

DIVISION 9

FINISHES



SECTION 09900**FIELD PAINTING****PART 1 GENERAL****1.01 SUMMARY**

- A. This Section includes Field Painting of all work indicated on the Contract Drawings and specified herein.

1.02 REFERENCES

- A. Materials and installation shall be in accordance with the latest revisions of the following codes, standards and specifications, except where more stringent requirements have been specified herein:

1. American Society for Testing and Materials (ASTM)
 - a. C2246 - Freeze-Thaw Test
 - b. D2247 - Humidity Test
 - c. B117 - Salt Spray Test
 - d. E84 - Surface Burning Characteristics Test
 - e. D16 - Definitions of Terms Relating to Paint, Varnish, Lacquer, and Related Products
 - f. D2805 - Contrast Ratio
 - g. D1308 - Stain Resistance
 - h. D4060 - Abrasion
 - i. D4541 - Adhesion
 - j. D522 - Conical Mandrel Elongation
2. The Society for Protective Coatings
 - a. Steel Structures Painting Manual, Volume 2, Systems and Specifications

1.03 QUALITY ASSURANCE

- A. All materials shall remain in their original containers with manufacturer's label intact. Manufacturer's name, product name and number, and color and batch number shall appear on the label.
- B. Manufacturer's representative shall be available to advise applicator on proper application techniques and procedures.

1.04 SUBMITTALS

- A. In addition to those submittals identified in the General Provisions, the following items shall be submitted:
1. Manufacturer's descriptive data fully describing each product to include solids by volume and V.O.C. ratings.

2. Manufacturer's certification that all materials furnished are in compliance with the applicable requirements of the referenced standards and this specification.
3. Manufacturer's application instructions.
4. Color charts illustrating range of colors [and textures] available for selection.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. The following manufacturers are named to establish a standard of quality necessary for the Project:
 1. International Protective Coatings
 2. Tnemec Company
 3. The Sherwin-Williams Company
 4. Or equal

2.02 GENERAL

- A. Coatings shall be applied per manufacturer's recommendations.
- B. All coordination for compatibility between shop primers, shop finish coats, field coats, and possible tie coats, shall be the responsibility of the Contractor.
- C. All field surfaces prepared for field painting will be reviewed by the Engineer before coating application begins.
- D. All coatings specified herein are in addition to shop coatings specified elsewhere.
- E. Apply coatings with a brush or a roller. Spray paint only where scheduled or with Engineer's review.
- F. Clean damaged shop coatings and retouch before any successive field painting is performed.

2.03 EXTRA STOCK

- A. [1] one gallon of unopened paint, in each type and color specified, shall be furnished to the Owner. Multi-component paints shall be supplied as a complete kit.

PART 3 EXECUTION

3.01 PRE-APPLICATION

- A. Examine surfaces to be coated and report any conditions that would adversely affect the appearance or performance of the coating systems, and which cannot be put into an acceptable condition by the preparatory work specified.
- B. The Contractor shall insure that moisture content of surfaces is within manufacturer's recommendations.

3.02 SURFACE PREPARATION

- A. General

1. Remove dust and loose material by dusting, sweeping, vacuuming, or blowing with high-pressure air.
2. Remove oil, wax, and grease in accordance with the manufacturer's recommendations.
3. Verify with Owner's representative that all surfaces to be coated are dry, clean, and free from dirt, dust, wax, grease, or other contaminants.
4. Remove electrical plates, hardware, light fixtures, trim, and fittings prior to preparing surfaces.
5. Shellac and/or seal marks which may bleed through surface finishes that could not be removed.

B. Metals

1. Prepare all non-primed metal surfaces in accordance with the Steel Structures Painting Manual.
 - a. Sandblasting shall conform to The Society for Protective Coatings Surface Preparations Specifications for *[near-white blast cleaning (SSPC-SP 10)] *[commercial blast cleaning (SSPC-SP 6)].
 - b. Before blast cleaning begins, the Contractor shall prepare a sample which shall correspond to the photographic standards of SSPC.
 - c. Proportions of sand, grit, or shot shall be adjusted as necessary to produce a prepared surface equivalent to the reviewed sample.
 - d. Applications of protective coatings shall be within 8 hours after blast cleaning and prior to the formation of rust.
 - e. Surfaces showing any traces of rust shall be blasted again before application of protective coatings.
 - f. In areas where assemblies are to receive a sandblasted surface preparation, and portions of the assembly have been previously coated, all prior coatings shall be removed by blast cleaning to the extent necessary for proper adhesion of the specified coating.
2. Shop Primed Metals or Ferrous Metals
 - a. SSPC-SP3-Power Tool Clean field connections, welds, burned, and abraded areas to remove rust and contaminants; touch up with specified primer. Feather edges to make patches inconspicuous where exposed to view.
3. Ferrous Metal - Submerged Service
 - a. SSPC-SP10 - Near White Blast Clean
4. Ferrous Metal - Non-Submerged Service

