

**1806 - WATER-BORNE ACRYLIC FINISH COAT**

**SECTION 1806**

**WATER-BORNE ACRYLIC FINISH COAT**

**1806.1 DESCRIPTION**

This specification covers water-borne acrylic finish coat intended for use with organic and inorganic zinc primers and epoxy mastic primer on structural steel.

**1806.2 REQUIREMENTS**

**a. General.**

(1) The coating is a single component, water-borne acrylic formulated to display compatibility with and adhesion to the cured organic and inorganic zinc primers, acrylics and epoxy mastic primers. It is used as a protective color finish coat. The pigment must be finely ground, and the mixed paint must not be caked, gelled, skinned nor exhibit hard settling in the container. The coating cures to a tough, semi-gloss, abrasion resistant surface. The shelf life of this paint is no less than 24 months. The VOC content of the coating must comply with the EPA Federal Register 40 CFR, Part 59, Subpart D, Table 1 for industrial maintenance coatings.

(2) The manufacturer is responsible for the formulation. Once established, the formulation may not be changed without prior notification to and approval of the KDOT.

**b. Pigment.** Use titanium dioxide and color retentive tinting pigments and selected extender pigments.

**c. Paint.**

- (1) Total Solids, % by weight ..... 45 minimum
- (2) Cyclic Corrosion/UV Exposure Test, 15 cycles (one cycle = 2 weeks; one week of UV exposure and one week in the Cyclic Corrosion Tester.)
  - (a) Scribe Corrosion ..... 7 minimum
  - (b) Unscribed Area ..... 9 minimum

**1806.3 TEST METHODS**

- a. Total Solids** ..... ASTM D 1644, except that the procedure is modified to a dry time of 72 hours at 100°F rather than 3 hours at 221°F.
- b. Cyclic Corrosion /UV Exposure** ..... ASTM D 5894 and KTMR-30
  - (1) Scribe Corrosion ..... ASTM D 1654.
  - (2) Unscribed Area ..... ASTM D 1654.

**1806.4 PREQUALIFICATION**

**a.** Prequalification of the water-borne acrylic finish coat is required. Manufacturers desiring prequalification should submit a 1 pint sample to the Engineer of Tests. Manufacturers will be notified of results when testing is completed. A list of prequalified materials will be maintained by the Bureau of Construction and Materials.

**b.** Testing and evaluation by KDOT may be waived if complete testing has been performed on the identical product by AASHTO National Transportation Product Evaluation Program (NTPEP) or another state DOT. Forward an official copy of the test report along with evidence that the product referenced is identical to that submitted for prequalification, to the Engineer of Tests for evaluation.

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c. All liquid components will be fingerprinted using infrared spectroscopy for use in screening future verification samples to verify that materials submitted for use are of an identical formulation as originally approved.

### **1806.5 BASIS OF ACCEPTANCE**

Prequalification as specified in **subsection 1806.4**.

Receipt and approval of a Type C certification as specified in **DIVISION 2600**.

Visual observation of performance on the project.