

1805 - HIGH-BUILD POLYURETHANE FINISH COAT

SECTION 1805

HIGH-BUILD POLYURETHANE FINISH COAT

1805.1 DESCRIPTION

This specification covers high-build polyurethane finish coats intended for use with inorganic zinc and epoxy mastic primers on structural steel.

1805.2 REQUIREMENTS

a. General.

(1) The coating is a 2-component high build aliphatic polyurethane formulated to display compatibility with, and good adhesion to, cured inorganic zinc and epoxy mastic primers. It is used as a protective color finish coat. The coating cures to a hard, tough, abrasion resistant surface. It must be well ground, free of caking, skins, gelatin and excessive settling. The shelf life of each component must be no less than 12 months. The VOC content of the coating must comply with the current national rule 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. Mixed Paint.

- (1) Total Solids, % by weight 65 minimum
- (2) Cyclic Corrosion/UV Exposure Test, 2000 hours
 - (a) Scribe Corrosion 7 - 10
 - (b) Unscribed Area 9 - 10

c. Packaging. Package the high build polyurethane coating components in 2 containers such that, upon mixing one of each of the containers, the resulting paint is in the correct proportions for application.

1805.3 TEST METHODS

- a. Total Solids** ASTM D 1644, except heat the sample for 72 hours at 100°F.
- b. Cyclic Corrosion/UV Exposure** ASTM D 5894 and KTMR-30
 - (1) Scribe Corrosion ASTM D 1654
 - (2) Unscribed Area ASTM D 1654

1805.4 PREQUALIFICATION

a. Prequalification of the high-build polyurethane finish coat is required. Manufacturers desiring prequalification should submit a 1-gallon 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 Materials and Research.

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.

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.

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1805.5 BASIS OF ACCEPTANCE

Prequalification as specified in **subsection 1805.4**.

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

Visual observation of performance on the project.