- a. SSPC-SP6 - Commercial Blast Clean
- 5. Non-Ferrous Metal
 - a. SSPC-SP1 - Solvent Cleaning
- 6. Galvanized Metal
 - a. SSPC-SP1 - Solvent Cleaning with non hydrocarbon-containing etching solutions such as SW Clean 'n' Etch or equivalent.
 - b. SSPC-SP3 - Power Tool Clean, white rust; Care shall be taken not to damage or remove galvanizing.
- C. Concrete and Masonry
 - 1. Allow new concrete and masonry to cure [28] days.
 - 2. Patch holes and cracks in the concrete flush with the surface using a portland cement grout patching material or equivalent.
 - 3. Clean mortar joints
 - 4. Remove stains caused by weathering or corroding metals by cleaning with manufacturer's approved methods.
 - 5. Verify required acid/alkali balance and allowable moisture content of material.
 - 6. Abrasive Blast Cleaning: The surface shall be lightly abraded, in accordance with ASTM D4259, without entirely removing the surface or exposing the underlying aggregates. The cleaned surface shall have the uniform texture of 100 grit medium sandpaper.
 - 7. For concrete floors: Acid etch in accordance with ASTM D4260, abrade in accordance with paint manufacturers recommended procedures.
- D. Wood
 - 1. Wipe off dust and grit just prior to painting.
 - 2. Remove or seal all pitch or deposits with a sealer compatible with the finish coating system.
 - 3. Seal knots and sappy sections with a sealer compatible with the finish coating system.
 - 4. Exterior Wood
 - a. After prime coat has been applied, fill nail holes with [tinted] caulking compound suitable for an exterior application, and compatible with the coating system.
 - 5. Glue-Laminated Beams
 - a. Prior to finishing, wash surfaces as recommended by manufacturer.

- 6. Interior Wood
 - a. After primer has dried, fill nail holes and cracks with wood filler; sand between coats.
- 7. Smooth Siding and Finish Woodwork
 - a. Sand rough, irregular spots.
- E. Plaster
 - 1. Plaster must be cured and dry. Wash and neutralize high alkali surfaces.
- F. Gypsum Wall Board
 - 1. Verify surface is free of dust, and ready to receive primer.
- G. Impervious Surfaces
 - 1. Remove mildew and mold in accordance with the manufacturer's recommendation.

3.03 APPLICATION

- A. Mix and thin material in accordance with the manufacturer's printed instructions.
- B. Allow each coat to dry thoroughly before recoating.
- C. Vary color slightly to indicate each successive coating.
- D. Cut in edges clean and sharp where work joins other materials or colors.
- E. Make finish coats smooth, uniform in color, and free of brush marks, laps, runs, dry spray, overspray, and missed areas.
- F. Where clear finishes are required, tint fillers to match wood. Work fillers into the grain before set. Wipe excess from surface.
- G. Prime back surfaces of interior and exterior woodwork with primer paint.
- H. Prime back surfaces of interior woodwork scheduled to receive stain or varnish finish with gloss varnish reduced 25 percent with mineral spirits.

3.04 UNCOATED MATERIALS AND ITEMS

- A. Glazed wall finishes, special coatings, and floor finishes are specified elsewhere.
- B. Surfaces not requiring protective coatings:
 - 1. Brass, Aluminum, PVC, Bronze, Copper

3.05 SCHEDULE FOR PAINTING AND FINISHING

Legend

- (1) Brush or roller application and spray application on metal deck and bar joist ceiling may require two coats to achieve required mil thickness.
- (2) Actual film thickness will depend on porosity of surface.
- (3) Dry Film Thickness (D.F.T.).
- A. Steel-Structural, Tanks, Pipes and Equipment

1. Exterior, Non-Immersion

International

D.F.T. (3)

Surface Preparation: SSPC-SP6

1st Coat: Interseal 670HS-7808 (1)

2nd Coat: Interseal 670HS-7808 (1)

3rd Coat: Interthane 870HS-7808

3.0 - 5.0

4.0 - 6.0

3.0 - 4.0

10.0 -15.0

Tnemec

D.F.T. (3)

Surface Preparation: SSPC-SP6

1st Coat: 66-1121 HiBuild Epoxoline (1)

2nd Coat: 66-color HiBuild Epoxoline (1)

3rd Coat: 74/75-color Endura-Shield

3.0 - 5.0

4.0 - 6.0

2.0 - 3.0

9.0 -14.0

Sherwin Williams

D.F.T. (3)

Surface Preparation: SSPC-SP6

1st Coat: Macropoxy 646, B58 Series (1)

2nd Coat: Macropoxy 646, B58 Series (1)

3rd Coat: Acrolon 218HS, B65 Series

3.0 - 5.0

4.0 - 6.0

2.0 - 3.0

9.0 -14.0

2. Exterior, Non-Immersion

International

D.F.T. (3)

Surface Preparation: SSPC-SP6

1st Coat: Interseal 670HS-7808 (1)

2nd Coat: Interseal 670HS-7808 (1)

3rd Coat: Interseal 670HS-7808 (1)

3.0 - 5.0

4.0 - 6.0

4.0 - 6.0

11.0 -17.0

Tnemec

D.F.T. (3)

Surface Preparation: SSPC-SP6

1st Coat: 66-1211 Hi-Build Epoxoline (1)

2nd Coat: 66-color Hi-Build Epoxoline (1)

3rd Coat: 66-color Epoxoline (1)

3.0 - 5.0

4.0 - 6.0

4.0 - 6.0

11.0 -17.0

Sherwin Williams

D.F.T. (3)

Surface Preparation: SSPC-SP6

1st Coat: Macropoxy 646, B58 Series (1)

3.0 - 5.0

2nd Coat: Macropoxy 646, B58 Series (1)

4.0 - 6.0

3rd Coat: Macropoxy 646, B58 Series (1)

