

**SUGGESTED SPECIFICATION  
SECTION 124813  
ENTRANCE FLOOR MATS AND FRAMES**

**Part 1 General**

**1.01 Summary**

- A.** This section includes the following types of flooring systems:
  - 1. Mechanically Fabricated Aluminum Floor Tile Assemblies
- B.** Related Sections: The following sections contain requirements related to this section:
  - 1. Special requirements of various flooring types; refer to section 09400 "Terrazzo"

**1.02 References**

- A.** American Society for Testing and Materials (ASTM)
- B.** The Aluminum Association
- C.** The Carpet and Rug Institute (CRI)
- C.** International Organization for Standardization (ISO)
- D.** Cradle to Cradle Products Innovation Institute (C2C)

**1.03 Submittals**

- A.** General: Submit the following in accordance with conditions of contract and Division 1 specification section 01300.
- B.** Product data for each type of floor tile specified including manufacturer's specifications and installation instructions.
- C.** Shop drawings in sufficient detail showing layout of tile system specified including details indicating construction relative to materials, direction of traffic, spline locations, profiles, anchors and accessories.
- D.** Samples for verification purposes: Submit an assembled section of floor tile members with selected tread insert showing each type of color for exposed floor tile and accessories required.

- E. Maintenance data in the form of manufacturer's printed instructions for cleaning and maintaining floor tile system.

**1.04 Quality Assurance** *[Specifier note: To maximize the life cycle of the entrance flooring and its appearance, the following items are critical: i) Most C/S mats are designed for traffic crossing perpendicular to the rail. ii) When designing an entranceway it is preferable to minimize the need for turning on the mat. iii) We recommend that splices in wider units (above 10') not be positioned in the middle of a door opening wherever possible.]*

- A. Flammability in accordance with ASTM E648, Class I, Critical Radiant Flux, minimum 0.45 watts/m<sup>2</sup>
- B. Slip resistance in accordance with ASTM D-2047-96, Coefficient of Friction, minimum 0.60 for accessible routes. *[Specifier note: Slip and fall accidents are a major concern in commercial entranceways. We recommend that approved systems be certified by the manufacturer as meeting a minimum coefficient of friction of 0.60, when tested in wet conditions.]*
- C. Standard rolling load performance is 300 lb./wheel with larger loading requirements as specified (load applied to a solid 5" x 2" wide polyurethane wheel, 1000 passes without damage). *[Specifier note: For entranceways in businesses such as retail outlets, airports, banks, and casinos, rolling load performance is a critical factor. We recommend that units with the highest practical loading capability be specified for such entrances.]*
- D. Single Source Responsibility: Obtain aluminum floor tile system from one source of a single manufacturer.
- E. Utilize superior structural aluminum alloy 5000 series for tile components.
- F. Utilize a manufacturer that is ISO 9001 & 14001 certified.

### **1.05 Delivery, Storage and Handling**

- A. Deliver materials to the project site ready for use and fabricated in as large sections and assemblies as practical, in unopened original factory packaging clearly labeled to identify manufacturer.

### **1.06 Project Conditions**

- A. Field measurements: Check actual openings for aluminum tile system by accurate field measurements before fabrication. Record actual measurements on final shop drawings. Coordinate fabrication schedule with construction progress to avoid delay of work.

- B.** Recessed Conditions: IMPORTANT: Coordination with Division 03 00 00 Concrete specifications is required. For proper installation, the concrete recess must be flat and smooth throughout. If the recess is formed by a concrete contractor, the pour dimensions may require leveling grout to achieve the proper depth and a smooth finish. The final recess depth will match the specified product and must be field verified. For proper frame installation, the side walls of the concrete recess must also be straight and smooth. Inconsistencies with the recess and side walls must be remediated prior to product installation.

## **Part 2 Products**

### **2.01 Manufacturers**

- A.** Drawings and specifications are based on manufacturer's literature from **Construction Specialties**, Inc. unless otherwise indicated. Other manufacturers must comply with the minimum levels of material and detailing indicated on the drawings and specified herein.

