shall be uniform in color, texture and appearance. All edges that terminate at walls, floor discontinuities and other embedded items shall be sharp, uniform and cosmetically acceptable with no thick or ragged edge. The Contractor shall work out an acceptable masking technique to ensure the acceptable finish of all edges.

C. Reference Standards:
   1. ACI 308 – Standard Practice for Curing Concrete
   2. ACI 302.1R-80 – Guide for Concrete Floor and Slab Construction

D. Contractor Prequalification Requirements:
   1. Each bidder for this project shall be a pre-qualified and “Approved Applicator” at the time of bid submittal with 5 years’ minimum experience.
   2. Each approved applicator shall have been pre-qualified in all phases of surface preparation and application of the specified floor coating system.

1.03 SUBMITTALS

A. Acceptance Sample: The acceptance sample shall be a one ft² (0.09 m²) sample of Tennant flooring system applied to hardboard or similar backing for rigidity and handling.

B. Manufacturer’s Literature: Descriptive data and specific recommendations for initiating, mixing, application and curing.

C. Manufacturer’s Material Safety Data Sheets (MSDS) for each respective product being used.

1.04 PRODUCT DELIVERY, STORAGE AND HANDLING

A. All materials shall be delivered in original manufacturer’s sealed containers with all pertinent labels intact and legible.

B. Store materials in protected areas at a temperature between 65°F (18°C) and 90°F (32°C).

C. Follow all manufacturer’s specific instructions and prudent safety practices for storage and handling.

1.05 JOB CONDITIONS

A. Materials should be stored indoors between 65°F (18°C) and 90°F (32°C).

B. Air and surface temperatures shall be in the range of 65°F (18°C) and 90°F (32°C) during the application and cure.

C. The relative humidity in the specific location of the application shall be less than 80% and the surface temperature shall be at least 5°F above the current, local dew point.

D. The surfaces to be coated shall have been prepared as specified in Section 3.02 “Surface Preparation”.

E. Protect all adjacent surfaces not to be coated with masking and covers.

PART II – PRODUCTS

2.01

A. Tennant Company, 701 N. Lilac Drive, Golden Valley, MN 55422 (800) 553-8033.

Distributed by Tennant Company, 701 N. Lilac Drive, Golden Valley, MN 55422 (800) 553-8033.
2.02 APPROVED MATERIALS
A. Primer / Build Coat: Tennant Eco-MPE™ – Multi-Purpose Epoxy
B. Topcoat: Tennant Eco-SDS – Static Dissipative Urethane - Satin

2.03 MATERIAL PREPARATION
A. Mix all material in strict accordance with the manufacturer’s specific instructions and procedures for the respective material being used.
B. Pot life and cure times are very short; mix only enough product to satisfy immediate application requirements.

PART III – EXECUTION
3.01 PRE WORK INSPECTION
A. Examine all surfaces to be coated with these materials and report any conditions that adversely affect the appearance or performance of the coating systems and which cannot be put into acceptable condition by the preparatory work specified in Paragraph 3.02.
B. Do not proceed with surface preparation and application until the surface is acceptable or authorization to proceed is given by the Architect or Engineer.
C. Ensure that floor drains, proximate equipment and any other items sensitive to dust and contamination are properly and adequately masked and protected.
D. For slabs on grade to be treated, Calcium Chloride tests will be run for every 1,000 ft² (92.9 m²) prior to installation.

3.02 SURFACE PREPARATION
A. General:
1. Detergent scrub and rinse with clean water to remove surface dirt, grease, oil and contaminants.
B. One of the following preparation methods may be used:
2. EasyPrep™: With 100 grit concrete tool, coating system must be <15 mils. With 25/35 grit concrete tool, coating system must be 10-25 mils.
3. Diamond Grinding: Coating system thickness varies with the type of diamond used. Sweep and vacuum to remove fine dust.
4. Steel Shot Blast: Coating system must be >16 mils. Use magnetic broom to remove excess shot, sweep to remove large debris and vacuum to remove fine dust.
5. Scarify: Coating system must be >25 mils. Sweep to remove large debris and vacuum to remove fine dust.