4.0 - 6.0

11.0 -17.0

3. Interior, Non-Immersion - Average Performance

<u>International</u>	<u>D.F.T.</u> (3)
Surface Preparation: SSPC-SP6	
1st Coat: Interseal 670HS-7808 (1)	3.0 - 5.0
2nd Coat: Interseal 670HS-7808 (1)	<u>4.0 - 6.0</u>
	7.0 -11.0
<u>Tnemec</u>	<u>D.F.T.</u> (3)
Surface Preparation: SSPC-SP6	
1st Coat: 66 Color Hi-Build Epoxoline (1)	3.0 - 5.0
2nd Coat: 66-color Hi-Build Epoxoline (1)	<u>4.0 - 6.0</u>
	7.0 -11.0
<u>Sherwin Williams</u>	<u>D.F.T.</u> (3)
Surface Preparation: SSPC-SP6	
1st Coat: Macropoxy 646, B58 Series (1)	3.0 - 5.0
2nd Coat: Macropoxy 646, B58 Series (1)	<u>4.0 - 6.0</u>
	7.0 -11.0

4. Immersion, Potable Water

<u>International</u>	<u>D.F.T.</u> (3)
Surface Preparation: SSPC-SP10	
1st Coat: Interline 850-7808 (1)	5.0 - 6.0
2nd Coat: Interline 850-7808 (1)	<u>5.0 - 6.0</u>
	10.0 -12.0
<u>Tnemec</u>	<u>D.F.T.</u> (3)
Surface Preparation: SSPC-SP10	
Roughen the surface before topcoating if the 139-1255 has been exposed exterior for 14 days or longer	
1st Coat: 139-1255 Pota-Pox II (1)	6.0 - 8.0
2nd Coat: 139-AA90 Pota-Pox II (1)	<u>6.0 - 8.0</u>
	12.0 -16.0
<u>Sherwin Williams</u>	<u>D.F.T.</u> (3)
Surface Preparation: SSPC-SP10	
1st Coat: Macropoxy 646 NSF (1)	5.0 - 6.0
2nd Coat: Macropoxy 646 NSF (1)	<u>5.0 - 6.0</u>
	10.0 -12.0

5. Immersion, Non-Potable Water

<u>International</u>	<u>D.F.T.</u> (3)
Surface Preparation: SSPC-SP10	
1st Coat: Interseal 670HS-7808 (1)	6.0 - 8.0
2nd Coat: Interseal 670HS-7808 (1)	<u>6.0 - 8.0</u> 12.0 -16.0
<u>Tnemec</u>	<u>D.F.T.</u> (3)
Surface Preparation: SSPC-SP10	
Roughen the surface before topcoating if the 104-1211 has been exposed exterior for 14 days or longer.	
1st Coat: 104-1211 H.S. Epoxy (1)	8.0 - 10.0
2nd Coat: 104-color H.S. Epoxy (1)	<u>8.0 - 10.0</u> 16.0 - 20.0
<u>Sherwin Williams</u>	<u>D.F.T.</u> (3)
Surface Preparation: SSPC-SP10	
1st Coat: Macropoxy 646, B58 Series (1)	5.0 - 6.0
2nd Coat: Macropoxy 646, B58 Series (1)	<u>5.0 - 6.0</u> 12.0 -16.0

6. High Temperature Surfaces Up To 800°F

<u>International</u>	<u>D.F.T.</u> (3)
Surface Preparation: SSPC-SP10	
1st Coat: Intertherm 50-7808	1.0 - 1.5
2nd Coat: Intertherm 50-7808	<u>1.0 - 1.5</u> 2.0 - 3.0
<u>Tnemec</u>	<u>D.F.T.</u> (3)
Surface Preparation: SSPC-SP10	
1st Coat: 39-1261 Silicone Aluminum	1.0 - 1.5
2nd Coat: 39-1261 Silicone Aluminum	<u>1.0 - 1.5</u> 2.0 - 3.0
<u>Sherwin Williams</u>	<u>D.F.T.</u> (3)
Surface Preparation: SSPC-SP10	
1st Coat: Kem Hi-Temp	1.0 - 1.5
2nd Coat: Kem Hi-Temp	<u>1.0 - 1.5</u> 2.0 - 3.0

7. Low Temperature Curing Applications - High Performance Below 40°F

<u>International</u>		<u>D.F.T. (3)</u>
Surface Preparation: SSPC-SP6		
1st Coat: Intergard 345-7808		3.0 - 5.0
2nd Coat: Intergard 345-7808		4.0 - 6.0
3rd Coat: Intergard 345-7808 (Interior)		4.0 - 6.0
3rd Coat: Interthane 870HS-7808		<u>3.0 - 4.0</u>
		11.0 -17.0
		or
		10.0 -15.0
 <u>Tnemec</u>		 <u>D.F.T. (3)</u>
Surface Preparation: SSPC-SP6		
1st Coat: 161-1211 Tneme-Fascure (1)		3.0 - 5.0
2nd Coat: 161-color Tneme-Fascure (1)		4.0 - 6.0
3rd Coat: 161-color Tneme-Fascure (1)	(interior)	4.0 - 6.0
or 3rd Coat: 74/75 End.-Shield (exterior)		
		<u>2.0 - 3.0</u>
		11.0 -17.0
		or
		9.0 -14.0
 <u>Sherwin Williams</u>		 <u>D.F.T. (3)</u>
Surface Preparation: SSPC-SP6		
1st Coat: Macropoxy 846, B58 Series (1)		3.0 - 5.0
2nd Coat: Macropoxy 846, B58 Series (1)		4.0 - 6.0
3rd Coat: Macropoxy 846, B58 Series (1)	(interior)	4.0 - 6.0
or 3rd Coat: Acrolon 218HS, B65 series (exterior)		
		<u>2.0 - 3.0</u>
		11.0 -17.0
		or
		9.0 -14.0

