

# **EZ-SET POLYMER CONCRETE TILES**

## **PART 1 GENERAL**

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### **1.02 DESCRIPTION**

A. This Section specifies furnishing and installing embedded polymer concrete detectable warning tiles 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 EZ-Set composite tiles of the kind proposed for use.

C. Shop drawings are required for products specified showing fabrication details; tile surface profile; adhesives; plans of mat placement including joints, and material to be used as well as outlining installation materials and procedure.

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.

E. 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 EZ-Set composite tiles 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. EZ-Set composite concrete tiles incorporating truncated domes shall conform to the following:

1. Compressive Strength of tile: 16,000 psi (ASTM C 109)

2. Tensile Strength of tile: 2083 psi (ASTM 638)

3. Flexural Strength of tile: 2,300 psi (ASTM D 790)

4. Slip Resistance Wet/Dry: .79 (ASTM F 1679)

5. Wear Resistance (ASTM D2486 ) 5000 Cycles- No Wear.

6. Impact Resistance (ASTM D2794)                      60 inch pounds-1/4"  
indentation- no visible cracking.

7. Water Absorption (ASTM D570)

Average % Absorption 2 hour:                      0.0

Average % Absorption 24 hour:                      0.0

8. Freeze/Thaw Cycling (ASTM D1037) 5 cycles No degradation or appearance change.

9. Salt Spray (ASTM B117) 200 hours – No visible degradation, including spalling, cracking or pitting. Slight spotting.

10. Chemical & Stain Resistance (ASTM D543/D1308) 54 chemical, commercial and consumer products tested. Range: No effect to severe staining. List of products available.

11. Shear Bond Strength of panel 500-550 psi.

#### 1.06 DELIVERY, STORAGE AND HANDLING

A. Tiles shall be suitably packaged or crated to prevent damage in shipment or handling. Finished surfaces shall be protected by sturdy wrappings, and shall be identified by model designation or number. Tiles shall be kept dry and away from sources of heat. Store on flat level surface.

B. EZ-Set tiles shall be delivered to location at building site for storage prior to installation.

#### 1.07 GENERAL CONDITIONS

A. Pour and finish the concrete according to the drawings and specifications. Maintain the slump range between 4-6. Check the slope using the electronic level to be certain that it meets the required standards.

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. EZ-Set composite concrete tiles shall be warranted in writing for a period of five years from date of final completion.

## **Part 2 PRODUCTS**

### 2.01 PANEL MANUFACTURER

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:

B. The EZ-Set composite polymer concrete panels specified are based on the composite concrete tiles manufactured/distributed by Detectable Warning Systems, Inc. (866-999-7452). Existing engineered ADA and California Title 24 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. Color: Yellow conforming to Federal Color No. 33538, Brick Red or Charcoal Gray. Color shall be homogenous throughout the panel.

### 2.02 INSTALLATION MATERIALS

A. DWS Stainless Steel replaceable concrete anchors.

## **PART 3 EXECUTION**

### 3.01 INSTALLATION

A. Using barricades, cones or other means, block off work area to pedestrian and vehicle traffic during installation process. Be certain that safety guidelines are followed according to government or other standards.

B. In addition to the regular mason's tools which will be used to finish the ramp surface, installation of the E-Z Set tiles can be assisted with a rubber mallet and a 4' level with electronic slope readout.

C. Pour and finish the concrete according to the drawings and specifications. Maintain the slump range between 4-6. Check the slope using the electronic level to be certain that it meets the required standards.

D. Locate- Trace an outline where tiles are to be placed in the wet concrete. This can be done using the point of a trowel. Be certain that the placement meets the specifications and drawings for this job.

E. Insert Anchors – Insert anchor bolts into holes on the tiles and screw on the receiver portion of the anchor on the other side. Tighten securely by holding anchor in place and hand tightening receiver.

F. Place- Set first tile in place at one end of the traced outline and press into the wet concrete using a wiggling motion. Be careful not to push the tiles too far into the concrete. The edge of the tile should be even and level with the surrounding concrete. Place the second tile next to the first, leaving a 1/2” gap and using the same wiggling motion press it into the wet concrete. Be certain that the second tile is even and level with the first and with the surrounding concrete.

G. Finish- Trowel concrete flat, remove any excess concrete and leave a 1/2” gap between the tiles. Apply broom finish or other recommended finish to the area immediately surrounding the tiles.

H. Recheck slope- Recheck the slope using the electronic level, and adjust the tiles if necessary to maintain the required slope specifications.

I. Do not allow any pressure from walking or other sources to be applied to the E-Z Set tiles during the concrete curing process. (Two days minimum).

J. Finish-The final step of the process is to sponge, or brush the surface to remove any excess concrete that may have been left on the surface of the EZ Set Tiles.

### 3.02 CLEANING AND PROTECTING

A. Protect tiles against damage during construction period to comply with manufacturer’s specification.

B. Protect tiles against damage from rolling loads following installation by covering with plywood.

C. Clean tiles by method specified by the manufacturer.

-END OF SECTION-