



# 3M™ Safety-Walk™ Cushion Matting 5270, 5270E, 5270YE

## Technical Data Sheet

April 2014

### 1) Product Description

The product is a nonwoven floor matting made from continuous vinyl filaments with a solid vinyl top surface. The mat is suitable for heavy foot traffic in dry areas and is motor oil resistant. The mat provides a comfortable surface for standing or walking. The raw materials used in this mat are silicone free.

### 2) Intended Use

Provide comfort and less fatigue where workers are standing or walking. Typical uses are in factory assembly and production areas including areas exposed to grease and/or oil. The mat is intended to reduce muscle discomfort and body aches due to fatigue in such areas.

### 3) Colors

<i>5270 Matting:</i> Black	<i>Edging:</i> None
<i>5270E Matting:</i> Black	<i>Edging:</i> Black edging on all sides
<i>5270YE Matting:</i> Black	<i>Edging:</i> Yellow edging on long dimension of mat, black edging on short dimension

### 4) Physical Requirements

<i>Property:</i>	<i>Typical Values:</i>
<b>Weight</b>	
ASTM D-418-68 Sec. 9-16	10.0 lb/yd <sup>2</sup> (4.5 kg/m <sup>2</sup> )
<b>Thickness*</b>	
ASTM D-418-68 Sect. 35-1	0.65 inches (16.5 mm)
	* Product may be compressed in package. Thickness is recovered loft.
<b>Noise Reduction Coefficient, NRC</b>	15%
<b>Coefficient of Friction</b>	
MIL-D1795D	Dry: 1.60
<b>Microbiological Properties</b>	
ASTM G-21-90	Passes – Inhibiting to fungal growth in the mat



### Flammability

DOC FF 1-70 (Pill Test)	Passes
ASTM E-648 (Flooring Radiant)	0.75 watts/cm <sup>2</sup>
Panel Test*	(no ignition)
*Recommended critical average radiantflux to be greater than 0.5 for institutional use, greater than 0.25 for residential and commercial use.	

### Electrical Properties

DC Insulation Resistance	2.0-2.3 X 10 <sup>9</sup> ohms
(ASTM D-257)	
Dielectric Strength (ASTM D 149)	19.9-20.3 KV
Volume Resistivity (ASTM D 257)	2.0 X 10 <sup>10</sup> ohms-cm

**Chemical Resistance** - All tests 7 days @ 72°F (22°C) unless otherwise noted

Water	Excellent
10% Salt Water	Excellent
Chlorinated Water	Excellent
Tri-Sodium Phosphate	Excellent
Acid chrome Plating Solution	Poor
1% Detergent Solution	Excellent
Glycerin	Excellent
Peanut Oil	Good
24% Sulfuric Acid	Excellent
10% Hydrochloric Acid	Excellent
Ethyl Alcohol	Good
Sodium Hydroxide	Excellent
Ammonium Persulfate	Excellent
Methylene Chloride (Paint Remover)	Poor
Mineral Spirits	Good
Gasoline	Good
Motor Oil	Good
Diesel Fuel	Good
Hexane	Excellent
Ferric Chloride	Excellent
<b>Excellent</b> – No observed effect on product. <b>Good</b> – Product stiffens or discolors slightly. <b>Poor</b> – Product becomes unsuitable for use.	



## 5) Installation, Seaming and Edging

---

**Installation:** Open the box and roll the mat out in the area to be covered and allow it to reach room temperature. If the mat is to be cut, see custom cutting instructions below.

**Custom Cutting:** 3M™ Safety-Walk™ Cushion Matting 5270, 5270E and 5270YE can be easily custom cut without edges fraying. Length and width dimensions may change during use. Wall-to-wall installations are not recommended.

***Tools needed:***

- Utility knife
  - Straight edge, 3-4 feet (0.9m – 1.2m) long
- If matting is to be cut to close specifications, be certain it is relaxed and not stretched. Unroll matting and allow the matting to lay undisturbed for 24 hours at room temperature.
  - Use a utility knife and straight edge for cutting. Do not use scissors.
  - If it is necessary to move matting after cutting, roll it loosely to avoid stretching.

**Seaming:** The 3M™ Safety-Walk™ Cushion Matting 5270, 5270E and 5270YE can be seamed together to make mats wider or longer than standard sizes.

- Before seaming, be certain that the matting is relaxed and not stretched. Unroll matting and allow it to lay undisturbed for 24 hours at room temperature. Avoid stretching or pulling on mat when seaming.
- Use pieces from the same roll to assure that color shade and texture are the same.

**Materials needed:**

- 3M™ Matting Seaming Tape (kit or roll)
  - 3M™ Matting Adhesive (one 3-ounce [88 ml] tube of adhesive will seam 15 linear feet [4.5 m] of matting).
- Before seaming, be certain that the matting is relaxed and not stretched. Unroll matting and allow the matting to lay undisturbed for 24 hours at room temperature. Avoid stretching or pulling on mat when seaming.
  - Use pieces from the same roll to assure that color shade and texture are the same.
1. Place pieces of matting to be seamed side by side on a clean surface.
  2. Unroll 3M™ Matting Seaming Tape between the two pieces of matting to be joined. Cut tape to length.
  3. Position the pieces of matting on seaming tape so that each piece's edge covers half the width of tape. Be sure the pieces of matting touch at the tape center but do not overlap or buckle.
  4. Fold back one piece of matting along the full seam length.
  5. Apply a continuous wavy bead of adhesive ¼ inch (6mm) from the outside edge of the exposed half of seaming tape. NOTE: When applying adhesive, work rapidly. Adhesive may cause wrinkling of seaming tape if matting is not joined within ten minutes.
  6. Return folded edge of matting to its original position and apply moderate pressure to bond adhesive.
  7. Fold back the second piece of matting along the full length of seam.
  8. Apply two additional beads of adhesive; the first along joint of seaming tape and first piece of matting, and the second in a wavy pattern ¼ inch (6mm) from the outside edge of the exposed half of seaming tape.