8. Low Temperature Curing Applications - Average Performance Below 40°F

<u>International</u>		<u>D.F.T (3)</u>
Surface Preparation: SSPC-SP6		
1st Coat: Intergard 345-7808		3.0 - 5.0
2nd Coat: Intergard 345-7808		<u>4.0 - 6.0</u>
		7.0 -11.0
 <u>Tnemec</u>		 <u>D.F.T. (3)</u>

Surface Preparation: SSPC-SP6	
1st Coat: 161-color Tneme-Fascure (1)	4.0 - 6.0
2nd Coat: 161-color Tneme-Fascure (1)	<u>4.0 - 6.0</u>
	8.0 - 11.0

Sherwin WilliamsD.F.T. (3)

Surface Preparation: SSPC-SP6	
1st Coat: Macropoxy 846, B58 Series (1)	3.0 - 6.0
2nd Coat: Macropoxy 846, B58 Series (1)	<u>4.0 - 6.0</u>
	7.0 - 11.0

InternationalD.F.T. (3)

Surface Preparation: SSPC-SP2	
1st Coat: Intergard 345-7808	4.0 - 6.0
2nd Coat: Intergard 345-7808	<u>4.0 - 6.0</u>
	8.0 - 12.0

TnemecD.F.T. (3)

Surface Preparation: SSPC-SP2	
1st Coat: 135-color Chembuild (1)	4.0 - 6.0
2nd Coat: 135-color Chembuild (1)	<u>4.0 - 6.0</u>
	8.0 - 12.0

Sherwin WilliamsD.F.T. (3)

Surface Preparation: SSPC-SP2	
1st Coat: Macropoxy 646, B58 Series (1)	4.0 - 6.0
2nd Coat: Macropoxy 646, B58 Series (1)	<u>4.0 - 6.0</u>
	8.0 - 12.0

B. Galvanized Steel, Non-Ferrous Metal, Pipe, Roof Deck and Miscellaneous Fabrications

1. Exterior, Non-Immersion

InternationalD.F.T. * (3)

Surface Preparation: SSPC-SP1	
1st Coat: Interseal 670HS-7808	4.0 - 6.0
2nd Coat: Interthane 870HS-7808	<u>3.0 - 4.0</u>
	7.0 - 10.0

TnemecD.F.T. (3)

Surface Preparation: SSPC-SP1	
1st Coat: 66-color Hi-Build Epoxoline (1)	4.0 - 6.0
2nd Coat: 74/75-color Endura-Shield	<u>2.0 - 3.0</u>
	6.0 - 9.0

Sherwin Williams D.F.T. (3)

Surface Preparation: SSPC-SP1

1st Coat: Macropoxy 646, B58 Series (1)

4.0 - 6.0

2nd Coat: Acrolon 218 HS, B65 Series

2.0 - 3.0

6.0 - 9.0

2. Interior, Non-Immersion

International D.F.T. (3)

Surface Preparation: SSPC-SP1

1st Coat: Interseal 670HS-7808 (1)

4.0 - 6.0

2nd Coat: Interseal 670HS-7808. (1)

4.0 - 6.0

8.0 -12.0

Tnemec

Surface Preparation: SSPC-SP1

D.F.T. (3)

1st Coat: 66-color Hi-Build Epoxoline (1)

2nd Coat: 66-color Hi-Build Epoxoline (1)

4.0 - 6.0

4.0 - 6.0

8.0 -12.0

Sherwin Williams D.F.T. (3)

Surface Preparation: SSPC-SP1

1st Coat: Macropoxy 646, B58 Series (1)

4.0 - 6.0

2nd Coat: Macropoxy 646, B58 Series (1)

4.0 - 6.0

8.0 -12.0

C. Concrete

1. Exterior, Below Grade

Note: Recommend surface preparation to compare with ICRI CSP 3 to 5

International D.F.T. (3)

Surface Preparation: clean and dry

1st Coat: Intertuf 708-7808

16.0 - 20.0

16.0 - 20.0

Tnemec D.F.T. (3)

Surface Preparation: Clean and dry.

1st Coat: 46H-413 Hi-Build Tneme-Tar (1)

16.0-20.0

16.0-20.0

Sherwin WilliamsD.F.T. (3)

Surface Preparation: Clean and dry.

1st Coat: Hi-Mil Sher-Tar (1)

16.0-20.0

16.0-20.0

2. Exterior, Above Grade

InternationalD.F.T. (3)

Surface Preparation: clean and dry

1st Coat: 898-7808 Pigmented Bonding Coat

2nd Coat: Porterflex 6000-7808

15.0

15.0

TnemecD.F.T. (3)

Surface Preparation: Clean and dry

1st Coat: 156-color Enviro-Crete TX

2nd Coat: 156-color Enviro-Crete TX

8.0- 9.0

8.0- 9.0

16.0-18.0

Sherwin WilliamsD.F.T. (3)

Surface Preparation: Clean and dry

1st Coat: Ultra-Crete

2nd Coat: Ultra-Crete

8.0- 9.0

8.0- 9.0

16.0-18.0

3. Immersion, Potable Water

InternationalD.F.T. (3)

Surface Preparation: Brush-Off Blast

1st Coat: Interline 850-7808

2nd Coat: Interline 850-7808

5.0 - 6.0

5.0 - 6.0

10.0 -12.0

TnemecD.F.T. (3)

Surface Preparation: Brush-Off Blast

Roughen the surface before topcoating if the 139-1255 has been exposed exterior for 14 days or longer.

