

SECTION 09 96 00 - HIGH-PERFORMANCE COATINGS

PART 1 - GENERAL

1.1 SYSTEM REQUIREMENTS

- A. Design Requirements:
 - 1. Provide high-performance coatings on all exterior surfaces and where durable finishes are required on interior surfaces.
 - 2. Provide fiber-reinforced epoxy paint at vivariums.

1.2 SUBMITTALS:

- A. MSDS: Contractor to provide Material Safety Data Sheets (MSDS) for all coating to the University Project Manager prior to application.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Basis-of-Design Product: Subject to compliance with requirements, provide listed products by Tnemec or a comparable product by one of the following:
 - 1. Carboline, an RPM company.
 - 2. PPG Architectural Finishes, Inc.

2.2 BLOCK FILLERS

- A. Block Filler, Waterborne Cementitious Acrylic:
 - 1. Basis-of-Design Product: Tnemec; Series 130 – Envirofill.

2.3 METAL FILLER/SURFACER

- A. Filler/Surfacer, Modified Amine Epoxy Filler.
 - 1. Basis-of-Design Product: Tnemec; Series 63-1500 – Filler and Surfacer.

2.4 INTERIOR PRIMERS/SEALERS

- A. Primer Sealer, Modified Polyamine Epoxy, Interior:
 - 1. Basis-of-Design Product: Tnemec; Series 201– Epoxoprime.

2.5 METAL PRIMERS

- A. Primer, Zinc-Rich, Urethane:
 - 1. Basis-of-Design Product: Tnemec; Series 94-H20 – Hydro-Zinc.
- B. Primer, Epoxy:
 - 1. Basis-of-Design Product: Tnemec; Series 27WB – F.C. Typoxy.

2.6 EPOXY COATINGS

- A. Waterborne Epoxy, Semi-gloss:
 - 1. Basis-of-Design Product: Tnemec; Series 287 – Enviro-Pox.
- B. Polyamidoamine Epoxy, Semi-gloss:

1. Basis-of-Design Product: Tnemec; Series L69 – Hi-Build Epoxoline II.

C. Modified Polyamine 100 Percent Solids Epoxy, Gloss:

1. Basis-of-Design Product: Tnemec; Series 280 – Tneme-Glaze.

2.7 POLYURETHANE COATINGS

A. Aliphatic Acrylic Polyurethane, Two-Component, Semi-Gloss:

1. Basis-of-Design Product: Tnemec; Series 750 – Endura-Shield

B. Ceramic-Modified, Waterborne, Aliphatic Polyurethane, Two-Component, Gloss.

1. Basis-of-Design Product: Tnemec; Series 297 – Enviro-Glaze.

2.8 ELASTOMERIC COATINGS

A. Acrylate Elastomer, Matte:

1. Basis-of-Design Product: Tnemec; Series 156 – Enviro-Crete.

2.9 FIBER REINFORCED EPOXY WALL COATING

A. Fiber reinforced epoxy: Two-part, spray-applied, fiber reinforced, 100 percent solids, accelerated aliphatic amine cured epoxy system with non-leaching antimicrobial additives.

1. Basis-of-Design Manufacturer: Prim Coat Coating Systems.

PART 3 - EXECUTION

3.1 EXTERIOR HIGH-PERFORMANCE COATING SCHEDULE

A. Concrete Substrates, Vertical Surfaces:

1. Elastomeric System:
 - a. Surface Preparation: SSPC-SP 13/NACE 6. Clean and dry.
 - b. Prime Coat: To match topcoat; DFT 4.0 to 8.0 mils.
 - c. Topcoat: Acrylate elastomer, matte; DFT 4.0 to 8.0 mils. Total DFT: 8.0 to 16.0 mils.

B. CMU Substrates:

1. Elastomeric System: At all CMU locations schedule to receive paint.
 - a. Surface Preparation: Clean and dry.
 - b. Block Filler: Block filler, waterborne cementitious acrylic.
 - c. Intermediate Coat: Acrylate elastomer, matte; DFT 4.0 to 8.0 mils.
 - d. Topcoat: Acrylate elastomer, matte; DFT 4.0 to 8.0 mils. Total DFT: 8.0 to 16.0 mils.

C. Steel Substrates:

1. Pigmented Polyurethane over Zinc-Rich Primer System: At all exterior exposed structural steel and miscellaneous metals unless noted otherwise.
 - a. Surface Preparation: SSPC-SP 6/NACE 3.
 - b. Prime Coat: Primer, zinc-rich, urethane; DFT 2.5 to 3.5 mils.
 - c. Intermediate Coat: Polyamidoamine epoxy; DFT 2.0 to 4.0 mils.
 - d. Topcoat: Aliphatic, polyurethane, two-component, pigmented, semi-gloss; DFT 3.0 to 4.0 mils. Total DFT: 7.5 to 11.5 mils.

