



# 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	Lens	Liner
Opaque white	Protected	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)

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**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.

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**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.

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**Shelf Life** Product should be applied within one year after purchase.

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**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](http://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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This Industrial Adhesives and Tapes Division product was manufactured under a 3M quality system registered to ISO 9002 standards.



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