

*Note: After downloading this spec, the Specifier must choose the correct Finish, Insert and Frame options and delete all other options to produce an accurate specification.*

**MB-300 MB-400**

## **PART 1 - GENERAL 1.01 SUMMARY**

### **MASTER SPECIFICATION**

#### **SECTION 12484**

#### **FURNISHINGS –ENTRANCE SYSTEMS**

1. Section includes: [Entrance matting systems, including aluminum mats and frames]
2. Related Sections: The following sections contain requirements related to this section:
  1. Grouting frames into recess; refer to Section 03 30 00, "Cast-in-Place Concrete" and Section 03 60 00,

"Grouting."

2. Special requirements of various flooring types; refer to Section 09400, "Terrazzo."

#### **1.02 REFERENCES**

1. American Society for Testing and Materials (ASTM)
2. The Aluminum Association
3. The Carpet and Rug Institute (CRI)
4. The National Floor Safety Institute (NFSI)
5. Other referenced documents

1. LEED v3 and LEED v4

#### **1.03 SYSTEM DESCRIPTION**

A. Performance Requirements: Provide [aluminum entrance floor mat system], which has been manufactured and installed to maintain performance criteria stated by manufacturer without defects, damage or failure.

#### **1.04 SUBMITTALS**

1. General: Submit listed submittals in accordance with the Conditions of the Contract and Division 1 Submittal Procedures Section.
2. Product data: Submit product data, including Manufacturer's specification sheet and installation instructions for specified products. Include methods of installation and substrate preparation for each type of substrate.

C. Sustainable Design Submittals: For projects requiring LEED submittal based on LEED v3

1. Submit documentation substantiating that MB-300 Series and MB-400 Series products contain a minimum of 49% pre-consumer recycled content and therefore contributes to Materials & Resources Credit 4.
2. Submit documentation substantiating that the project is located within 500 miles of the manufacturing facility and therefore contributes to Materials & Resources Credit 5
3. Submit documentation substantiating that the project has permanently installed MB-300 Series mat or MB-400 Series mat that is at least 10 feet in length and therefore contributes to Indoor Environmental Quality Credit 5.
4. Sustainable Design Submittals: For projects requiring LEED submittal based on LEED v4
  1. Submit documentation substantiating that MB-300 Series mat or MB-400 Series mat contain a minimum of 49% pre-consumer recycled content and therefore contributes to Materials & Resources Sourcing of Raw Materials Credit.
  2. Submit documentation substantiating that the project is located within 100 miles of the manufacturing facility and therefore contributes to Materials & Resources Regional Material Credit.
  3. Submit documentation substantiating that the project has permanent entryway system at least 10 feet in length that is maintained on a weekly basis and therefore contributes to Indoor Environmental Quality Enhanced Indoor Air Quality Strategies Credit.
5. Shop drawings: Submit shop drawings showing layout, profiles and product components, including anchorage, accessories, finish colors, patterns and textures.
6. Samples: Submit samples for each type and color of exposed entrance mat, frames and accessories required. Provide samples of mat materials.
7. Quality Assurance Submittals: (1) Certified test reports showing compliance with specified performance characteristics and physical properties, and (2) Manufacturer's Installation Instructions.
8. Closeout Submittals: (1) Cleaning & Maintenance Data (Include methods for maintaining installed products and precautions against cleaning materials and methods detrimental to finishes and performance), and (2) Warranty.

#### **1.05 QUALITY ASSURANCE**

1. Standard rolling load performance: 350 lb./wheel rating for the MB-300 product and 350 lb./wheel rating for the MB-400 product. (testing used 1,000 passes) ASTM F2753 Rolling Load Over Resilient Floor Covering.
2. Slip resistance in accordance with ASTM C1028 Coefficient of Friction, minimum 0.60 for accessible routes.
3. Flammability in accordance with ASTM E648, Class 1, Critical Radiant Flux, minimum of 0.45 watts/m<sup>2</sup>. Exceeds Class 1 rating as specified in NFPA Life Safety Code 101 and IBC 804.2 Classification.
4. Corrosive resistant surpassed in PPS 1001 Corrosion testing.
5. Single Source Responsibility: Obtain floor mats/grids and frames from one source of a single manufacturer.
6. All materials are sourced domestically in the continental United States, with 99.8% of all sourced materials being manufactured domestically. Finished product manufactured 100% in the United States in accordance with BAA.

#### **1.06 SEQUENCING/SCHEDULING**

1. Ordering: Comply with Manufacturer's ordering instructions and lead-time requirements to avoid construction delays.
2. Delivery: Deliver materials in Manufacturer's original, unopened, undamaged packaging.
3. Storage: Store materials in temperature and humidity conditions recommended by Manufacturer and protect materials from exposure to harmful weather conditions.
4. Installation: Except as otherwise indicated herein, sequencing or scheduling for performance of work of this section in relation with other work is Contractor's option. Delay installation of mats until near time of substantial completion for the project.

### **1.07 PROJECT CONDITIONS**

1. Temperature: Maintain temperature where products will be installed before, during and after installation as recommended by Manufacturer.
2. Field Measurements: Where possible, verify actual measurements by field measuring before fabrication and include measurements in shop drawings. To avoid construction delays, coordinate field measurements and fabrication schedule based upon construction progress.
3. Recessed Conditions: It is imperative that the concrete recess is entirely flat and smooth for successful installation. If a concrete contractor is responsible for forming the recess, the pour dimensions may require leveling grout to achieve the proper depth and a smooth finish. The final recess depth must match the specified product and must be field verified. Also, for proper frame installation, the side walls of the concrete recess must also be straight and smooth. Variances with the recess and side walls must be adjusted/corrected prior to product installation.

