

1804 - ALUMINUM EPOXY MASTIC PRIMER

SECTION 1804

ALUMINUM EPOXY MASTIC PRIMER

1804.1 DESCRIPTION

This specification covers aluminum epoxy mastic primer for use on structural steel.

1804.2 REQUIREMENTS

a. General.

(1) The coating is a self-priming, high solids, 2-component epoxy containing aluminum flake pigment. Design the aluminum epoxy mastic as a 1-coat high-build complete protective system with excellent adhesion to rusted steel, inorganic zinc and old paint after such surfaces have been properly prepared. The coating must be compatible with a wide variety of finish coats including urethanes and acrylics. Supply the epoxy coating as a 2-component material at a 1:1 volume mix ratio. It must be well ground, free of caking, skins, gelatin and excessive settling with a shelf life of each component of 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. Pigment. Use a leafing aluminum flake as the primary pigment. Other pigmentation must contain no toxic heavy metals.

c. Vehicle. Use a modified epoxy and curing agent that is suitably insensitive to moisture to allow trouble free application.

d. Mixed Paint.

- (1) Total Solids, % by weight 90 minimum
- (2) Cyclic Corrosion/UV Exposure Test, 2000 hours
 - (a) Scribe Corrosion 7 - 10
 - (b) Unscribed Area 9 - 10

e. Packaging. Package the aluminum epoxy mastic coating components in 2 containers such that when mixed according to the manufacturer's instructions, a complete container of each component is used.

1804.3 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.

1804.4 PREQUALIFICATION

a. Prequalification of the aluminum epoxy mastic primer 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.

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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.

1804.5 BASIS OF ACCEPTANCE

Prequalification as specified in **subsection 1804.4**.

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

Visual observation of performance on the project.