



## Defender

### 3/8" Ribbed Commercial Entrance Mat Installation & Maintenance Instructions

*These instructions supersede any verbal or written instructions from Amarco Products representatives, and must be followed in order for the warranty to be in effect.*

## INSTALLATION INSTRUCTIONS

### Delivery

- Order materials in compliance with product supplier's ordering and lead time requirements, in order to take delivery at least 48 hours in advance of installation (to allow materials to acclimate to job site conditions).
- Accept delivery of materials only if they are in unopened, undamaged packaging that bears the name and brand of the manufacturer or supplier, project identification, and shipping and handling instructions.

### Storage

- Store material in original packaging in areas that are enclosed and weather tight with the permanent HVAC system set at a temperature between 65°F and 80°F for a minimum of 48 hours prior to commencement of installation.
- Roll Goods should be removed from shipping packaging, unrolled to lay flat and acclimatized in installation area whenever possible. Reverse rolling the product often times aids in relaxing the roll memory of the product. Room, floor covering and adhesive must be at a temperature or 65 F degrees for 48 hours prior to and after installation.

***NOTE: If material is flattened or distorted during storage or transporting, do not attempt to install it.***

### Materials and Accessories Required

Consult the appropriate Material Safety Data Sheets (MSDS) for proper handling of accessories.

- **Flooring:** Amarco Products' Defender
- **Adhesive:** Amarco Products' multi-purpose adhesive
  - **Spread rate:** approximately 110 - 125 sq. ft. per gallon
  - **Trowel size:** 3/32" x 3/32" x 3/32" V-notch
  - **MVER:** 5 lbs/1,000 sqft/24 hr
  - **Relative Humidity:** 86% or less
  - **pH range:** 7-9
- **Other:** tape measure, straight edge, caulk line, utility knife and 100-lb, three-section floor roller

## Substrate Preparation and Pre-installation Testing

### All substrates

- The substrate must be sound, clean, permanently dry, perfectly smooth, and free of cracks and contaminants, including paint, old adhesive, curing compounds, oil, grease, wax, asphalt, or other contaminants that could negatively affect the performance of the adhesive. Any irregularities in the substrate will telegraph (show through) to the finished floor.
- Floor laying work shall not begin until the installer has assessed and approved the substrate and subfloor conditions.

### Concrete substrates and subfloors

- Ensure that the general contractor has followed ASTM F710. ASTM F710 includes requirements for moisture and pH testing, smoothness, flatness, concrete strength, and the presence of a vapor retarder under the slab. ASTM F710 requires that all concrete slabs be tested, regardless of age or grade level, using the Calcium Chloride test (ASTM F1869) and Relative Humidity test (ASTM F2170). No other test methods are acceptable. The General Contractor and installer shall both keep records of all tests related to ASTM F710 on file.
- Test procedures shall be followed exactly in order for test results to be valid. (Building shall be at in service temperature and humidity, concrete shall be properly cleaned, etc.) See ASTM F2170 for details. It is recommended that a qualified, independent third party conduct the tests.
- Test result requirements using Amarco Multi-purpose are:
  - ASTM F1869: maximum MVER of 5 lbs/1000 sq ft/24 hrs
  - ASTM F2170: relative internal humidity of 86% or less
  - pH test: pH between 7.0 and 9.0

*Readings below 7.0 and above 9.0 can adversely affect flooring or adhesives, or both.*

### Site Conditions

- The flooring shall be installed only after other trades have finished, and a permanent HVAC system is operational. Temporary heat is not acceptable. During installation, maintain the room temperature between 65°F and 80°F. Relative humidity between 40% and 86% is preferable. Excessively high or low interior air relative humidity will influence curing of floor patching materials and adhesive open times.
- Maximize fresh air ventilation by using exhaust fans, at point of use, and by opening windows and doors as necessary. Face fans out of the area where flooring is being installed, not into the area.
- Because some materials used during installation may be flammable, make sure no sources of ignition or open flame exist near the use of those materials.

