

3M

Scotchlite™

Photoelectric Grade Sheeting

7590

Technical Data

May, 2003

Product Description

3M™ Scotchlite™ Photoelectric Grade Sheeting 7590 is a durable, flexible, wide-angle, smooth-surface, retroreflective sheeting, specially designed for use in photoelectric applications such as retroreflective labels or marks. The sheeting consists of special lens elements enclosed within a transparent resin, having a smooth flat outer surface and is supplied with a low-temperature, pressure-sensitive adhesive protected by a removable liner

Construction

Color

Opaque white

Lens

Protected

Liner

Yes

Typical Physical Properties

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

Thickness

Applied: .007 in. (.017 cm)
Liner: .004 in. (.010 cm)

Typical Luminance Factor

-4° reading: 200X
Skewed 45° reading: 80X

Temperature Resistance

Continuous exposure: 200°F (93°C)
Intermittent exposure (30 min.): 400°F (204°C)

Features

- Sealed lens surface.
- Weatherable.
- Daylight visibility.
- Facilitates printing.
- Offers wet optical performance.
- Cleanability.
- High adhesion formula for low temperatures.
- Designed for strong uniform response of photoelectric devices up to 45° entrance angle.
- For indoor or outdoor use.
- Good choice for nautical uses.
- Multiple uses.
- For permanent installation.

Available Sizes

Widths: 1/2 in. (1.27 cm), 1 in. (2.54 cm), 2 in. (5.08 cm),
3 in. (7.62 cm), 4 in. (10.16 cm), 6 in. (15.24 cm)

Lengths: 50 yds. (45.7 m)

3M™ Scotchlite™ Photoelectric Grade Sheeting 7590

Application Techniques	Automatic and manual dispensers are available to facilitate application of 3M™ Scotchlite™ Photoelectric Grade Sheeting 7590. Application may be made at temperatures as low as 10°F (-12°C) to a clean and dry surface. The sheeting will remain serviceable for many years when properly applied to a suitable substrate and used in typical indoor or outdoor environments. The sheeting maintains approximately 90% of its dry brightness with water falling on the surface (Rainfall Test Method of Federal Highway Administration Specification, FP-74, Section 718.01 [6]). Use in high temperature environments (above 200°F [93°C]) for an extended period of time could permanently reduce retroreflective efficiency. Repeated freeze-thaw cycles may cause subtle but visible cracking of the reflective surface, which should not significantly affect performance. Extreme cracking will reduce the optical performance of the sheeting.
Storage Conditions	Store in a cool, dry area, preferably at 70-75°F (20-24°C) and 30-50% relative humidity, and horizontally in shipping carton. Avoid pressure from stacking.
Shelf Life	Product should be applied within one year after purchase.
For Additional Information	To request additional product information or to arrange for sales assistance, call toll free 1-800-362-3550 or visit www.3M.com/packaging. Address correspondence to: 3M Industrial Adhesives and Tapes Division, Building 21-1W-10, 900 Bush Avenue, St. Paul, MN 55144-1000. Our fax number is 651-778-4244. In Canada, phone: 1-800-364-3577. In Puerto Rico, phone: 1-787-750-3000. In Mexico, phone: 52-70-04-00.
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ISO 9002

This Industrial Adhesives and Tapes Division product was manufactured under a 3M quality system registered to ISO 9002 standards.



**Industrial Business
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