3.03 APPLICATION
A. Floor
6. This application shall consist of applying the Primer / Build Coat, allowing time for cure and then applying the Topcoat in the sequence and film thicknesses as specified herein below and in Paragraph 3.06.
7. Open only containers of components to be used in each specific application. Refer to manufacturer’s data sheets for pot life/temperature relationship to determine size of batches to mix.
8. Primer: Immediately pour all of the mixed material onto the floor in a single bead. Push the flat squeegee at an even speed with sufficient down pressure to apply the thinnest coat. Start the second and remaining passes by pushing material parallel to the first stroke. Hold the bead of material near the center of the bar. NOTE: Eco-MPE applied thin may “bridge” holes and cracks momentarily before soaking in--make sure the previously squeegeed area is overlapped (halfway). NOTE: The use of spiked shoes will allow freedom of movement on the wet floor.
To reduce outgassing bubbles, it is best to wait until the primer has set up enough to walk on before applying a build coat of Eco-MPE. The primer does not need to be sanded if coated within 24 hours at floor temperatures 65°F-90°F (18°C-32°C).
If primer is not coated within 24 hours, it must be sanded with 60 grit paper. We recommend thorough sanding with a swing-type buffer so that multiple scratch marks cause an obvious gloss loss on all areas (depressions will remain shiny), and the floor is uniformly dulled. The ability to see individual scratch marks is an indication that sanding is not adequate. Scrub with detergent and rinse with clean water before coating.
9. **Build Coat**: Immediately pour all of the mixed material onto the floor in a single bead. Push the flat or 1/16” (1.60 mm) notched squeegee at an even speed with down pressure to spread the material. Start the second and remaining passes by pushing material parallel to the first stroke. Hold the bead of material near the center of the bar and push at an even speed with slight down pressure. **NOTE:** *The use of spiked shoes will allow freedom of movement on the wet floor.* **CAUTION:** *The surface will be slippery.* Backroll the material with a 3/8” (10 mm) nap roller for a smooth uniformed appearance. Backrolling is required to remove the puddles and squeegee lap marks in order to obtain uniform texture and a consistent mil thickness.

If Eco-MPE is topcoated with Eco-SDS Satin at floor temperatures of 65-90°F (18-32°C), it does not need to be sanded if applied within 24 hours. **NOTE:** *This is a Tennant solution only; DO NOT try this with competitive epoxies.* Build coat must be sanded if applying Eco-SDS Satin after 24 hours. Use 100 grit paper/screens. The use of more aggressive paper will introduce deep grooves that will not be covered by a single, thin coat of urethane. We recommend thorough sanding with a swing-type buffer so that multiple scratch marks cause an obvious gloss loss on all areas (depressions will remain shiny), and the floor is uniformly dulled. The ability to see individual scratch marks is an indication that sanding is not adequate. Scrub with detergent and rinse with clean water before coating and tack rag to remove fine dust.

10. **Topcoat**: Premix Part A using a Jiffy® Mixer Blade with slow speed drill. **POTLIFE:** *Mix only enough material which can be used within 45 minutes.* **NOTE:** *Once opened, this material cannot be resealed for later use.* **COLORS:** Premix Tennant Colorant before adding to Part A to ensure uniform color. Add colorant to Part A and mix using a Jiffy® mixer blade and slow speed drill. For colorant options, refer to the GENERAL PRODUCT INFORMATION, OPTIONS section found on page 3 of the system guide. Continue to mix and add Part B. Pour mixed parts A/B/colorant into Part C while mixing. **NOTE:** *The Part C is not blended—DO NOT SPLIT MIX OR PRODUCT MAY NOT MEET PERFORMANCE SPECIFICATIONS.* Mix for 3 minutes using a Jiffy® mixer blade and slow speed drill. Move the blade up and down and the sides of the pail and across the bottom to ensure contents are thoroughly mixed so no dry filler remains. Pour into application tray.

