

2210 - TEMPORARY PAVEMENT MARKING TAPE

SECTION 2210

TEMPORARY PAVEMENT MARKING TAPE

2210.1 DESCRIPTION

This specification covers preformed plastic pavement markings designed for limited service life. This includes both Removable (Type I) and Non-removable (Type II) materials for use on both portland cement concrete and asphalt surfaces. Type II is further broken out for prequalification by use. Plain Type II is that which is prequalified for general use in all configurations on both portland cement concrete and asphalt surfaces. Type IIA is that which is prequalified for use as temporary skip lines on new asphalt surfaces only.

This specification also covers Removable Line Masking Tape. This is a highly durable, skid resistant, non-reflective, black or dark gray, pliant polymer tape designed for temporary obliteration of existing pavement markings. Provide material in widths or sizes sufficient to extend approximately 1.0 inch beyond the edges of the existing markings. The tape must be able to be removed without damage to the existing marking.

2210.2 REQUIREMENTS

Provide preformed pavement markings that comply with ASTM D 4592 with the following exceptions and additions:

a. Delete all references to application temperatures. Apply all markings according to the manufacturer's recommendations for proper surface conditions and preparation, air and surface temperatures, and other weather conditions.

b. Store all material in accordance with the manufacturer's directions, including temperature and exposure to the elements.

c. If recommended by the manufacturer, use a primer to precondition the pavement surface.

d. **Retroreflection.** The sample size is changed to 1.0 X 2.0 feet. Retroreflection requirements are not applicable for Removable Line Masking Tape.

e. **Durability and Wear Resistance.** The material can suffer no more than a 25% loss of beads, sand, grit or pigmented color layers when subjected to 30,000 revolutions on a small wheel circular track device as defined in subsection 2210.3b.

2210.3 TEST METHODS

a. ASTM D 4592

b. **Durability and Wear Resistance.** ASTM E 660, with the following variations:

(1) Mount two opposite wheels with Goodyear 3.40-5 NHS Industrial Rib tires with a total load of 51.5 pounds on each tire. Maintain tire pressure at 25 psi. Mount the wheels perpendicular to the specimens and toe out 2° to produce a slight abrading action.

(2) Apply specimens to 6 inch diameter dense graded asphalt concrete cores, which have been compacted at 3000 psi for 2 minutes. After application, allow the specimens to cure for 2 hours before beginning the test.

c. **Field Evaluation Test.** KTMR-9, Field Evaluation of Pavement Marking Materials.

d. **Removability Test.** KTMR-10, Removability of Temporary Pavement Marking Tape.

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2210.4 PREQUALIFICATION

Manufacturers interested in prequalifying material under this specification must submit at least 200 linear feet (Type I and Removable Line Masking tapes) or 100 linear feet (Type II) of each color, and a complete set of installation recommendations and instructions to the Engineer of Tests, Materials and Research Center, 2300 Van Buren, Topeka, KS 66611.

Provide material that complies with **subsection 2210.2**. In addition, the following Field Evaluation will be conducted:

- **Field Evaluation.** Subject Type I and Type II material to traffic conditions on both portland cement concrete and asphalt surfaces for 6 months during the period of July through February. Unless field evaluation as Type IIA only is specifically requested by the manufacturer, all Type II submittals will be installed as Type II for full evaluation. If the material fails part of the field evaluation as Type II, it will still be considered for approval as Type IIA. If a Type IIA field evaluation is specifically requested, subject the material to traffic conditions on a asphalt surface for 2 months during the paving season, using only longitudinal lines. Evaluate Removable Line Masking Tape when installed over existing durable pavement markings.

During the field evaluation, the material cannot pick up and retain road grime which causes more than a slight discoloration of the surface. A strong contrast must remain between the striping material and the pavement surface. At the end of the evaluation period, the material must be entirely intact with no evidence of lifting, curling, breaking or displacement. Transverse lines can suffer no more than a 25% loss of beads, sand, grit or pigmented color layers in the wheel path. After 6 months, the material must maintain minimum retroreflectivity values of 150 millicandelas/sq m/lux for white and 100 millicandelas/sq m/lux for yellow. Contrast requirements are not applicable for Removable Line Masking Tape.

Field evaluation for temporary tape may be waived if a complete field test has been performed on the identical product by another state department of transportation or AASHTO test facility that includes both hot and cold weather conditions, and was a minimum of 6 months in duration. For Type I and Removable Line Masking tapes, testing must include removability. 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.

The sample will be tested for compliance with all requirements of this specification. The Bureau of Materials and Research will maintain a list of qualified materials and installation instructions. Products will remain on the list as long as field performance is satisfactory, and the results of verification testing are consistently acceptable.

2210.5 BASIS OF ACCEPTANCE

Prequalification as required by **subsection 2210.4**.

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

Visual observation of performance on the project.