

SPECIAL PROVISION

NOTE: This special provision is generally written in the imperative mood. The subject, "the Contractor" is implied. Also implied in this language are "shall", "shall be", or similar words and phrases. The word "will" generally pertains to decisions or actions of Sedgwick County Public Works.

HEAT-FUSED RETROREFLECTIVE PREFORMED THERMOPLASTIC PAVEMENT MARKINGS

1. DESCRIPTION

This specification is for a preformed pliant polymer thermoplastic pavement marking material which is durably and stably adhered to asphalt concrete pavements and Portland cement concrete pavements by means of heat fusion. The markings shall be designed for transverse, longitudinal, legend and symbol markings subjected to high urban traffic volumes and particularly severe wear and shear action. The applied markings shall not deteriorate due to exposure to sunlight, water, oil, gasoline, pavement oil content, salt and adverse weather conditions.

BID ITEMS

Heat-fused Preformed Thermoplastic Pavement Marking (*) (#) (**)

Pavement Marking Symbol (Heat-Fused Preformed Thermoplastic) (*) (#) (**)

* Color (White, Yellow or Black)

Width (in.) or Legend or Symbol type

** Thickness (thousandths of inch)

2. MATERIALS

The manufacturer shall have the option of formulating the material according to their own specifications; however, the solid resin shall be an alkyd-like binder. The alkyd-like binder shall not contain petroleum based hydrocarbon resins. The physical and chemical properties contained in this specification shall apply regardless of the manufacturer's specifications. The material upon heating during application shall not exude fumes which are toxic, or injurious to persons or property. The pigment, beads and filler shall be well dispersed in the resin.

Except for black material, the preformed markings material shall have a minimum of 30% uniformly distributed glass beads throughout its entire cross section and a protruding exposed layer of glass beads that provide immediate retroreflectivity without additional glass beads being dropped on the material during application.

Configurations of straight lines, symbols, and legends shall conform to the most recent edition of The Manual on Uniform Traffic Control Devices for Streets and Highways.

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The preformed markings shall conform to pavement contours, breaks and faults through the action of traffic at normal pavement temperatures. The markings shall have resealing characteristics and be capable of fusing to itself and previously applied, worn hydrocarbon and alkyl thermoplastic.

The preformed markings shall upon application exhibit uniform adequate nighttime reflectivity. The markings shall have average minimum intensities of 200 millicandelas for white and 100 millicandelas for yellow as measured with a Delta LTL 2000 (or most recent model) retroreflectometer.

- a. **Skid Resistance.** The surface of the preformed thermoplastic markings shall provide a minimum skid resistance value of 45 BPN when tested according to ASTM E 303-74.
- b. **Thickness.** The width of the supplied material shall have a minimum average thickness of 0.060 inch (1.524 mm), 0.090 inch (2.286 mm), or 0.125 inch (3.15 mm) as indicated in the particular bid items for this purchase/project.
- c. **Effective Performance Life.** Any properly applied preformed thermoplastic material that shall smear or soften independent of pavement movement within a period of three years from date of application shall be replaced by the supplier.
- d. **Packaging.** The material for use as line markings, legends and symbols shall be available in roll or flat form. Material shall be available up to 48 inches in width and up to 90 feet in length. The material shall be packed in suitable cartons clearly labeled for ease of identifying the contents. The preformed markings shall be usable for a minimum of one year after the date of receipt when stored in accordance with the manufacturer's recommendations.

3. INSTALLATION

Prior to application the material shall remain flexible at temperatures above 50° F and shall be fusible to asphaltic concrete and Portland cement concrete pavements by means of the normal heat of a propane type torch. The markings shall be applied in accordance with the manufacturer's recommendations on clean and dry surfaces.

Markings shall be capable of being applied as the original permanent marking on the day the surface is paved without being adversely affected by the fresh pavement oil content.

4. BASIS OF ACCEPTANCE

Acceptance of material furnished under this specification will be based on: (1) a certificate prepared by the manufacturer showing that the supplied material meets the requirements

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of this specification explicitly, and (2) a visual inspection upon delivery for condition and conformance with dimensional and other requirements.

5. BASIS OF PAYMENT

Payment for heat-fused retroreflective preformed thermoplastic pavement markings shall be made at the contract lump sum price bid or the contract unit price bid per lineal foot or legend or symbol of material of specified type (straight line, symbol), width, thickness and color installed less any applicable liquidated damages.

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