

# Tnemec Seamless Mechanical Room Flooring Specification

## PART I – GENERAL

### 1.01 RELATED WORK SPECIFIED ELSEWHERE

- A. Cast-In-Place Concrete, Section 03300
- B. Painting, Section 09900

### 1.02 QUALITY ASSURANCE

- A. Acceptance Sample:
  - 1. A minimum one-foot square 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 their 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
  - 3. United States Department of Agriculture Acceptance
- 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-foot square sample of Tnemec 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 Safety Data Sheets (SDS) 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 60°F and 90°F.
- C. Follow all manufacturer's specific instructions and prudent safety practices for storage and handling.

### 1.05 JOB CONDITIONS

- A. The material, air and surface temperatures shall be in the range of 60°F to 85°F during application and cure.
- B. The relative humidity in the specific location of the application shall be less than 85% and the surface temperature shall be at least 5°F above the dew point.
- C. The surfaces to be coated shall have been prepared as specified in Section 3.02 "Surface Preparation".
- D. Protect all adjacent surfaces not to be coated with masking and covers.

## PART II – PRODUCTS

### 2.01 ACCEPTABLE MANUFACTURERS

- A. Tnemec Company Inc., 123 W. 23<sup>rd</sup> Ave, N. Kansas City, MO 64116; (800) 863-6321. Distributed by Righter Group, Inc. 187 Ballardvale St., Suite A190, Wilmington, MA 01887; (800) 533-3003.

### 2.02 APPROVED MATERIALS

- A. Tnemec Series 206 Sub-Flex EP Epoxy Flooring System:
  1. Saturating Prime Coat: Tnemec Series 201 Epoxoprime 100% Solids Epoxy Primer/Sealer.
  2. Intermediate Coat: Tnemec Series 206 Sub-Flex EF100% Solids Epoxy applied at 40-60 mil dft.
  3. Topcoat: Tnemec Series 297 Enviro-Glaze water borne urethane applied at 2.0-3.0 mils dft.

### 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 short; mix only enough product to 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.

### 3.02 SURFACE PREPARATION

- A. General:
  1. Initially, dislodge dirt, mortar spatter and other dry surface accumulations and contamination by scraping, brushing, sweeping, vacuuming or compressed air blow-down.
  2. Surfaces that are heavily contaminated with petroleum or other process products shall be cleaned with the appropriate degreaser, detergent or other effective cleaner/surfactant followed by thoroughly rinsing with fresh water to remove the accumulation prior to mechanical cleaning efforts. Mechanical cleaning will not remove such deposits but will only drive them deeper.
  3. All concrete floor surfaces shall be visibly dry, especially in cracks and other deep surface discontinuities, prior to commencing mechanical cleaning and preparation.
- B. Mechanical Surface Preparation and Cleaning:
  1. All accessible concrete floor surfaces shall be mechanically cleaned using a "Blast-Trac" method or approved equivalent. All surface and embedded accumulations of paint, toppings, hardened concrete layers, laitance, power trowel finishes and other similar surface characteristics shall be removed leaving a bare concrete surface having a minimum profile of 30 mils and exposing the upper facades of concrete aggregate. (Reference SSPC-SP13 / NACE 6, ICRI CSP 3-5)
  2. Floor areas that are inaccessible to the cleaning machine shall be mechanically abraded to the specified degree of cleanliness, soundness and profile using vertical disc scarifiers, starwheel scarifiers, grinders, needle guns or other suitable effective equipment.
  3. Cracks in the floor 3/16" and wider, shall be routed out to a minimum 1/2" deep V-groove of sound concrete and filled with materials recommended by the manufacturer. Other significant surface discontinuities such as holes, pits, depressions and exposed aggregate areas shall be filled with similar materials.
  4. Allow the surface to dry or force dry with heat and circulating air to ensure that all surface, especially discontinuities, are visibly dry.
  5. All concrete floor terminations and leading edges shall be saw-cut and chiseled down to 1/4- 1/2" as to avoid feathered edge terminations. This includes drains, construction & expansion joints and all leading edges of concrete floor where they meet dissimilar materials.

### 3.03 APPLICATION

#### A. Floor

1. This application shall consist of applying the Primer/Intermediate/Sealer, allowing time for cure, and then applying the topcoats in the sequence and film thicknesses as specified herein below and in Paragraph 3.06.
2. Open only the 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.
3. Pour the mix onto the floor surface, flat squeegee and backroll to form a uniform, continuous film, ensuring that all crevices, cracks and other surface discontinuities have been saturated and coated.
4. Allow for the Primer/Sealer to cure.
5. Pour intermediate resin onto floor, spread with notched squeegee and backroll using porcupine roller or loop roller.
6. After full cure, apply topcoat.

### 3.04 INSPECTION

- A. Request acceptance of the Primer/Intermediate coats 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.

### 3.06 COATING SCHEDULE-FLOOR AND COVE SYSTEM

- A. Primer/Sealer Coat: Tnemec Series 201 Epoxoprime 100% Solids Epoxy primer/sealer saturation at 150-200 sq. ft per gallon. DFT of 8 mils.
- B. Intermediate Coat: Tnemec Series 206 Sub-Flex EP 100% Solids Epoxy at 40-60 mils.
- C. Topcoat: Tnemec Series 297 Enviro-Glaze at 300-350 sq. ft. per gallon. DFT of 2-3 mils.

**Temporary Protection** for interior flooring subjected to high traffic and heavy rolling loads such as scissor lifts and high reach equipment. Potential surfaces could include: polished concrete, terrazzo, concrete, stone, marble, tile, carpeting, vinyl tile and other finished floors. Shall meet LEED v4 and be FR Rated per NFPA- 701 and ASTM E648.

1. ENTRY POINT PROPLEXFR HD1200, lightweight 6 lb. ridged Polypropylene sheets for interior use, 4 mm board at 1200 grams/m<sup>2</sup>. Material shall be waterproof, non-warping when wet, light weight, and may be reused multiple times before recycling.

END OF SECTION

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 Tnemec high-performance coating systems for commercial 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.rightergroup.com](http://www.rightergroup.com)

Many coatings contain organic solvents. Consult Righter Group for compliance to local VOC regulations.

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