

**SECTION 12484
ENTRANCE MATS AND GRATES**

Part 1 - General

1.01 Summary

- A. This section includes the following types of Flooring Systems:
 - 1. Entrance Grating and Framing Assemblies
- B. Related Sections
 - 1. 03300 "Cast-In-Place Concrete" and 03600 "Grout" for cast-in-place and grouting of recessed frame

1.02 References

- A. American Society for Testing and Materials (ASTM)
- B. National Fire Protection Agency (NFPA)
- C. The Aluminum Association, Inc.
- D. The Carpet and Rug Institute (CRI)
- E. The National Floor Safety Institute (NFSI)
- F. Surface Flammability of Carpets and Rugs (CFR 16 Part 1630 and 1631)

1.03 Submittals

- A. Submit the following in accordance with specification section 01300 and contract requirements.
- B. Product data for each type of entrance grating and frame to include:
 - 1. Product detail drawing including product cross-section and technical information.
 - 2. Manufacturer's product specification, installation instructions.
 - 3. Manufacturer's maintenance and cleaning instructions.
 - 4. Shop drawings showing traffic direction, dimensions, sectioning, insert types and colors, metal finishes and framing.
- C. Product samples representing the assembled grating with the selected insert and insert color selector, and frame assembly including installation accessories.

1.04 Quality Assurance

- A. Flammability: Critical radiant flux 0.45 watts/m² or greater, in accordance with ASTM E648. Life Safety Code[®] NFPA 101, Class 1 Interior Floor Finish Testing and Classification.
- B. Slip Resistance: Coefficient of friction 0.60 or greater, in accordance with ASTM D2047 tested in wet conditions.
- C. Rolling Load: No deformation with 350 lb/wheel and minimum of 2500 passes. Load applied to a 5" diameter, 2" wide solid polyurethane wheel.
- D. Maximum deflection of 0.080 inch with 1000 pound uniform load, assembled with vibration resistant aircraft industry fasteners; snap-fit assembly not permitted.
- E. Single Source: Obtain entrance grating and frames from a single source to ensure dimensional compatibility.

1.05 Delivery, Storage and Handling

- A. Deliver materials in unopened original factory packaging, labeled to identify product and manufacturer. Store in controlled environment. To avoid damage do not stack other material on top of matting or frames.

1.06 Project Conditions

- A. Coordinate installation of recess frame with concrete construction. Install frames to ensure dimensions provided in shop drawings are maintained. Finished recess must be flat and level. Defer frame installation until related interior finish work is in progress.

Part 2 - Products

2.01 Manufacturers

- A. Supply entrance grating and frames as manufactured by the Architectural Products Division of Pawling Corporation, 32 Nelson Hill Road, Wassaic, NY 12592. Other manufacturers must comply with requirements indicated in this specification, products data, and shop drawings.

2.02 Materials

- A. Aluminum: ASTM B221, alloy 6105-T5 and 6063-T5 for extrusions.

**Product Specification
RG-500 Drain-Well[®] Entrance Grate**

**Pro•Tek[®]
Systems
Entrance
Matting &
Gratings**

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Building
Products
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- B. Rigid Vinyl: High impact, rigid PVC.
- C. Flexible Vinyl: 80 Durometer, flexible PVC.
- D. Tread Inserts: Refer to section 2.03.

