

1808 – CALCIUM SULFATE ALKYD SYSTEM

SECTION 1808

CALCIUM SULFONATE ALKYD SYSTEM

1808.1 DESCRIPTION

This specification covers a calcium sulfonate alkyd paint system for use on structural steel including weathering steel. The system may also be used for encapsulation or overcoating.

1808.2 REQUIREMENTS

a. General.

(1) The coating system consists of 3 materials: rust penetrating sealer, spot primer, and topcoat. The sealer is for use on pack rusted steel associated with and around rockers, riveted flanges and joints. The spot primer is for use where the existing coating has been removed. The topcoat is for use over existing paint, penetrating sealer, and spot primer. The coating can be used over a variety of existing paints including but not limited to lead based paint, inorganic/organic zinc, epoxy, vinyl, and alkyd. Supply each coating as a single component material. All coatings must be well ground, free of caking, skins, gelation, and excessive settling with a shelf life of not less than 12 months. Provide pigmentation that contains no toxic heavy metals. Comply with the current national rule for industrial maintenance coatings concerning VOC content.

(2) The manufacturer is responsible for the formulation. Once established, no change in the formulation is permitted without prior notification to and approval of the KDOT.

b. Vehicle: Use a modified overbased calcium sulfonate alkyd resin.

c. Rust Penetrating Sealer:

- Total solids, % by weight 40 minimum

d. Spot Primer:

- Total solids, % by weight 70 minimum

e. Topcoat:

- Total solids, % by weight 70 minimum

f. Paint System,

- Cyclic Corrosion/UV Exposure Test, 15 cycles (one cycle = 2 weeks; one week of UV exposure and one week in the Cyclic Corrosion Tester.):
 - Scribe Corrosion 7 minimum
 - Unscribed Area 8 minimum

1808.3 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

- Scribe Corrosion ASTM D 1654
- Unscribed Area ASTM D 1654

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1808.4 PREQUALIFICATION

a. Prequalification of the calcium sulfonate paint system 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 complete. The Bureau of Construction and Materials will maintain a list of prequalified 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.

c. All applicable 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.

1808.5 BASIS OF ACCEPTANCE

Prequalification as required by **subsection 1808.4**.

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

Visual observation of performance on the project.