

2209 - HIGH DURABILITY PAVEMENT MARKING MATERIAL

SECTION 2209

HIGH DURABILITY PAVEMENT MARKING MATERIAL

2209.1 DESCRIPTION

This specification covers white or yellow high durability pavement markings designed to be used in severe wear conditions such as repeated shear actions from crossover or encroachment traffic and turning, stopping or starting traffic. This includes material for use on both portland cement concrete and asphalt surfaces.

2209.2 REQUIREMENTS

Provide high durability pavement marking material that complies with ASTM D 4505 Reflectivity Level II with the following exceptions and additions:

a. The material must have a strong topcoat with glass beads distributed to provide immediate and continuing retroreflection. Bond ceramic particles to the top layer to provide a skid resistant surface.

b. Delete all references to application temperatures.

c. Tensile Strength. The material must have a minimum tensile strength of 500 psi when measured in the direction of the roll.

d. Adhesion. 8 lbf, minimum.

e. Dimensions. With the exception of patterned, provide material with a 0.05 inch minimum thickness. Provide patterned material with a thickness of not less than 0.02 inch at the thinnest portion of the cross section and 0.07 – 0.09 inch at the thickest portion of the cross section. All measurements are exclusive of the adhesive.

2209.3 TEST METHODS

ASTM D 638 with the following exception:

- Test a 1 by 6 inch sample at a temperature between 70 and 80°F using a jaw speed of 10 - 12 inches per minute.

ASTM D 4505.

2209.4 PREQUALIFICATION

Submit at least 100 linear feet of each color, and a complete set of installation recommendations and instructions to Engineer of Tests.

If the material complies with all laboratory requirements, the manufacturer will be contacted to arrange for the field evaluation. The field evaluation will consist of 2 or 3 test projects at times and locations as determined by the Bureau of Transportation Safety and Technology. Manufacturers must specify if the material may be used on both asphalt and concrete surfaces or only on asphalt or concrete surfaces.

Duration of the test project will be dependent on the submittal of test data from the AASHTO National Transportation Product Evaluation Program (NTPEP). Forward an official copy of the test data along with evidence that the material referenced is identical to that submitted for prequalification to the Engineer of Tests for evaluation. Materials with no test data will have a test project duration of 18 months; materials with test data will have a test project duration of 12 months. Materials will be evaluated initially and every 3 to 6 months throughout the duration of the test project for retroreflectivity, color and durability.

The material will be evaluated for compliance with this specification, and the manufacturer will be notified of the results. The Bureau of Construction and Materials will maintain a list of qualified materials and installation instructions. Products will remain on the prequalified list as long as field performance is satisfactory and the results of verification testing are consistently acceptable. Report any changes in formulation to the Engineer of Tests for review and evaluation to determine if requalification is necessary.

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2209.5 BASIS OF ACCEPTANCE

a. Long Line Markings.

- (1) Prequalification as required by **subsection 2209.4** above.
- (2) Satisfactory results of Verification Testing. Except for symbols, the Engineer will sample each lot or batch. Collect samples of each lot in accordance with KT-81.

b. Preformed Symbols.

- (1) Prequalification as required by **subsection 2209.4** above.
- (2) Receipt and approval of a Type C certification as specified in **DIVISION 2600**, which also includes all lot numbers of material used to fabricate the symbols.