1st Coat: 139-1255 Pota-Pox II (1)

2nd Coat: 139-AA90 Pota-Pox II (1)

4.0 - 6.0

8.0 -10.0

12.0 -16.0

Sherwin Williams

Surface Preparation: Abrasive Blast to achieve ICRI CSP 3 to 5

D.F.T. (3)

1st Coat: Macropoxy 646 NSF (1)
2nd Coat: Macropoxy 646 NSF (1)

4.0 - 6.0
4.0 - 6.0
8.0 - 12.0

4. Immersion, Non-Potable Water

<u>International</u>	<u>D.F.T.</u> (3)
Surface Preparation: Brush-Off Blast	
1st Coat: Interseal 670HS-7808	6.0 - 8.0
2nd Coat: Interseal 670HS-7808	<u>6.0 - 8.0</u> 12.0 -16.0
<u>Tnemec</u>	<u>D.F.T.</u> (3)
Surface Preparation: Brush-Off Blast	
Roughen the surface before topcoating if the 104-color has been exposed exterior for 14 days or longer	
1st Coat: 104-color H.S. Epoxy (1)	8.0-10.0
2nd Coat: 104-color H.S. Epoxy (1)	<u>8.0-10.0</u> 16.0-20.0
<u>Sherwin Williams</u>	<u>D.F.T.</u> (3)
Surface Preparation: Abrasive Blast to achieve ICRI CSP 3 to 5	
1st Coat: Macropoxy 646 NSF (1)	4.0 - 6.0
2nd Coat: Macropoxy 646 NSF (1)	<u>4.0 - 6.0</u> 8.0 - 12.0

5. Interior

<u>International</u>	<u>D.F.T.</u> (3)
Surface Preparation: clean and dry	
1st Coat: Intergard 475HS-7808	4.0 - 6.0
2nd Coat: Intergard 475HS-7808	<u>4.0 - 6.0</u> 8.0 -12.0
<u>Tnemec</u>	<u>D.F.T.</u> (3)
Surface Preparation: Clean and dry	
1st Coat: 66-color Hi-Build Epoxoline	4.0 - 6.0
2nd Coat: 66-color Hi-Build Epoxoline	<u>4.0 - 6.0</u> 8.0 -12.0
<u>Sherwin Williams</u>	<u>D.F.T.</u> (3)
Surface Preparation: Clean and dry	4.0 - 6.0
1st Coat: Macropoxy 646, B58 Series	<u>4.0 - 6.0</u>
2nd Coat: Macropoxy 646, B58 Series	8.0 -12.0

6. Interior, Low Odor

<u>International</u>	<u>D.F.T. (3)</u>
Surface Preparation: clean and dry	
1st Coat: Intergard 735-7808	2.0 - 2.5
2nd Coat: Intergard 735-7808	<u>2.0 - 2.5</u>
	6.0 - 7.5

<u>Tnemec</u>	<u>D.F.T. (3)</u>
Surface Preparation: Clean and dry	
1st Coat: 111/112 Tneme-Tufcoat	2.0 - 2.5
2nd Coat: 111/112 Tneme-Tufcoat	2.0 - 2.5
3rd Coat: 111/112 Tneme-Tufcoat	<u>2.0 - 2.5</u>
	6.0 - 7.5

7. Floors, Interior
Note: Achieve ICRI CSP 1 to 3

<u>International</u>	<u>D.F.T. (3)</u>
Surface Preparation: Brush-off Blast or Blast Track	
1st Coat: Intergard 345-7808	4.0 - 6.0
2nd Coat: Intergard 345-7808	<u>4.0 - 6.0</u>
	8.0 - 12.0

<u>Tnemec</u>	<u>D.F.T. (3)</u>
Surface Preparation: Brush-off Blast or Blast Track	
Should a non-skid surface be desired the 1st coat of 66 should be designated NS. The second coat should remain as specified.	
1st Coat: 66-color Hi-Build Epoxoline	4.0 - 6.0
2nd Coat: 66-color Hi-Build Epoxoline	<u>4.0 - 6.0</u>
	8.0 - 12.0

Sherwin WilliamsD.F.T. (3)

Surface Preparation: Brush-off Blast or Blast Track
To achieve ICRI CSP 1 to 3
Should a non-skid surface be desired the 1st coat of AS 1000
HS should be designated NS. The second coat should remain
as specified.

1st Coat: ArmorSeal 1000 HS, B67-2000 Series
2nd Coat: ArmorSeal 1000 HS, B67-2000 Series

4.0 - 6.0
4.0 - 6.0
8.0 -12.0

D. Concrete Block & Porous Masonry

1. Exterior

InternationalD.F.T. (3)

Surface Preparation: clean and dry
 1st Coat: 895-7808 Unifill Block Filler
 2nd Coat: Porterflex-7808

15.0
 15.0

TnemecD.F.T. (3)

Surface Preparation: Clean and dry
 1st Coat: 157-color Enviro-Crete TX
 2nd Coat: 157-color Enviro-Crete TX

8.0 - 9.0
8.0 - 9.0
 16.0 -18.0

Sherwin WilliamsD.F.T. (3)

Surface Preparation: Clean and dry
 1st Coat: Ultra-Crete
 2nd Coat: Ultra-Crete

8.0 - 9.0
8.0 - 9.0
 16.0 -18.0

2. Interior

InternationalD.F.T. (3)

