Revision A, Effective April 2015

3M Graphics Warranties Technical Information Selector

Safety Data Sheets (SDS)

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Product Description

· High gain reflective industrial grade sheeting, exposed lens, retroreflective plastic-based material

Product Features

- Pre-coated with a pressure-sensitive adhesive
- · Covered with a removable protective liner
- Offers very high retroreflective efficiency and small optical elements.
- · Sealed-lens surface
- Thin construction
- Ease of angularity
- Exceptional reflective gain
- · Ease of conformability
- For various shaped items, including cylinders
- Angularity allows pickup from moving objects

Recommended Applications

- Can be used as a back-drop for motion sensors used for filming movies.
- This industrial grade reflective sheeting is recommended for applications demanding very high retroreflective efficiency; however, its use is limited to manual application since the material is too thin to perform in automatic application equipment.

Characteristics

The following technical information and data should be considered representative or typical only, and should not be used for specification purposes.

Physical Characteristics

Characteristic	Value	
Film Color	Light gray	
Retroreflection Definition	The typical coefficient of retroreflection defined is measured at a -4° entrance angle and a 0.2° observation angle. It is expressed in candlepower per foot-candle per square foot (candela/lux/square meter) per ASTM E810. The entrance angle is formed by a light beam striking the surface at a point and a line that is perpendicular to the surface at the same point.	
	An observation angle is formed by the light beam striking the reflective surface and returning to the observer. From 800 feet (249 meters), a motorist normally views a graphic at a 0.2° angle.	
Thickness	Without liner: 0.004 in (0.010 cm) With liner: 0.006 in (0.015 cm)	
Typical Luminance Factor	-4° reading: 900X Skewed 45° reading: 700X	
Temperature Resistance	Continuous exposure: 175 °F (79 °C) Intermittent exposure: 250 °F (121 °C)	
Available Sizes*	Widths: 1/2 in (1.27 cm); 3/4 in (1.90 cm); 1 in (2.54 cm); 2 in (5.08 cm); 24" (60.96 cm) Lengths: 50 yds. (45.7 m)	

^{*} Custom widths and lengths are available on request, subject to minimum order requirements.



Warranty Information

3M Basic Product Warranty

3M Graphics Products are warranted to be free of defects in materials and manufacture at the time of shipment and to meet the specifications stated in its applicable 3M Graphics Product Bulletin and as further set forth in the 3M Graphics Warranties Bulletin.

Limited Remedy

The limited remedy applicable to each warranty is addressed in the 3M Graphics Warranties Bulletin found at 3MGraphics.com/warranties.

Limitation of Liability

Except to the extent prohibited by law, 3M SHALL NOT UNDER ANY CIRCUMSTANCES BE LIABLE TO PURCHASER OR USER FOR ANY DIRECT (EXCEPT FOR THE LIMITED REMEDY PROVIDED HEREIN), INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, LABOR, NON-3M MATERIAL CHARGES, LOSS OF PROFITS, REVENUE, BUSINESS, OPPORTUNITY, OR GOODWILL) RESULTING FROM OR IN ANY WAY RELATED TO 3M'S GRAPHICS PRODUCTS, SERVICES, OR THIS BULLETIN. This limitation of liability applies regardless of the legal or equitable theory under which such losses or damages are sought.

Additional Limitations

See the 3M Graphics Warranties Bulletin at <u>3MGraphics.com/warranties</u>, for terms, additional limitations of your warranty, if any, and limitations of liability.

Application and Installation

Hand application is recommended, as the material is too thin to perform in application equipment.

Application may be made at temperatures as low as 10 °F (-12 °C) to a clean and dry surface; however, it is recommended that application be made at 60 °F (16 °C) to 80 °F (27 °C).

Avoid touching the reflective surface, since skin oils will reduce the retroreflective brightness. Brightness can be restored by cleaning with a soft cloth and a dilute solution of mild detergent in water.

The sheeting will remain serviceable for many years when properly applied to a suitable substrate and used in typical indoor or outdoor environments.

Use in a high temperature environment (above 350 °F (177 °C)) for an extended period of time could permanently reduce retroreflective efficiency.

Shelf Life and Storage

Shelf Life

The product should be applied with one year after purchase.

Storage Conditions

- 70° to 75°F (20° to 24°C) and 30-50% relative humidity
- Out of sunlight
- · Clean, dry area
- · Horizontal in the original container
- Avoid pressure from stacking

3M[™] Scotchlite [™] High Gain Reflective Sheeting

Health and Safety

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When handling any chemical products, read the manufacturers' container labels and the Safety Data Sheets (SDS) for important health, safety and environmental information. To obtain SDS sheets for 3M products go to <u>3M.com/SDS</u>, or by mail or in case of an emergency, call 1-800-364-3577 or 1-651-737-6501.

When using any equipment, always follow the manufacturers' instructions for safe operation.

Bulletin Change Summary

For the most current 3M Technical Information available to successfully use this product, please view this Bulletin electronically and click on the blue underlined links to view the relevant documents. This Bulletin has been substantially changed to remove warranty information and replace it with references to the new Graphics Warranties website. Please read the entire Bulletin thoroughly.

3M Commercial Solutions

3M Center Building 220-12E-04 St. Paul, MN 55144-1000 1-800-328-3908 Fax 651-736-4233 3M.com/GRAPHICS 3M Canada

PO Box 5757 London, ON N6A 4T1 1-800-265-1840 Fax 519-452-6245 3M México S.A. de C.V.

Av. Santa Fe No. 55 Col. Santa Fe, Del. Alvaro Obregón México D.F. 01210 General 5255-5270-0400 Fax 5255-5270-2277 3M Puerto Rico, Inc.

350 Chardon Avenue Suite 1100 San Juan, PR 00918 General 787-620-3000 Fax 787-620-3018

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