D. Galvanized-Metal Substrates:

1. Pigmented Polyurethane System: At all exterior exposed galvanized metal.
 - a. Surface Preparation: Abrasive blast or chemically cleaned and etched.
 - b. Prime Coat: Primer not required; intermediate coat is self-priming.
 - c. Intermediate Coat: Polyamidoamine epoxy; DFT 2.0 to 4.0 mils.

- d. Topcoat: Aliphatic, polyurethane, two-component, pigmented, semi-gloss; DFT 3.0 to 4.0 mils.
- e. Total DFT: 5.0 to 8.0 mils.

3.2 INTERIOR HIGH-PERFORMANCE COATING SCHEDULE

A. Concrete Substrates, Vertical Surfaces:

1. Epoxy/Polyurethane System:

- a. Surface Preparation: SSPC-SP 13/NACE 6, clean and dry.
- b. Prime Coat: To match intermediate coat; DFT 2.0 to 3.0 mils.
- c. Intermediate Coat: Waterborne epoxy, semi-gloss; DFT 2.0 to 3.0 mils. Topcoat: Ceramic-modified, waterborne, two-component, aliphatic polyurethane, gloss; DFT 2.0 to 3.0 mils.
- d. Total DFT: 6.0 to 9.0 mils.

B. CMU Substrates:

1. Epoxy/Polyurethane System: At all CMU locations scheduled to receive paint unless otherwise indicated.

- a. Surface Preparation: Clean and dry.
- b. Block Filler: Block filler, waterborne cementitious acrylic.
- c. Primer: To match intermediate coat; DFT 2.0 to 3.0 mils.
- d. Intermediate Coat: Waterborne epoxy, semi-gloss; DFT 2.0 to 3.0 mils.
- e. Topcoat: Ceramic-modified, waterborne, two-component, aliphatic polyurethane, gloss; DFT 2.0 to 3.0 mils.
- f. Total DFT: 6.0 to 9.0 mils.

2. 100 Percent Solids Epoxy System: At all CMU locations in areas subject to continuous wetting, for example, shower stalls.

- a. Surface Preparation: Clean and dry.
- b. Block Filler: Block filler, waterborne cementitious acrylic.
- c. Primer: To match topcoat; DFT 6.0 to 8.0 mils.
- d. Topcoat: Modified polyamine, 100 percent solids epoxy, gloss; DFT 6.0 to 8.0 mils.
- e. Total DFT: 12.0 to 16.0 mils.

C. Steel Substrates:

1. Pigmented Polyurethane System: At all exposed structural steel, miscellaneous metals.

- a. Surface Preparation: SSPC-SP 6/NACE 3.
- b. Prime Coat: To match intermediate coat; DFT 2.0 to 3.0 mils.
- c. Intermediate Coat: Polyamidoamine epoxy; DFT 2.0 to 3.0 mils.
- d. Topcoat: Aliphatic, polyurethane, two-component, pigmented, semi-gloss; DFT 3.0 to 4.0 mils.
- e. Total DFT: 7.0 to 10.0 mils.

2. Pigmented Polyurethane System over Manufacturer's Standard Primer: At all interior painted hollow metal doors and frames, handrails, guardrails, stairs, ladders and ship's ladders.

- a. Prime Coat: Manufacturer's standard universal primer.
- b. Intermediate Coat: Polyamidoamine epoxy; DFT 2.0 to 3.0 mils.
- c. Topcoat: Aliphatic, polyurethane, two-component, pigmented, semi-gloss; DFT 3.0 to 4.0 mils.

D. Galvanized-Metal Substrates:

1. Pigmented Polyurethane System: At all interior exposed galvanized metal.

- a. Surface Preparation: Abrasive blast or chemically cleaned and etched.
- b. Prime Coat: Primer not required; intermediate coat is self-priming.
- c. Intermediate Coat: Polyamidoamine epoxy; DFT 2.0 to 4.0 mils.
- d. Topcoat: Aliphatic, polyurethane, two-component, pigmented, semi-gloss; DFT 3.0 to 4.0 mils.
- e. Total DFT: 5.0 to 8.0 DFT.

- E. Gypsum Board Substrates:
 - 1. Epoxy/Polyurethane System: At all gypsum board surfaces scheduled to receive high-performance coatings.
 - a. Surface Preparation: Level 5 finish.
 - b. Prime Coat: Primer sealer, modified polyamine epoxy; DFT 4.0 to 6.0 mils.
 - c. Intermediate Coat: Waterborne epoxy, semi-gloss; DFT 2.0 to 3.0 mils.
 - d. Topcoat: Ceramic-modified, waterborne, two-component, aliphatic polyurethane, gloss; DFT 2.0 to 3.0 mils.
 - e. Total DFT: 8.0 to 12.0 mils.

END OF SECTION 09 96 00