Surface Preparation: clean and dry
 1st Coat: 895-7808 Unifill Block Filler
 2nd Coat: Intergard 475HS-7808
 3rd Coat: Intergard 475HS-7808

-
 4.0 - 6.0
4.0 - 6.0
 8.0 -12.0

TnemecD.F.T. (3)

Surface Preparation: Clean and dry
 1st Coat: 130-6601 Envirofill (2) 100 sq. ft. per gal.
 2nd Coat: 66-color Hi-Build Epoxoline
 3rd Coat: 66-color Hi-Build Epoxoline

-
 4.0 - 6.0
4.0 - 6.0
 8.0 -12.0
 (over filler)

Sherwin WilliamsD.F.T. (3)

Surface Preparation: Clean and dry

1st Coat: Cement-Plex 875 (2) 100 sq. ft. per gal.

2nd Coat: Macropoxy 646, B58 Series

3rd Coat: Macropoxy 646, B58 Series

-

4.0 - 6.0

4.0 - 6.0

8.0 -12.0

(over filler)

3. Interior, Low Odor

InternationalD.F.T. (3)

Surface Preparation: clean and dry

1st Coat: Interlac 895-7808

2nd Coat: Intergard 735-7808

3rd Coat: Intergard 735-7808

-

2.0 - 3.0

2.0 - 3.0

4.0 - 6.0

TnemecD.F.T. (3)

Surface Preparation: Clean and dry

1st Coat: 130-6601 Envirofill (2) 100 sq. ft. per gal.

2nd Coat: 111-color Tneme-Tufcoat

3rd Coat: 111-color Tneme-Tufcoat

2.0 - 2.5

2.0 - 2.5

4.0 - 5.0

(over filler)

Sherwin WilliamsD.F.T. (3)

Surface Preparation: Clean and dry

1st Coat: Cement-Plex 875 (2) 100 sq. ft. per gal.

2nd Coat: Epo-Plex Multi-Mil

3rd Coat: Epo-Plex Multi-Mil

2.0 - 2.5

2.0 - 2.5

4.0 - 5.0

(over filler)

E. Dry Wall

1. Interior, Low Odor

InternationalD.F.T. (3)

Surface Preparation: clean and dry

1st Coat: Intergard 735-7808

2nd Coat: Intergard 735-7808

3rd Coat: Intergard 735-7808

1.5 - 2.0

2.0 - 3.0

2.0 - 3.0

5.5 - 8.0

TnemecD.F.T. (3)

Surface Preparation: Clean and dry

1st Coat: 51-792 PVA Sealer

1.5 - 2.0

2nd Coat: 111-color Tneme-Tufcoat

2.0 - 2.5

3rd Coat: 111-color Tneme-Tufcoat

2.0 - 2.5

5.5 - 7.0

Sherwin WilliamsD.F.T. (3)

Surface Preparation: Clean and dry

1st Coat: PrepRite 200 Primer, B28W200

1.5 - 2.0

2nd Coat: Epo-Plex Multi-Mil

2.0 - 2.5

3rd Coat: Epo-Plex Multi-Mil

2.0 - 2.5

5.5 - 7.0

F. Insulated Pipe

1. Interior

InternationalD.F.T. (3)

Surface Preparation: clean and dry

1st Coat: Interseal 670HS-7808

5.0 - 6.0

2nd Coat: Interseal 670HS-7808

5.0 - 6.0

10.0 -12.0

TnemecD.F.T. (3)

Surface Preparation: Clean and dry

1st Coat: 51-792 PVA Sealer

1.5 - 2.0

2nd Coat: 66-color Hi-Build Epoxoline

2.0 - 3.0

3rd Coat: 66-color Hi-Build Epoxoline

2.0 - 3.0

5.5 - 8.0

Sherwin WilliamsD.F.T. (3)

Surface Preparation: Clean and dry

1st Coat: PrepRite 200 Primer, B28W200

1.5 - 2.0

2nd Coat: Epo-Plex Multi-Mil

2.0 - 2.5

3rd Coat: Epo-Plex Multi-Mil

2.0 - 2.5

5.5 - 7.0

G. Wood

1. Interior

International D.F.T. (3)

Surface Preparation: clean and dry

1st Coat: Intercryl 530-7808 2.0 - 3.0

2nd Coat: Intercryl 530-7808 2.0 - 3.0

4.0 - 6.0

Tnemec D.F.T. (3)

Surface Preparation: Clean and dry

1st Coat: 111-color Tneme-Tufcoat 2.0 - 2.5

2nd Coat: 111-color Tneme-Tufcoat 2.0 - 2.5

4.0 - 5.0

Sherwin Williams D.F.T. (3)

Surface Preparation: Clean and dry

1st Coat: Epo-Plex Multi-Mil 2.0 - 2.5

2nd Coat: Epo-Plex Multi-Mil 2.0 - 2.5

4.0 - 5.0

2. Exterior

International D.F.T. (3)

Surface Preparation: Remove loose paint and caulk, dry

1st Coat: Intercryl 530-7808 2.0 - 3.0

2nd Coat: Intercryl 530-7808 2.0 - 3.0

4.0 - 6.0

Tnemec D.F.T. (3)

Surface Preparation: Remove loose paint and caulk, dry

1st Coat: 6-color Tneme-Cryl 2.5 - 3.0

2nd Coat: 6-color Tneme-Cryl 2.5 - 3.0

5.0 - 6.0

Sherwin Williams D.F.T. (3)

Surface Preparation: Remove loose paint and caulk, dry

1st Coat: DTM Primer/Finish, B66 Series	2.5 - 3.0
2nd Coat: DTM Primer/Finish, B66 Series	<u>2.5 - 3.0</u>
	5.0 - 6.0

- H. Ferrous piping, valves, operators, misc. appurtenances installed within the pipeline. All of the following systems are for the coating of the exterior of pipe, valves, etc. only.

