

## SECTION 820 COATINGS FOR STEEL STRUCTURES

**820.01 Description.** This material consists of the designated systems of coatings for steel structures. If no system is designated, the material shall conform to the requirements of Subsection 820.02 (a).

### 820.02 Material Requirements.

*Inorganic Zinc-Epoxy Urethane System.* Individual coats shall consist of an inorganic zinc-rich primer conforming to the requirements of AASHTO M 300, Type I or II; an epoxy-polyamide intermediate coat conforming to the requirements of SSPC-Paint 22 (pigmented to contrast with both the primer and topcoat); and an aliphatic urethane topcoat conforming to the requirements of SSPC-PS Guide 17.00, Type II. The topcoat color of the structural steel shall match color chip No. 24172 (green) of FED-STD-595B, unless otherwise indicated on the Plans.

*Moisture-Cured Urethane System.* All paint used on any one structure shall be produced by a single manufacturer; and the coating system shall conform to the minimum requirements as noted below.

#### Primer

Generic Type:	Micaceous Iron Oxide/Zinc-rich, single-component, moisture-cured polyurethane
Vehicle Type:	Moisture-cured polyurethane
Volume of Solids:	60% minimum
Pigment Type:	Micaceous Iron Oxide/Zinc dust
Coverage:	3 mils (75 $\mu$ m) DFT minimum
VOC:	Not to exceed 2.84 lb/gal (0.34 kg/L)
Weight:	Minimum 19.00 lb/gal (2.28 kg/L)

#### Intermediate Coat

Generic Type:	Micaceous Iron Oxide-filled, single-component, moisture-cured polyurethane
Vehicle Type:	Moisture-cured polyurethane
Volume of Solids:	60% minimum
Pigment Type:	4.00 lb/gal (0.48 kg/L) Micaceous Iron Oxide, tinted to distinguish from primer and topcoat
Color:	Tinted to distinguish from primer and topcoat
Coverage:	3 mils (75 $\mu$ m) DFT minimum
VOC:	Not to exceed 2.84 lb/gal (0.34 kg/L)
Weight:	Minimum 16.00 lb/gal (1.92 kg/L)

#### Finish Coat

Generic Type:	Micaceous Iron Oxide-filled, single-component, moisture-cured polyurethane
Vehicle Type:	Moisture-cured polyurethane
Volume of Solids:	60% minimum
Pigment Type:	3.50 lb/gal (0.42 kg/L) Micaceous Iron Oxide
Finish:	Flat (low gloss)
Color:	To be specified in the Plans
Coverage:	3 mils (75 $\mu$ m) DFT minimum
VOC:	Not to exceed 3.00 lb/gal (0.36 kg/L)
Weight:	Minimum 16.00 lb/gal (1.92 kg/L)

Each single coat of paint shall be a color different from the others. The color of the primer and intermediate paint shall be at the Contractor's option and shall provide contrast with the underlying substrate or previously applied paint. The color of the finish paint shall be as specified in the Plans.

Successive time interval for coating in between prime coat, intermediate coat, and finish coat shall be a minimum of four and a maximum of 14 days. If the Contractor fails to complete the painting during the established period, the surface shall be cleaned if necessary as determined by the Engineer.

The Contractor may use one of the following approved paint systems:

1. *Wasser High-Tech Coatings, Kent, WA 98032*

Primer: Wasser MC-MIO Zinc (spot) [3 mils (75  $\mu$ m), DFT]

Intermediate: Wasser MC-Miomastic Iron Oxide [3 mils (75  $\mu$ m), DFT]

Finish: Wasser FerroX A [3 mils (75  $\mu$ m), DFT]

2. *Xymax Coatings, Inc., Oakland, FL 33*

336 (spot) [3 mils (75  $\mu$ m), DFT]

Intermediate: Mono-Ferro [3 mils (75  $\mu$ m), DFT]

Finish: Bridge Finish [3 mils (75  $\mu$ m), DFT]

All components of the system (primer, intermediate, and finish coats) will be accepted on the basis of the manufacturer's written certification that the batch(s) produced meets their product specification.

Only paint arriving at the work site in new, unopened containers shall be used.

Containers of paint shall be labeled with the manufacturer's name, product name, component part, batch number, date of manufacture, and shelf life date. Paint in containers having expired shelf life dates shall be immediately removed from the work site.

c. *Moisture-Cured Aluminum System.* The moisture-cured aluminum paint must follow the following requirements:

**One-Coat System**

Generic Type:	Aluminum filled aromatic moisture-cured urethane
Vehicle Type:	Moisture-cured aromatic polyurethane
Pigment Type:	Minimum 2.00 lb/gal (0.24 kg/L) non-leaving aluminum
Coverage:	2 mils (50 $\mu$ m) DFT minimum
VOC:	Not to exceed 3.50 lb/gal (0.42 kg/L)
Weight:	9.2 lb/gal (1.1 kg/L)
Volume of Solids:	52.0 " 1.0%
Shelf Life:	Six months from date of shipment, in unopen original containers stored at temperatures below 86 $^{\circ}$ F (30 $^{\circ}$ C).