2.03 Entrance Grating

- A. Pawling Corporation model RG-500 Drain-Well® Entrance Grating. Manufactured from high strength aluminum alloy, structural tube, tread-rail extrusions spaced at 1.5" centers, fastened to high strength aluminum alloy cross-support channels spaced at 12" centers perpendicular to tread rails. Cross-support and tread rails shall be mechanically assembled with vibration resistant, high strength steel, blind rivets. Tread rails to include continuous tread rail insert (selected from options listed below) for exposed walking surface. Support rails to include continuous dual-durometer vinyl cushion for contact with substrate. Tread rails are standard in mill finish aluminum. Also available in clear, medium bronze, and black anodized finishes.
- B. Tread Inserts (select from options listed below)
 - 1. Rigid-Back Nylon "SNC" Carpet: Solution dyed, 100% nylon, 33.8oz/sqyd available in manufacturer's standard colors. Carpet fibers fusion bonded to continuous two-ply rigid backing. Carpet fibers incorporate anti-stain (Teflon), anti-static, and anti-microbial additives.
 - 2. Bristle Filament "BF" Carpet: Solution dyed polypropylene fibers, 27oz/sqyd with a 50% blend of 600/12-denier multi filament and 595/D1 monofilament, available in manufacturer's standard colors. Passes 16 CFR Part 1630 (FF 1-70) and 16 CFR Part 1631 (FF 2-70) flammability. Bristle Filament is not Class 1. Carpet fibers to be fusion bonded to continuous two-ply rigid backing. Fibers are waterproof and incorporate UV inhibitors for exterior use.
 - 3. Maxi-Tuft Long Wear "MLW" Carpet: Spaced dyed, 100% polyamide nylon, tetra-lobal, 30oz/sqyd available in manufacturer's standard colors. Carpet fibers fusion bonded to continuous two-ply rigid backing. Carpet fibers incorporate anti-stain, anti-static, and anti-microbial additives.
 - 4. Rigid Corrugated Vinyl "RCV": Rigid vinyl extrusion with corrugated surface for improved slip resistance, available in manufacturer's standard colors. Manufactured with UV stable pigments for improved color fastness.
 - 5. Corrugated Aluminum "CA": Alloy 6105-T5 extruded aluminum with corrugated surface for improved slip resistance, available in mill finish.
 - 6. Abrasive Aluminum "AA": Alloy 6105-T5 extruded aluminum with applied medium grit abrasive for maximum slip resistance. Aluminum is mill finish with abrasive available in manufacturer's standard colors.
- C. Framing and Cross Supports
 - 1. Level Bed Deep Recess: Model RGF-500, alloy 6063-T5 extruded aluminum recessed framing. Installed frame shall provide 1/2" exposed perimeter trim and a 4 1/2" deep recess. Standard in mill finish aluminum, also available in clear, medium bronze, and black anodized finishes (*specify anodized finish for best resistance to contact with concrete*). Installer to use self-leveling screed to ensure smooth, flat recess.
 - 2. Cross Supports: Shall be alloy 6105-T5 extruded aluminum I-Beam, 3" flange width, 1/4" wall thickness spaced at 12" centers to support each RG-500 cross-support channel. Beams are mechanically fastened to perimeter frame at both ends. Clearance for drainage shall be provided between beam and bottom of recess. Spans in excess of 48" incorporate adjustable height support legs occurring in pairs fastened to opposing sides of I-Beam.
- D. Optional Drain Pan
 - 1. Cover bottom of recess with 16-gauge clear anodized aluminum sheet liner. Liner shall engage perimeter frame along all outer edges. Installer to seal butt joints and liner junction to frame with silicone caulk.

Part 3 - Execution

3.01 Examination

- A. Examine substrate and area where grating is to be installed. Do not proceed until unsatisfactory conditions have been corrected.

3.02 Installation

- A. Install products in accordance with manufacturer's installation instructions.
- B. Recessed opening must be flat, 1/8" in 10'-0", and free of debris before grating is installed.

3.03 Protection

- A. Protect installed frames from damage by using temporary plywood filler in recess opening. Cover exposed frames with similar materials until construction traffic is minimized. Install gratings when project is near substantial completion and no further wheeled traffic or major construction operations will affect grating.

3.04 Cleaning

- A. Include grating and recess in a routine cleaning and maintenance program. Regular cleaning will maximize functionality, appearance, and life span of the product. Refer to manufacturer's cleaning and maintenance instructions for additional information.