## Layout

- The architect or end user should be shown the proposed installation layout including any intended seam locations, with the goal of keeping seam visibility to a minimum. Position seams so that:
  - Main traffic runs parallel to – rather than across – the seam
  - Light does not strike directly across the seam.
  - The seams are away from areas subject to pivoting or rolling traffic.
  - In doorway openings connecting adjoining rooms, parallel seams are required.
- The flooring dealer or contractor shall provide a layout drawing for the intended installation that contains the following information
  - Date and scale of drawing
  - Location, swing, and clearance of all doors
  - Existing substrate/subfloor conditions
  - Notation identifying who is responsible for:
    - removal of existing floor coverings and/or underlayments
    - preparation of existing substrate
    - removal of debris from new floor covering installation
    - protection of finished floor covering after installation
    - Initial maintenance procedures
  - Name of manufacturer, product style, and pattern to be installed
  - Product quantities required
  - Seam layout including pattern match requirements (if required)
  - Location and type of all edge moldings and base required
- The end user shall be provided a copy of the layout drawing for approval prior to installation.

## Installation

1. 24 hours prior to installation, measure the area to be carpeted. Lay out the roll goods on the subfloor under normal, occupied lighting conditions in the configuration required for installation. This step will ensure the roll goods acclimate to the climate properly.
2. Make the necessary cuts and dry fit the cuts into place.
  - Recommended seaming techniques:
    - “Row cutting” - Proper pattern matching and satisfactory seams in carpets are best achieved when the carpet is cut along the manufacturing tuft rows. This is commonly known as “row cutting”. When removing the selvage edges care must be taken to ensure that none of the yarn that involves the pattern is removed

- Lengthwise seam cutting - Define the tuft row to be cut by parting the pile with a row finding device such as: screwdriver, awl or comb along the length of the proposed cut. Start the cut by making a small incision on the edge with a carpet knife. Insert the cutter between the backing yarns and cut along the tuft row. The cutter blade should always be positioned on the proper side of the cutter to insure the best seam possible; this may require the installer to make some trial cuts to determine the best side of the cutter the exposed blade should be on.
  - Cross/Butt/End seams - Most cut pile carpets can be row cut from the top side using a loop pile or cushion back cutter. Installers may find some products are easiest cut from the back side while following a "rib" tuft row utilizing a conventional carpet cutting knife.
  - Overlap - Place one piece of carpet over the other with an overlap of one inch. Use the top piece of carpet as your guide, and then simply cut along its edge. Both pieces should butt together tightly.
  - Seams must be positioned so that, where possible:
    - They run the length of the area.
    - Main traffic flow runs along, rather than across, the seam.
    - Natural light does not strike across the seam.
    - Are away from areas subject to pivoting traffic.
    - Are not perpendicular to doorway openings.
3. It is the installer's responsibility to inspect the dry laid installation and notify the appropriate authority of any imperfections or irregularities prior to final adhesive installation.
  4. After dry fitting the carpet, thoroughly sweep the substrate to remove all dirt and debris before adhesive application.
    - Any irregularities on the subfloor can telegraph through the carpet.
    - Dust, grease and other debris on the subfloor can cause adhesion issues with the adhesive.
  5. After removing all debris and contaminants from the substrate, position the carpet in the configuration required for installation.
  6. Carefully fold back the carpet seams exposing the subfloor.
  7. Spread adhesive with a 3/32" V-notched trowel. Amarco Products multi-purpose adhesive coverage will be approximately 110 - 125 sq.ft. per gallon. Apply only as much adhesive as can be installed within 30 minutes.
  8. Lay the breadth of the carpet into the adhesive and work out any air pockets. Lay the second breadth into the adhesive and work our any air pockets toward the seam.
  9. Using a 100-lb, three-section floor roller, roll the adhered areas. Roll at least twice, once in each direction (horizontally and vertically) to ensure that the adhesive has transferred completely to the backing. Refer to adhesive manufacturer's instructions for detailed instructions.
  - 10.Repeat steps 3-8 for the remaining floor.
  - 11.Once finished, smooth the entire floor again with the roller.