## **PART 2 - PRODUCTS**

### **2.01 ACCEPTABLE MANUFACTURER**

A. Provide MB-300 Series (aluminum hinge) or MB-400 Series (vinyl hinge)

### **2.02 MATERIALS**

A. Tread rails shall be manufactured from aluminum, complete with co-extruded soft-durometer cushions, supplied in mill finish unless otherwise indicated (anodized – clear, light bronze, medium bronze, dark bronze or black).

MB-300 Series with exposed hinge rail connectors shall be extruded 6063-T6 alloy complete with perforations for drainage.

MB-400 Series shall be extruded 6063-T6 alloy complete with extruded soft-durometer vinyl hinge for coupling rails together.

#### **1. LEED v3**

1. IEQ Credit 5: MB-300 Series and MB-400 Series are designed for permanent installation.
2. MR Credit 4: 49% pre-consumer recycled.

Section 124813: Floor Mats and Frames Page 4 of 5

c. MR Credit 5: Material must be manufactured within 500 miles of project location.

2. LEED v4

1. MR Sources of Raw Materials Credit: 49% pre-consumer.
2. MR Regional Material Credit: Material must be manufactured within 100 miles of project location.
3. IEQ Enhanced Indoor Air Quality Strategies Credit: MB-300 Series and MB-400

Series are LEED acceptable permanent entryway systems.

Tread insert options for MB-300 and MB-400:

1. **MonoScrape™ HD Carpet Inserts** shall meet the Carpet and Rug Institute's standard for good indoor air quality. Fibers shall include a minimum of 100, 12 mil monofilament fibers per square inch and colorfast, solution dyed nylon. Available in one of 12 standard colors as offered by Manufacturer. Each polybrush carpet fiber and monofilament shall be fusion-bonded to a rigid two-ply backing to prevent fraying and supplied in continuous splice-free lengths. Carpet weight shall be 33 oz./sq. yd.
2. **Polybrush Inserts** shall be solution-dyed polypropylene fibers with 4,500 total denier, available in one of three standard colors as offered by the Manufacturer. The textured fibers have ultraviolet blockers and color as an integral part of the filament. Each carpet fiber and monofilament shall be fusion-bonded to a rigid two-ply backing to prevent fraying and supplied in continuous splice-free lengths. Carpet weight shall be 33 oz./sq. yd.
3. **Vinyl Inserts** shall include a flexible dual durometer vinyl insert in any one of three colors as offered by Manufacturer.
4. **Vinyl Abrasive Inserts** shall include a flexible abrasive grit tape, bonded to a rigid vinyl tread insert. Tread insert shall be supplied in black, complete with one of five abrasive colors as offered by Manufacturer.
5. **Serrated Aluminum Inserts** shall be extruded 6063-T52 alloy. Serrated aluminum inserts shall be in mill finish unless otherwise indicated (anodized – clear, light bronze, medium bronze, dark bronze or black).

Framing for Aluminum BaseMat Series

1. **B-1 - Beveled Vinyl Frame** shall be 2" wide, with tapered lead-in edge for surface mount applications. The B-1 beveled vinyl frame is available in black only.
2. **B-2 - Beveled Aluminum Frame shall be 1-3/8" wide 6063-T5 aluminum alloy and permanently secures mat for surface mount applications. Frame color shall be supplied in mill finish unless otherwise indicated (anodized – clear, light bronze, medium bronze, dark bronze or black).**
3. **L-3 - Aluminum Recessed Angle Frame** shall be a 7/16" deep recessed frame in 6063-T5 aluminum alloy with 1/8" wide exposed surface. Frame color shall be in mill finish unless otherwise indicated (anodized – clear, light bronze, medium bronze, dark bronze or black).
4. **THFR - Threshold Frame** shall be supplied in 6063-T5 aluminum alloy. For surface/recess installations to provide a flush transition from the entryway door threshold to the mat surface. The frame does not require a leveling screed. The threshold frame shall be supplied in mill finish unless otherwise indicated (anodized – clear, light bronze, medium bronze, dark bronze or black).

1.01

PRODUCT SUBSTITUTIONS

A. Substitutions: No substitutions permitted.

## **PART 3 – EXECUTION**

### **3.01 SUBSTRATE PREPARATION**

A. Examine substrates and conditions where floor mats will be installed. Do not proceed with installation until unsatisfactory conditions are corrected. Subfloor shall be clean and dry, and within acceptable tolerances.

### **3.02 INSTALLATION**

1. Sizes: Shop-fabricate units of floor mat to greatest extent possible in sizes as indicated. Where not indicated otherwise, provide single unit for each mat installation, but do not exceed manufacturer's maximum size recommendation for units intended for removal and cleaning. Where joints in mats are necessary, space symmetrically and away from normal traffic lanes. Miter corner joints in framing elements with hairline joints or provide prefabricated corner units without joints. Where possible, verify sizes by field measurement before shop fabrication.
2. Accessories: [Where indicated for recessed or wall-to-wall installations, provide aluminum framework as recommended by Manufacturer.] [Where indicated for surface mount installations provide beveled aluminum frame or beveled vinyl frame.]
3. General: Strictly comply with Manufacturer's installation instructions and recommendations. Coordinate installation with adjacent work to ensure proper clearances and to prevent tripping hazards.

### **3.03 CLEANING AND PROTECTION**

1. General Cleaning: Refer to Manufacturer's Cleaning and Maintenance Instructions.
2. Owner's Personnel: Instruct Owner's personnel in proper maintenance procedures.
3. Protection: Protect installed product and finish surfaces from damage during construction and until acceptance.

END OF SECTION