1. Interior, Immersion, Non-Potable

<u>International</u>	<u>D.F.T.</u> (3)
Surface Preparation: SSPC-SP10	
1st Coat: Interseal 670HS-7808 (1)	3.0 - 5.0
2nd Coat: Interseal 670HS-7808 (1)	4.0 - 6.0
3rd Coat: Interseal 670HS-7808 (1)	<u>4.0 - 6.0</u>
	11.0 -17.0

<u>Tnemec</u>	<u>D.F.T.</u> (3)
Surface Preparation: SSPC-SP10	
1st Coat: 66-1211 Hi-Build Epoxoline (1)	3.0 - 5.0
2nd Coat: 66-color Hi-Build Epoxoline (1)	4.0 - 6.0
3rd Coat: 66-color Hi-Build Epoxoline (1)	<u>4.0 - 6.0</u>
	11.0 -17.0

<u>Sherwin Williams</u>	<u>D.F.T.</u> (3)
Surface Preparation: SSPC-SP10	
1st Coat: Macropoxy 646, B58 Series (1)	3.0 - 5.0
2nd Coat: Macropoxy 646, B58 Series (1)	4.0 - 6.0
3rd Coat: Macropoxy 646, B58 Series (1)	<u>4.0 - 6.0</u>
	11.0 -17.0

2. Immersion, Potable Water

<u>International</u>	<u>D.F.T.</u> (3)
Surface Preparation: SSPC-SP10	
1st Coat: Interline 850-7808 (1)	5.0 - 6.0
2nd Coat: Interline 850-7808 (1)	<u>5.0 - 6.0</u>
	10.0 -12.0

<u>Tnemec</u>	<u>D.F.T.</u> (3)
Surface Preparation: SSPC-SP10	
Roughen the surface before topcoating if the 139-1255 has been exterior exposed for 14 days or longer	
1st Coat: 139-1255 Pota-Pox II (1)	6.0 - 8.0
2nd Coat: 139-AA90 Pota-Pox II (1)	<u>6.0 - 8.0</u>
	12.0 -16.0

<u>Sherwin Williams</u>	<u>D.F.T.</u> (3)
Surface Preparation: SSPC-SP10	
1st Coat: Macropoxy 646 NSF (1)	6.0 - 8.0
2nd Coat: Macropoxy 646 NSF (1)	<u>6.0 - 8.0</u>
	12.0 -16.0

3. Interior, Non-Immersion - Average Performance

<u>International</u>	<u>D.F.T.</u> (3)
Surface Preparation: SSPC-SP6	
1st Coat: Interseal 670HS-7808 (1)	3.0 - 5.0
2nd Coat: Intergard 475HS-7808 (1)	<u>4.0 - 6.0</u>
	7.0 -11.0

<u>Tnemec</u>	<u>D.F.T.</u> (3)
Surface Preparation: SSPC-SP6	
1st Coat: 66-color Hi-Build Epoxoline (1)	3.0 - 5.0
2nd Coat: 66-color Hi-Build Epoxoline (1)	<u>4.0 - 6.0</u>
	7.0 -11.0

<u>Sherwin Williams</u>	<u>D.F.T.</u> (3)
Surface Preparation: SSPC-SP6	
1st Coat: Macropoxy 646, B58 Series (1)	3.0 - 5.0
2nd Coat: Macropoxy 646, B58 Series (1)	<u>4.0 - 6.0</u>
	7.0 -11.0

4. Exterior, Non-Immersion

<u>International</u>	<u>D.F.T.</u> (3)
Surface Preparation: SSPC-SP6	
1st Coat: Interseal 670HS-7808 (1)	3.0 - 5.0
2nd Coat: Intergard 475HS-7808 (1)	4.0 - 6.0
3rd Coat: Interthane 870HS-7808	<u>3.0 - 4.0</u>
	10.0 -15.0

<u>Tnemec</u>	<u>D.F.T.</u> (3)
Surface Preparation: SSPC-SP6	
1st Coat: 66-1211 Hi-Build Epoxoline (1)	3.0 - 5.0
2nd Coat: 66-color Hi-Build Epoxoline (1)	4.0 - 6.0
3rd Coat: 74/75 - color Endura-Shield	<u>2.0 - 3.0</u>
	9.0 -14.0

5. Exterior, Below Grade

<u>International</u>	<u>D.F.T.</u> (3)
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Surface Preparation: Clean and Dry
 1st Coat: Intertuf 708-7808 16.0 -20.0
 16.0 -20.0

Tnemec D.F.T. (3)

Surface Preparation: Clean and Dry
 1st Coat: 46H-413 Hi-Build Tneme-Tar (1) 16.0 -20.0
 16.0 -20.0

Sherwin Williams D.F.T. (3)

Surface Preparation: Clean and Dry
 1st Coat: Hi-Mil Sher-Tar (1) 16.0 -20.0
 16.0 -20.0

- I. Galvanized, Non-Ferrous, Wrought piping, valves, operators, misc. appurtenances installed within the pipeline. All of the following systems are for the coating of the exterior of pipe, valves, etc. only.