## Clean Up and Final Finish

- Maintain the room temperature between 65°F and 80°F for 48 hours after installation. Thereafter, maintain temperature at a minimum of 55°F.
- Commercial vacuum to clear the area of debris and grit.
- Keep all traffic off flooring for 24 hours to prevent indentation while the adhesive sets.
- Wait 72 hours before doing initial cleaning or allowing rolling traffic or furniture on the floor (Initial cleaning shall follow the latest version of the maintenance instructions for Defender).
- Covering exposed edges of flooring is recommended.
  - Use product coving or cove base molding on the walls around perimeter of room and protective molding at doorways or areas where the new flooring will fit against existing flooring. Use cap molding on walls if the flooring will be installed as coved installation.
  - If the exposed edge of new flooring extends above adjacent existing flooring, a protective molding must be used.
- Installing entrance matting systems at all exterior entrance ways is recommended to maximize the useful life and appearance of the flooring.
- Upon completion of the job, the end user shall sign a Job Completion Ticket.

## MAINTENANCE INSTRUCTIONS

*The following cleaning and maintenance instructions are recommended to uphold the appearance and effective performance of the product.*

1. **Preventative maintenance:** Because 90% of all dirt in a building comes in on footwear, Amarco Products strongly recommends installing and maintaining entrance matting (preferably permanently installed) at all outdoor entrances (20-30 linear feet for major entrances; less for infrequently used entrances). Doing this will improve indoor air quality, reduce flooring maintenance costs, and lengthen the life of your interior floors.
2. **Furniture protection:** Protect flooring from damage by furniture by using the proper glides, casters and/or floor protectors. Prevent damage by wheeled furniture, appliances, dollies, pallet jacks and etc by using wheels or casters that are appropriate for the load being carried. When moving very heavy objects across the floor, even if they are on wheels, it is recommended to cover the floor with plywood or hardboard panels to prevent indentations, scratching or other damage to the floor.
3. **Routine cleaning:**
  - Vacuum cleaning using a commercial brush vacuum cleaner
  - Removing dirt/debris is most effective on dry matting.
  - Recommendations for vacuuming frequency:
    - Heavy foot traffic/soiling: 1x per day
    - Light foot traffic/soiling: 2-3x per week
    - Occasional foot traffic/minimal soiling: 1x per week

4. **Deep cleaning:**

- Vacuum matting and remove any spots.
- Deep clean matting using the Hot Water Extraction method.
- Extraction cleaning removes deeply embedded soils and should be performed as needed, based on traffic and soil levels.
- Best results and quickest dry times are achieved with a commercial truck-mounted steam extraction machine.
- When clear water is obtained during the extraction, the dirt has been removed from the carpet.
- Recommendations for deep cleaning frequency.

5. **Spot removal:**

- Remove spills and spots as soon as possible after they occur.
- Remove solid components using a scoop, liquids using a clean, white cloth or tissue paper.
- Always treat the spot with a clean, damp cloth.
- Always works towards the middle of the spot, in the direction of the pile.
- Pat on the spot, do not rub; Let the spot dry then vacuum the treated area.
- Call in an expert for dried or hardened spots, who can prevent the carpet from getting damaged by using the right products.

6. **Gum removal:**

- Excess chewing gum should be scraped off with a standard putty knife.
- Chewing gum residue may require use of a citrus-solvent based spot remover from a janitorial supply distributor.

7. **Ice melt removal:**

- To prevent ice melt build-up, vacuum periodically throughout the day when ice melt is being used.
- Follow the "deep cleaning" instructions in section 4 to remove ice melt residue.