

**KANSAS DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION TO THE
STANDARD SPECIFICATIONS, 2015 EDITION**

Delete SECTION 2215 and replace with the following:

SECTION 2215

PAVEMENT MARKING PAINT

2215.1 DESCRIPTION

This specification covers water-borne pavement marking paint and glass beads suitable for use as retroreflective pavement markings on portland cement concrete or asphalt pavement.

2215.2 REQUIREMENTS

a. Paint. Use white or yellow paint that is specifically manufactured for use as pavement markings. Formulate the paint to consist of acrylic resin, lead free pigments and water as the solvent. The paint must comply with volatile organic compound (VOC) requirements, be lead and other toxic heavy metal free, and exhibit the following qualities:

(1) Formulation:

Yellow paint- The pigment of the Yellow paint shall consist of the following for each 100 gallons of paint:

- A. 30 lbs. of approved Hansa Yellow
- B. 17 lbs. of Rutile Titanium Dioxide
- C. Other such extender pigments as necessary to produce a close match to the yellow color requirement.

White and yellow paint shall be composed of 100% acrylic polymer, which shall be Rohm and Haas HD-21 acrylic resin or Dow Chemical's DT400.

(2) Hiding Power: A contrast ratio of not less than 0.96 when the paint is applied with a 0.020 inch film applicator.

(3) Daylight Reflectance: Daylight Reflectance of the white and yellow paints shall not be less than 80% and 45%, respectively.

(4) Color: Provide paint that meets the requirements of ASTM D 6628.

(5) Bead Embedment: At least 90% of the glass beads must be embedded between 50 and 70%.

(6) No Pick-up Time: Maximum 5 minutes.

b. Glass Beads for Pavement Marking Paint (Double Drop System).

Provide glass beads according to the pavement marking paint manufacturer's recommendations that comply with AASHTO M 247 or specification provided by the manufacturer. Beads will be submitted by the manufacturer and tested at the MRC lab according to type before use on KDOT projects.

c. Paint Sampling and Testing. The Engineer will take (2) one quart samples of each color of paint used on the project. Send the samples to MRC for testing and evaluation.

2215.3 TEST METHODS

a. Paint.

(1) Hiding Power. ASTM D 2805.

(2) Daylight Reflectance. ASTM E 1347.

(3) Bead Embedment. Apply paint to a Leneta plain white paper chart at a wet film thickness of 0.025 inch followed immediately by an application of glass beads (AASHTO M 247, Type 3) dropped onto the surface of the paint. After drying for at least 24 hours observe the amount of bead embedment with a 30-power microscope.

(4) No Pick-Up Time. ASTM D 711.

b. Glass Beads.

- (1) AASHTO T 346

2215.4 PREQUALIFICATION

None Required.

2215.5 BASIS OF ACCEPTANCE

a. Paint.

- (1) Receipt and approval of a Type D certification as specified in **DIVISION 2600**.
- (2) Satisfactory results of tests conducted by the MRC on each color of paint used on the project.
- (3) Visual inspection for color and retroreflectivity of in-place pavement markings (paint + beads).

b. Glass Beads.

- (1) Receipt and approval of a Type D certification as specified in **DIVISION 2600**.
- (2) Copy of the MRC test report for each lot of beads used on the project that shows compliance with the specification.

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