1. Exterior, Non-Immersion

International D.F.T. (3)

Surface Preparation: SSPC-SP1
 1st Coat: Interseal 670HS-7808 (1) 4.0 - 6.0
 2nd Coat: Interthane 870HS-7808 3.0 - 4.0
 7.0 -10.0

Tnemec D.F.T. (3)

Surface Preparation: SSPC-SP1
 1st Coat: 66-color Hi-Build Epoxoline (1) 4.0 - 6.0
 2nd Coat: 74/75-color Endura-Shield 2.0 - 3.0
 6.0 - 9.0

Sherwin Williams D.F.T. (3)

Surface Preparation: SSPC-SP1 4.0 - 6.0
 1st Coat: Macropoxy 646, B58 Series (1) 2.0 - 3.0
 2nd Coat: Acrolon 218HS, B65 Series 6.0 - 9.0

2. Exterior, Below Grade

International D.F.T. (3)

Surface Preparation: Clean and Dry
 1st Coat: Intertuf 708-7808 16.0 -20.0
 16.0 -20.0

Tnemec D.F.T. (3)

Surface Preparation: Clean and Dry
 1st Coat: 46H-413 Hi-Build Tneme-Tar (1) 16.0 -20.0
 16.0 -20.0

Sherwin Williams D.F.T. (3)

Surface Preparation: Clean and Dry
 1st Coat: Hil-Mil Sher-Tar (1) 16.0 -20.0
 16.0 -20.0

3. Interior, Non-Immersion - Average Performance

International D.F.T. (3)

Surface Preparation: SSPC-SP6
 1st Coat: Interseal 670HS-7808 (1) 3.0 - 5.0
 2nd Coat: Intergard 475HS-7808 (1) 4.0 - 6.0
 7.0 -11.0

Tnemec D.F.T. (3)

Surface Preparation: SSPC-SP6
 1st Coat: 66-color Hi-Build Epoxoline (1) 3.0 - 5.0
 2nd Coat: 66-color Hi-Build Epoxoline (1) 4.0 - 6.0
 7.0 -11.0

Sherwin Williams D.F.T. (3)

Surface Preparation: SSPC-SP6 3.0 - 5.0
 1st Coat: Macropoxy 646, B58 Series (1) 4.0 - 6.0
 2nd Coat: Macropoxy 646, B58 Series (1) 7.0 -11.0

4. Interior, Immersion, Non-Potable

International D.F.T. (3)

Surface Preparation: SSPC-SP10
 1st Coat: Interseal 670HS-7808 (1) 3.0 - 5.0
 2nd Coat: Interseal 670HS-7808 (1) 4.0 - 6.0
 3rd Coat: Interseal 670HS-7808 (1) 4.0 - 6.0
 11.0 -17.0

Tnemec D.F.T. (3)

Surface Preparation: SSPC-SP10
 1st Coat: 66-1211 Hi-Build Epoxoline (1) 3.0 - 5.0
 2nd Coat: 66-color Hi-Build Epoxoline (1) 4.0 - 6.0

3rd Coat: 66-color Hi-Build Epoxoline (1) 4.0 - 6.0
11.0 -17.0

Sherwin Williams D.F.T. (3)

Surface Preparation: SSPC-SP10
 1st Coat: Macropoxy 646, B58 Series (1) 3.0 - 5.0
 2nd Coat: Macropoxy 646, B58 Series (1) 4.0 - 6.0
 3rd Coat: Macropoxy 646, B58 Series (1) 4.0 - 6.0
11.0 -17.0

3.06 COLOR CODED AND MARKED PIPING

- A. All exposed piping shall be painted, color coded, and marked as scheduled.
 - 1. Piping in exposed trenches shall be considered exposed.
 - 2. Markers shall be of an all temperature adhesive tape, suitable for any pipe finish or covering.
 - 3. Printing on markers shall be of sufficient size and style as reviewed by Engineer.
 - 4. A flow arrow shall be installed with each pipe marker at a minimum spacing of 10 ft.
 - 5. Where two colors do not have sufficient contrast to easily differentiate between them, a six-inch band of contrasting color shall be on one of the pipes at 30 inch intervals.
- B. On fiberglass, plastic, stainless steel, copper pipe, or other uncoated piping, a combination of wide banding tape and narrow banding tape shall be used for the pipe color and band.

3.07 PIPING COLOR CODE

- A. Water Lines

Raw	Olive Green
Settled or Clarified	Aqua
Finished or Potable	Dark Blue
[_____]	[_____]
- B. Chemical Lines

Alum or Primary Coagulant	Orange
Ammonia	White
Carbon Slurry	Black
Caustic	Yellow with Green Band

Chlorine (Gas and Solution)	Yellow
Fluoride	Light Blue with Red Band
Lime Slurry	Light Green
Ozone	Yellow with Orange Band
Phosphate Compounds	Light Green with Red Band
Polymers or Coagulant Aids	Orange with Green Band
Potassium Permanganate	Violet
Soda Ash	Light Green with Orange Band
Sulfuric Acid	Yellow with Red Band
Sulfur Dioxide	Light Green with Yellow Band
[_____]	[_____]
C. <u>Waste Lines</u>	
Backwash Waste	Light Brown
Sludge	Dark Brown
Sewer (Sanitary or Other)	Dark Gray
[_____]	[_____]
D. <u>Other</u>	
Compressed Air	Dark Green
Gas	Red
Other Lines	Light Gray
[_____]	[_____]

- END OF SECTION -