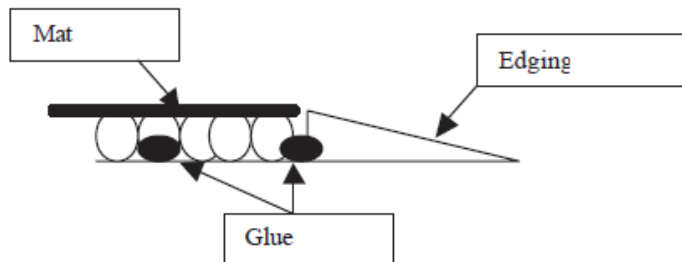
9. Return folded edge of the second piece of matting back to its original position and press firmly. At the same time, gently push both pieces of matting together to eliminate any gaps.
10. Place a weight, such as a board, along the full length of seam to maintain pressure on the bond. Allow to dry undisturbed for at least 8 hours before placing it into service.

**Beveled Edging:** Beveled edging can be easily applied to the 3M™ Safety-Walk™ Cushion Matting 5270, 5270E and 5270YE to form a tapered edge.

***Tools and materials needed:***

- Utility knife
- Straight edge, 3-4 feet long (0.9m – 1.2 meters)
- 3M™ Matting High Profile Edging
- 3M™ Matting Adhesive (one 3-ounce [88 ml] tube of adhesive will adhesive apply approximately 15 linear feet [4.5m] of edging).

Before applying edging ensure that matting and edging are relaxed and not stretched. Unroll matting and edging and allow to lay undisturbed for 24 hours at room temperature. Do not stretch or pull on matting when applying edging.



When gluing on edging, solid top of mat faces up and coils face down as shown in the figure above. Recommended maximum edge length is 12 feet (3.6 meters).

1. Arrange mat on floor so that side to be edged are straight. Trim edges with a utility knife (not scissors) and a straight edge if necessary (see Custom Cutting).
2. Cut a piece of edging the same length as the edge of mat.
3. Place edging flat on the floor, grooved side up.
4. Apply two beads of adhesive liberally to the top of edging groove.
5. Place edge of mat on top of edging groove containing adhesive. Gently work mat snugly into the corner of edging groove to ensure a good fit.
6. Place a weight, such as a board, along the full length of edging to maintain pressure on the bond. Allow to dry undisturbed for at least 8 hours before placing it into service.

## 6) Cleaning and Maintenance

---

### *Daily Maintenance*

1. Shake mat vigorously to remove debris.
2. Clean up debris under and around mat and place mat, on a clean dry floor.
3. Damp mop top surface of mat and return to service.

### *Periodic Maintenance*

1. Remove debris (see daily maintenance).
2. For difficult to remove oil, grease, and/or debris, spray or mop on a general purpose cleaner or non-chlorinated degreaser prior to cleaning.
3. Scrub solid top surface of mat with a deck brush.
4. Rinse off.
5. Allow to dry before placing back in service.



3M™ Nomad™ and 3M™ Safety-Walk™ vinyl matting has been certified by the National Floor Safety Institute (NFSI) as providing a "high traction" backing. NFSI tested these 3M™ mats using its NFSI 101-C Test Method for Measuring Dry Transitional Coefficient of Friction (TCOF) of Floor Mat Backing Materials and found each mat to have a TCOF of greater than 0.05. According to NFSI, mats lacking the high-traction backing offered by 3M™ matting are more prone to movement, which can increase the risk of migration, buckling, and curling, which, in turn, can contribute to slip, trips, and falls.

### **Important Notice:**

**Product Use:** Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the performance of 3M™ Safety-Walk™ Matting products, including the type and preparation of the surface, and the conditions of use. User is solely responsible for evaluating the product and determining whether it is fit for user's particular purpose and adequately maintained.

**Warranty, Limited Remedy and Disclaimer:** 3M warrants that its 3M™ Safety-Walk™ Matting products, if used as recommended, will be free from defects in material and manufacture for the period of one year from the date of purchase from 3M or 3M's authorized distributor. 3M MAKES NO OTHER EXPRESS OR IMPLIED WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. If a 3M™ Safety-Walk™ Matting product does not conform to this warranty, the sole and exclusive remedy is, at 3M's option, replacement of the 3M product or refund of the purchase price. This warranty does not cover product failure arising out of product abuse or misuse, or the failure to properly install or maintain the product.

**Limitation of Liability:** Except where prohibited by law, 3M will not be liable for any loss or damage arising from its 3M™ Safety-Walk™ Matting products, whether direct, indirect, special, incidental or consequential, regardless of the legal theory asserted.



Commercial  
Solutions Division  
St. Paul, MN 55144-1000  
1-800-852-9722  
[www.3M.com/floorsafety](http://www.3M.com/floorsafety)

3M and Safety-Walk are trademarks of 3M Company. ANSI is a registered trademark of American National Standards Institute, Inc. NFSI logo is a registered trademark of National Floor Safety Institute.  
Used under license in Canada.  
© 3M 2014. All rights reserved. ID:82405