

# Detectable Warning Systems, Inc.

## SURFACE APPLIED DETECTABLE WARNING MATS

### RediMat Submittal

#### **PART 1 - GENERAL**

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##### 1.02 DESCRIPTION

- A. This Section specifies furnishing and installing RediMat surface applied polyurethane detectable warning mat where indicated, using an exterior grade tactile warning surface described herein.

##### 1.03 RELATED WORK SPECIFIED ELSEWHERE

- A. Drawings and general provisions of Contract, including General and Special Conditions and Division 1 Specifications Section, apply to this Section.

##### 1.04 SUBMITTALS

- A. Product Data: Submit manufacturer's literature describing products, installation procedures and routine maintenance.
- B. Samples for Verification Purposes: Submit three (3) samples of RediMat surface applied polyurethane tactile mat of the kind proposed for use.
- D. Material Test Reports: Submit test reports from qualified independent testing laboratory indicating that materials proposed for use are in compliance with requirements and meet the properties indicated.
- A. Maintenance Instructions: Submit copies of manufacturer's specified maintenance practices for each type of tactile tile and accessory as required.

## 1.05 QUALITY ASSURANCE

- A. Provide surface applied tactile mat and accessories as produced by a single manufacturer.
- B. Installer's Qualifications: Engage an experienced Installer qualified for installation, who has successfully completed tile installations similar in material, design, and extent to that indicated for Project. .
- C. Americans with Disabilities Act (ADA): Provide tactile warning surfaces which comply with the detectable warnings on walking surfaces section of the Americans with Disabilities Act (Title 49 CFR TRANSPORTATION, Part 37.9 STANDARDS FOR ACCESSIBLE TRANSPORTATION FACILITIES, Appendix A, Section 4.29.2 DETECTABLE WARNINGS ON WALKING SURFACES. In addition products must comply with CALIFORNIA TITLE 24 requirements regarding patterns, color and sound on cane contact.
- D. Polyurethane tactile mat incorporating truncated domes shall conform to the following:
  - 1. Water Absorption of mat when tested by ASTM-D570 not to exceed 0.35% -after vacuum.
  - 2. Compressive Strength - ATM D695-96 5,000 psi
  - 3. Slip Resistance- ASTM F1679-96 - .89
  - 4. Impact Resistance ASTM D5420-96 No cracking up to 80 inch pounds
  - 5. Accelerated Weathering ASTM G154/ASTM D4587 Delta E <6.5 after 500 hours
  - 6. Flexural Strength ASTM 790-96a 13,000 psi
  - 7. Stain & Chemical Resistance ASTM 1308-87 No Change
  - 8. Tensile Strength ASTM D412 Not less than 1,100 psi
  - 9. Hardness of mat when tested to ASTM-D2240: 90 (Shore A).
  - 10. Specific Gravity of mat when tested to ASTM-D792: 1.22
  - 11. Abrasion/Wear Resistance -weight loss of mat when tested to ASTM- D4060 - 4.7 mgs.

## 1.06 DELIVERY, STORAGE AND HANDLING

- A. Mat and adhesive materials shall be packaged durable cartons to prevent damage in shipment or handling. Mats should remain in the factory cartons until reaching the job site and installation has begun. Mats shall be kept dry and away from sources of heat. Store at 80 degrees F or less. Store on flat level surface.
- B. Mats shall be delivered to location at building site for storage prior to installation.

## 1.07 SITE CONDITIONS

- A. Environmental Conditions and Protection: Maintain minimum air and surface temperature of 50 degrees F and rising in spaces to receive tactile mats prior to installations, during installation, and for not less than 2 hours after installation.

B. Provide barricades or screens to protect passengers or public.

1.08 EXTRA STOCK

A. Deliver extra stock to the Owner. Furnish new materials from same manufactured lot as materials installed and enclose in protective packaging with appropriate identification. Furnish not less than two or (10)% of the supplied materials for each type, color and pattern installed.

1.09 Warranty

A. Surface applied detectable warning mat shall be warranted in writing for a period of five years from date of final completion.

