

ITEM 608.01 91M - SURFACE APPLIED DETECTABLE WARNING

DESCRIPTION

This work shall consist of furnishing and installing detectable warning surfaces on sidewalk curb ramps and other locations as indicated in the Contract Documents or as directed by the Engineer.

MATERIALS

General Requirements:

The Manufacturer shall supply certification that the detectable warning surface material meets the requirements of these specifications. Detectable warning surface materials shall:

- Meet the requirements of the current Standard Sheet for detectable warnings details.
- Be composed of a mixture of cementitious materials, or plastics, polymeric materials, resins, and pigments.
- Be an approximate visual match to the color specified in the Contract Documents, as determined by the Engineer, and be uniform in color and texture.
- Have a good appearance, free of cracks or other defects
- Have clean-cut and well-defined edges.
- Adhere to Hot Mix Asphalt (HMA) or portland cement concrete (PCC) surfaces at a minimum air temperature of 16°C (60°F), and a minimum pavement temperature of 21°C (70°F).
- Be weather resistant and durable to normal pedestrian wear and maintenance activities.
- Show no appreciable fading, lifting, or shrinkage.
- Be capable of molding or fitting itself to the contours, breaks, and faults of HMA or PCC surfaces.
- Show no significant tearing, rollback, lifting, or other signs of poor adhesion.
- Have friction characteristics similar to a broomed PCC surface.

Physical Properties:

<u>STANDARD</u>	<u>PROPERTY</u>	<u>RESULTS</u>
ASTM C-501	Wear Resistance	Wear Index: 15
MIL D-3124	Impact Resistance	9 N steel ball dropped twice from 2.4 meters produced no adhesion failure or cracking
ASTM E-96	Water Vap. Transm.	100 grams/sq. meter/24 hours
MIL D-3134	Bonding Strength	2.2 MPa shear, 3.4 MPa pull

Pavement Surface Primer, if required:

- Recommended by the manufacturer.
- Conform to Federal, State, and Local regulations for the emission of volatile organic compounds (VOC).

Packaging and Shipment: Shipped and packaged in accordance with commercially accepted standards. Clearly display the name of the product, the name and address of the manufacturer, the quantity of material, the date of manufacture, and the date of expiration or the shelf life, on each

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container or on the shipping invoice .

Basis of Materials Acceptance:

As listed in this specifications Provisionally Approved Product list OR provisionally approved equivalent by the Department:

PRODUCT NAME	MANUFACTURER/LOCATION
Armor-Tile Surface Applied System	Engineered Plastics Inc Williamsville, NY 14221
DWS TILES	Troy DieCutting Company Troy, NY 12180
SAFTI-TRAX	Cote-L Industries Teaneck, NJ 07666
STRONGWARN	Strongwall Industries, Inc. Ridgewood, NJ 07450
Tactile Warning Tile	ADA Solutions, Inc. North Billerica, MA 01862
Trelleborg's TGS (Tactile Guidance System)	Trelleborg Industri-AB Edison, NJ 08820

In order to be approved as equal by the Department:

- A. The Contractor shall submit three sets of the following to the Engineer, for distribution to the Materials Bureau and the Regional Landscape Architect and for the Engineer’s approval, at least 30 days prior to the proposed installation:
- A minimum 300 mm x 300 mm sample of the Detectable Warning Surface Material.
 - All associated product material literature .
 - Preparation requirements.
 - Equipment required for installation.
 - Name(s) of suppliers.

OR

- B. The Manufacturer shall demonstrate in writing and provide references that the detectable warning material, and the proposed system for bonding and/or fastening the detectable warnings to the substrate, have been satisfactorily used for roadway, sidewalk curb ramp, path, or exterior floor applications. Further, this use shall have been in locations exposed

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to high pedestrian traffic, and under weather conditions similar to those experienced in New York State, for a minimum period of five years.

The manufacturer of any product/system provisionally approved under method A or B shall submit to the Engineer a letter from the Materials Bureau indicating that the requirements of this specification have been met. The product must perform to the satisfaction of the Department for a minimum period of one year in order to be listed in this specification.

CONSTRUCTION DETAILS

All detectable warning surfaces shall meet the following requirements:

Prior to the start of work, the Contractor shall install a job-site sample for the approval of the Engineer. The sample size shall be 1.5 meters x .6 meters, minimum, and applied at a location selected by the Engineer. As many test areas will be applied as are necessary to achieve a sample area that meets the satisfaction of the Engineer. All subsequent work shall conform to the appearance of the approved sample. The sample shall not be incorporated into the work and will be removed after approval.

Follow all applicable material suppliers and manufacturer's requirements for environmental conditions, surface preparation, installation procedures, curing procedures, and materials compatibility.

As a minimum, surfaces shall be cleaned by the use of mechanical sweepers, power brooming, or hand brooming. Curing compounds or heavier contamination shall be cleaned by abrasive blasting or other means as approved by the Engineer.

METHOD OF MEASUREMENT

Detectable Warning Surface will be measured as the number of square meters, measured to the nearest tenth (0.1) square meter, computed from the payment lines as shown in the Contract Documents.

BASIS OF PAYMENT

The unit price bid shall include all labor, material, and equipment necessary to complete the work, including job site samples. Sidewalk curb ramps and other locations, where detectable warnings will be furnished and installed, will be paid for under the sidewalk or other applicable items in the Contract.