11. Apply Eco-SDS Satin at the rate of 550 ft²/gallon (51.1 m²/3.78 L) with a mohair roller. For proper appearance and development of physical properties, it is crucial that material is not applied above or below this rate. Dip the roller in the coating and lightly roll out excess in the application tray. Apply two 8-10 foot (2.4-3.0 meters) long paths on the concrete, making one stroke left to right and one right to left. Rewet the roller and apply two more paths adjacent to the first pair. Rewet roller and apply a third pair adjacent to the second. Spread the material evenly with V-shaped cross passes. Make sure the floor has just enough coating to cover evenly. Excess material could cause the floor to blister, especially in high humidity. Insufficient material will cause the floor to look non-uniform. Level the area with straight passes that cross the initial material paths. These final strokes will reduce roller marks. If the appearance is not satisfactory, reroll the area. This product has similar work time as Eco-HTS 100. Work it until you are satisfied with the look. Remix the material in the tray occasionally (with the roller) to prevent settling of the Part C (filler). **NOTE:** *This product cannot be finish rolled by a separate individual. Late finish rolling moves the conductive particles out of alignment and the system will not have the specified electrical properties.*

12. Allow coating to dry 24 hours at 75°F (24°C), 50% relative humidity before opening to light traffic. Allow more time at low temperatures, low humidity or for heavier traffic. Full coating properties take 14 days to develop.

3.04 **INSPECTION**

A. Request acceptance of the Primer / Build Coat before application of the Topcoat commences.

B. All work that is not acceptable to the Architect, Engineer or Owner must be corrected before consideration of final acceptance.

3.05 **CLEAN-UP**

A. Remove any material spatters and other material that is not where it should be. Remove masking and covers, taking care not to contaminate surrounding areas.

B. Repair any damage that should arise from either the application effort or from the clean-up effort.

C. Dispose of all excess material, packaging and other waste in accordance with federal, state and local regulations.
3.06 COATING SCHEDULE

A. **Primer / Buildcoat**: Tennant Eco-MPE – Multi-Purpose Epoxy.
   A two component, 100% solids epoxy applied at 3 mils (0.08 mm) for priming or up to 30 mils (0.76 mm) as a build coat.
   - **Primer**: A gallon (3.78 litres) will cover: 535 ft² (49.7 m²) @ 3 mils (0.08 mm), 321 ft² (29.8 m²) @ 5 mils (0.13 mm) wet/dry film.
   - **Build Coat**: A gallon (3.78 litres) will cover: 201 ft² (18.7 m²) @ 8 mils (0.20 mm), 160 ft² (14.9 m²) @ 10 mils (0.25 mm) wet/dry film.

B. **Topcoat**: Tennant Eco-SDS – Static Dissipative Urethane - Satin.
   A three-component, static dissipative urethane that has a satin appearance. A gallon (3.78 litres) will cover 550 ft² (51.1 m²). DFT of 2.7 mils (0.07 mm) per coat.

**Specifier Notes**: This product selection guide is written according to the Construction Specifications Institute (CSI) format, including Master Format, Section Format and Page Format, contained in the CSI Manual of Practice.

The section must be carefully reviewed and edited by the Architect to meet the requirements of the project and local building code. Coordinate this section with other specification sections and the drawings.

Delete all “Specifier Notes” when editing this section.

**Specifier Notes**: This section covers Tennant’s high-performance coating systems for commercial/industrial facilities.

This specification is only a guide listing various coating system options for various environments and should not be used as a final specification. Additional coating systems not listed in this specification are available, and may be more appropriate for your coating application. To finalize this specification, please contact [www.tennantfloorcoatings.com](http://www.tennantfloorcoatings.com).

Many coatings contain organic solvents. Consult Tennant Company for compliance to local VOC regulations.