### **2.02 Materials**

- A.** Aluminum - ASTM B 209, alloy 5000 series for floor tile fabrication.
- B.** Tread insert options - refer to section 2.05.
- C.** 3M Dual Lock

### **2.03 Floor Mat/Grid**

*[Specifier note: Select 1 of 8 standard patterns, Kinetic, Odyssey, Windmill, Transit, Tease, Pinwheel, Cross Hatch, Honeycomb, or work with C/S design team to create a custom design.]*

- A. Model and Description – Floormat**- ¼", ½", and ¾" depths available. Cradle 2 Cradle Silver certified (carpet insert only). Shall be mechanically fabricated from solid 5052-H32 aluminum plate with a minimum thickness of 0.25 inch. Machining will have slots providing free area for fall through of dirt and debris. Machining will also allow for recessed installation of chosen inserts. Fully fabricated modules will be supplied in clear anodized finish. *[Specifier note: Choose depth.]*

**2.04 Frames** *(Select one below and delete others) [Specifier note: Although most entrance flooring systems can accommodate some variation in the flatness of mat well bases, it is recommended that the surface beneath the mat or grid be finished with a leveling screed to ensure optimum performance of the system.]*

- A. RA – Recessed application:** No frame required.
- B. TA – Surface Mounted Aluminum Frame (For ½" overall depth)** shall be a 1 5/8"(38.1mm) wide 6105-T5 Aluminum alloy and permanently positions mat for surface mounted applications. Frame color shall be supplied in mill (standard) or one of 9 optional colors as offered by manufacturer. (Custom colors are available.) Choose from anodized or heavy-duty powder coat finish. Note: Mill finish frames in contact with concrete to be primer coated.
- C. TA – Surface Mounted Aluminum Frame (For ¾" overall depth)** shall be a 3 1/2"(38.1mm) wide 6063-T6 aluminum alloy and permanently positions mat for surface mounted applications. Frame color shall be supplied in standard mill or one of 9 optional colors as offered by manufacturer. (Custom colors are available.) Choose from anodized or heavy-duty powder coat finish. Note: Mill finish frames in contact with concrete to be primer coated.

## **2.05 Tread Insert** *(Select one below and delete others)*

- A. RR- Recycled Rubber ECO Surfaces® Recycled Rubber Insert-** High slip resistant rubber (SC of 90) insert manufactured with recycled rubber and EPDM (26%-90% dependent on color chosen).
- B. CP- Shaw® Path series or Patcraft® Paseo series Carpet Insert-** 100% solution dyed Nylon 6 fiber, with non-woven synthetic backing, designed for high traffic areas. *(Similar carpet brands may be used pending CS approval and testing. Select one, delete others)*
- C. No Insert-** Certain patterns do not require any insert material.

## **Part 3 Execution**

### **3.01 Examination**

- A. Verification of conditions:** Examine areas and conditions under which work is to be performed and identify conditions detrimental to proper or timely completion.
  - 1. Do not proceed until unsatisfactory conditions have been corrected.

### **3.02 Preparation**

- A. Manufacturer shall offer assistance and guidance to provide a template of irregular shaped mat assemblies to ensure a proper installation.**

### **3.03 Installation**

- A.** Install the work of this section in strict accordance with the manufacturer's recommendations.
- B.** Set mat at height recommended by manufacturer for most effective cleaning action.
- C.** Coordinate top of mat surface with bottom of doors that swing across to provide ample clearance between door and mat.

### **3.04 Cleaning**

- A.** It is important to the life cycle of the entrance mat that a maintenance schedule be developed which includes regular vacuuming and extraction that correctly matches the amount of traffic the mat incurs.

### **3.05 Protection**

- A.** After completing required frame installation and concrete work, provide temporary filler of plywood or fiberboard in recess, and cover frames with plywood protective flooring. Maintain protection until construction traffic has ended and project is near time of substantial completion.
- B.** Defer installation of floor mats until time of substantial completion of project.