**PART 2 – PRODUCTS**

2.01 MAT SPECIFICATIONS

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated in the Work include, but are not limited to, the following:

The polyurethane detectable warning mat specified is based on the Detectable Warning RediMat manufactured by Detectable Warning Systems, Inc. (866-999-7452).

B. It is an unbreakable, UV protected, flexible polyurethane material with a proprietary pre-applied adhesive system that employs peel and stick technology. Existing engineered ADA field tested products in service for a minimum of 2 years which are subject to compliance with requirements, may be incorporated in the work and shall meet or exceed the specified test criteria and characteristics.

1. Materials – mat to be produced with a glass reinforced, UV treated polyurethane material for durability, strength and sun degradation.
2. Composition – mat to be a molded material that is 100% solid throughout, including surface and truncated domes. This requirement is for durability and safety concerns.
3. Color - Color shall be homogenous throughout the mat. Colors must provide light-on-dark or dark-on-light contrast with the surrounding substrate/surface
4. Pre-applied adhesive – attached peel and stick adhesive must completely cover the underside of the mat and be composed of materials that adhere to substrate (concrete or asphalt) without the requirement of any additional materials or actions such as primers or concrete sealers being applied to the substrate.

2.02 INSTALLATION MATERIALS

A. Stainless steel concrete screws 3/16" x 1 1/4" for pre-drilled holes ( number to vary depending on mat size)

B. Nylon finishing washers colored to match mat color.

## **PART 3 EXECUTION**

### **3.01 INSTALLATION**

- A. During all surface preparation and mat installation, procedures must ensure adequate safety guidelines are in place and that they are in accordance with the applicable industry and government standards.
- B. Throughout the installation phases of surface preparation and mat setting, ensure that care is taken to prevent damage to any work.
- C. Immediately prior to installing the surface applied tactile mats, all surfaces must be inspected to ensure that they are clean, dry, free of voids, curing compounds, projections, loose material, dust, oils, grease, sealers and determined to be structurally sound before the application warning mat. . All new substrate concrete paving must have been cured for at least 28 days prior. If present, all concrete curing compounds shall be removed with sandblasting. The proprietary sealant/adhesive requires that the substrate and the ambient temperature are 50 degree F minimum and rising, and completely dry with no precipitation during 24 hours prior to installation. Assure that sprinklers or other water sources will not be turned on during the installation and adhesive curing process.
- D. Place mats as shown on the drawings. Inspect the mats and clean all dust and other contaminants from the surfaces to be adhered. Set the mats in place one at a time, true and square, following the manufacturers written instructions.
- E. Carefully remove the paper backing. Place adjoining mats with a 1/8" gap against each other in their pre-laid positions. Press firmly from the center out to remove all trapped air. Using, hand, foot and/or roller apply pressure over the entire surface of the mat to insure complete contact with the concrete substrate.
- F. After the mats have been installed stainless steel concrete screws shall be installed. Drill holes true and straight to the depth required using the recommended bit with holes located by the preformed holes in the mats. Clean dust from the holes to provide clear passage for the anchor. Mechanically fasten tiles to the floor by hand using Phillips screwdriver. Set screws to a depth and tightness that will allow the washer to slightly turn. Ensure the fastener has been set to full depth, straight and true.
- G. After fasteners have been set cut the nozzle of the included sealant tube at a 45 degree angle. Apply a smooth, thin bead of sealer around the perimeter (sealer is not required between adjoining mats).
- H. After the mats have been fully installed, and sealer has cured, the surface can be cleaned, if needed, following the recommended maintenance and cleaning procedures.

### **3.02 CLEANING AND PROTECTING**

- A. Protect mats against damage during construction period to comply with manufacturer's specification.
- B. Protect mats against damage from rolling loads following installation by covering with plywood.
- C. Clean mats by method specified by the manufacturer. RediMat can be cleaned with a medium stiff brush and a diluted mild detergent/water cleaner. Due to the non-porous nature of the mat normal rainfall will keep the mat with a clean appearance.

**-END OF SECTION-**