

# Tnemec Storm Water Detention Tank Specification

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- A. Products and Manufacturers: Provide one of the following:
  - 1. Tnemec Company, Inc. Kansas City, MO. 800-863-6321 Or equal.
- B. Products: Provide the following Containment Lining system:
  - 1. Epoxy Primer, filler, surfacer to surface prepared concrete substrate and fill bugholes and eliminate outgassing:
    - a. Tnemec Series 218 MortarClad, to serve as primer, filler, surfacer on walls and floors at 1/16" average dft. Series 217 MortarCrete for deep holes and spalls from 1/4" to 3" deep. Also, to fill at pipe penetrations in walls. Tnemec Series 215 Surfacing Epoxy for overhead patching if necessary, all by Tnemec Company, Inc. Or equal.
  - 2. Tnemec Series 262 Elasto-Shield Modified Polyurethane lining on walls and floors: Spray in 1 continuous coat or Brush /Roller apply polyurethane 2-3-coats as necessary to achieve total dft 50-60 mils. **Use Series 264 Elasto-Shield for potable water applications**
  - 3. Ceilings: Tnemec Series 22 Epoxoline 2 coats (Total dft 24 mils). Tnemec Series 22 Epoxoline is NSF approved for potable water.

## PART 3 - EXECUTION

### 3.1 INSPECTION

- A. Examine the areas and conditions where lining is to be installed and correct any conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions have been corrected by The Contractor in a manner acceptable to the Architect.

### 3.2 SUBSTRATE PREPARATION (Concrete)

- A. Allow concrete to cure approx. 28 days. Abrasive blast concrete to open up air holes and provide a texture equivalent to ICRI- CSP 4-5. Where open air abrasive blasting is not allowed, use 3000 psi pressure washer with injected or Black Beauty aggregate. Or use hand and power tools as necessary including electric bush hammers, rotary Bush hammers or diamond grinding tools to achieve a CSP 4-5.

**NOTE: Purpose of Prep is to remove all laitance, open all air holes and roughen surface.**

- B. If there are honeycombs or deep voids noticed after pulling forms, these voids should be filled, with Tnemec Series 217 MortarCrete after the surface prep described above. Series 217 also to be used to fill large gaps between OD of pipe penetrations and sleeves. Fill with Tnemec Series 215 Surfacing Epoxy on underside of ceiling as necessary.

### 3.3 SUBSTRATE PREPARATION (Steel, Ductile Iron)

- A. Prepare steel and ductile iron, such as plates, pipe sleeves or pipe by abrasive blasting to SP-10 Near White metal with 2-3 mil anchor pattern. If abrasive blasting is not allowed, Power Tool Clean Steel to SP-11 to remove all scale and rust. Anchor pattern should be 2-3 mils dft.
- B. Prime all steel and ductile iron with Tnemec Series 22 Epoxoline at 8-12 mils dft prior to application of Tnemec Series 262 or 264. If 262 or 264 are not required, use a 2<sup>nd</sup> coat of 22 at 8-12 mils dft

### 3.4 INSTALLATION

- A. Primer/Surfacer for Walls and Floor: Tnemec Series 218 MortarClad, modified water-based epoxy cement at approx., 1/16" to 1/8" max. The purpose of the Series 218 is to serve as a primer to adhere to the prepared concrete, prevent outgassing of air from the concrete, fill minor air holes, provide small cove at wall to floor transitions, wall to wall transitions and provide an overall smooth surface for application of the flexible waterproofing coating. On incidental steel and ductile iron use Tnemec Series 22 Epoxoline at 8-12 mils dft.

- B. Waterproofing for Walls and Floor: Tnemec Series 262 Elasto-Shield at 50-60 mils dft. 262 can be applied by special spray equipment on walls in continuous passes over several hours, building up to 50-60 mils, OR in 2-3 coats approx 2-3 hours apart by roller. 262 is applied to floor using squeegee in 1 coat.
- C. Ceiling: 1st Coat: 1 coat Tnemec Series 22 Epoxoline, amine cured, 100% solids epoxy at 12-15 mils dft applied by roller or spray.
  - 1. Touch Up: After cure of the 1<sup>st</sup> coat of Tnemec Series 22 Epoxoline, which is approx. 16 to 24 hours, inspect surface of the Series 22 for any discontinuities. After application of the Series 22, which is normally supplied in an off-white color, minor holes/pits are usually easy to detect. At this point, fill any minor pits, or discontinuities with Tnemec Series 215 Surfacing Epoxy, 100% solids epoxy filler/surfacer with 210C aggregate as necessary.
  - 2. 2<sup>nd</sup> Coat: 1 coat Series 22, amine cured, 100% solids epoxy at 12-15 mils dft applied by roller or spray.

### 3.5. APPLICATION REQUIREMENTS

- A. Epoxy coatings need dry, warm, pollution-free environments in order to cure properly. Urethane coatings require dry environments.
- B. Temperatures inside the tanks should be at least 55°F, if not warmer. In addition to heat, dehumidification is very important to prevent condensation and a condition called “amine blush” which is prevalent in high solids epoxy coatings, especially 100% solid epoxies.

### 3.6 APPURTENANCES

- A. Threaded fasteners for ladders should be installed in concrete walls prior to application of the coating system. Fasteners should be embedded in epoxy grout. After application of coating system, ladders should be installed with rubber pads on Back of attachment angles so that coating is not damaged. Rubber pads should also be put under bottom of ladder if it rests on the floor of the tank.
- B. Pipe sleeves should be installed prior to application of the coating system. Any exposed steel on sleeves should be coated with 2 coats of Tnemec Series 22 Epoxoline. The annular region between sleeves and OD of pipe should be waterproofed using a Link Seal system. As a backup, Tnemec Series 262 Elasto-Shield and/or Tnemec Series 265 Elasto-Shield TG caulk can be used to seal the gap between pipe and sleeve, depending on size of annulus. Backer rod or cementitious grout may be required to fill the gap prior to coating.

### 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 Coatings 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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July 2018