



## Scotchlite™ Reflective Material 8910 Silver Fabric

Technical Data Sheet

April 2001

### Description

3M™ Scotchlite™ Reflective Material - 8910 Silver Fabric is composed of wide angle, exposed retroreflective lenses bonded to a durable cloth backing (65% polyester, 35% cotton).

### Retroreflective Performance

The coefficient of retroreflection ( $R_A$ , in cd/lux/m<sup>2</sup>) is measured by methods traceable to either of the following retroreflective intensity testing procedures:

ASTM E809 and E810 ( $R_A$ )  
CIE 54: 1982 ( $R'$ )

The  $R_A$  values were measured at the listed specific entrance and observation angles.

Entrance Angle	Observation Angle	Typical $R_A$	Minimum $R_A$
-4.0°	0.2°	500	330
+5.0°	0.33°	330	250

### Color

Product Number	Daytime Color	Reflected Color
8910	Silver	White

### Physical Performance

Scotchlite reflective material - 8910 silver fabric is certified to meet ANSI/ISEA 107-1999 Level 2 retroreflective performance and EN 471 Class 2 retroreflective performance, and will meet or exceed the following specifications:

Retroreflectivity: . . . . .ANSI/ISEA 107-1999  
(Initial) . . . . . Level 2 (Table 5)  
EN 471 Class 2 (Table 5)

Abrasion: . . . . .EN 530 Method 2  
( $R_A \geq 100$ )<sup>1</sup> . . . . . 5000 cycles

Flexing: . . . . .ISO 7854 Method A  
( $R_A \geq 100$ )<sup>1</sup> . . . . . 7500 cycles

Cold Fold: . . . . .ISO 4675 (-20°C)  
( $R_A \geq 100$ )<sup>1</sup>

Temperature Cycle: . . . . .12 hours @ (50±2)°C  
( $R_A \geq 100$ )<sup>1</sup> . . . . . 20 hours @ (-30±2)°C

Wash: . . . . .ISO 6330 Method 2A  
( $R_A \geq 100$ )<sup>1</sup> . . . . . 50 cycles @ 60°C (140°F)

Dry-clean: . . . . .ISO 3175 Method 9.1  
( $R_A \geq 100$ )<sup>1</sup> . . . . . 20 cycles

Wet Reflectivity: . . . . .ANSI/ISEA 107-1999 Annex A  
( $R_A \geq 100$ )<sup>1</sup> . . . . . EN 471 Annex A

<sup>1</sup> Measured at 0.2° observation angle and 5.0° entrance angle.

## Performance

While use of 3M™ Scotchlite™ Reflective Material enhances visibility, no reflective material can guarantee absolute visibility, particularly in adverse weather conditions. Performance will vary depending upon actual use, exposure conditions and maintenance. Users should test reflective material to satisfy conformance to their own requirements.

## Application Instructions

Whenever two or more pieces of 3M™ Scotchlite™ Reflective Material - 8910 Silver Fabric are used together on a single surface or as a set, they should be matched to ensure uniform daytime color and nighttime or low-light reflectivity.

**Cutting:** Die-cutting is recommended, although fabric can also be hand-cut or guillotined.

**Sewing:** Sew in place using a lockstitch with no more than 12 stitches per inch (2.54 cm), and not less than 5/64" (2 mm) from the edge of the reflective fabric. For best results, apply to light and medium weight fabrics.

## Care and Maintenance Instructions

**Important:** Test each application according to appropriate care instructions required for the finished product. Actual life of Scotchlite reflective material - 8910 silver fabric depends on cleaning method and wear conditions. Care label recommendations:

**Wash:** Machine wash, 40°C (105°F)



**Bleach:** Only non-chlorine bleach when needed



**Dry:** Tumble dry low



**Iron:** Use medium iron, 150°C (300°F)



**Dry-clean:** Dry-clean, normal cycle



## Product Availability

3M™ Scotchlite™ Reflective Material - 8910 Silver

Fabric is available in rolls with the following standard widths and roll lengths:

Units	Width	Width Tolerance	Standard Roll Length
inches	< 6"	±1/32"	100 yd.
inches	6" ≤ w < 36" ≥ 36"	0" to +1/8" +1/8" to +1/4"	100 yd. (> 12" = 50 yd.)
mm	< 150 mm	±1 mm (std) ±.5 mm (special)	100 m
mm	150 mm ≤ w < 900 mm ≥ 900 mm	0 mm to +4 mm +3 mm to +7 mm	100 m (> 300 mm = 50 m)

## Order and Product Information

To order 3M™ Scotchlite™ Reflective Material Products, contact 3M Personal Safety Products Department Customer Service at 800-328-7098 Ext. 2.

## Storage and Shelf Life

Store in a cool, dry area and use within two years after date of receipt. Store rolls in original shipping cartons. Return partially used rolls to the carton or suspend horizontally through the core. Cut sheets should be stored flat.

## Handling Precautions for Hot and Humid Environments

Scotchlite reflective material - 8910 silver fabric contains an aluminum layer as part of its construction. Blemishing of this aluminum layer can occur if the front surface of the product has direct contact from hands during application and is then exposed to hot and humid conditions, greater than 80°F and greater than 70% relative humidity, for a period of weeks. These blemishes do not affect the performance of the product.

---

### **Important Notice to Purchaser:**

Except where prohibited by law, 3M makes the following limited warranty in place of any others, express or implied, including any implied warranties or conditions of MERCHANTABILITY or fitness for a particular purpose or any implied warranty or condition commonly found in the industry: 3M shall replace or, at its option, refund the price paid to 3M for any 3M™ Scotchlite™ Reflective Material or other 3M reflective products ("Products") which at the time of shipment to 3M's purchaser do not meet 3M's published Product specifications.

Because of the unlimited variety of potential applications for Products, BEFORE production use, the User (which may be a converter or end product manufacturer or others) must determine that the Products are suitable for the intended use and are compatible with other component materials. User is solely responsible for determining the proper amount and placement of Products. While reflective Products enhance visibility, no reflective product can ensure visibility or safety under all possible conditions. **3M shall not be liable in contract or in tort, for any indirect, incidental, special, or consequential damages (including, without limitation, lost profits, goodwill and business opportunity) relating to the use or inability to use the Products.**



### **Personal Safety Products Department 3M Safety and Security Systems Division**

3M Center, Building 225-4N-14  
St. Paul, MN 55144-1000  
800-328-7098, Ext. 2

### **3M Canada**

P. O. Box 5757  
London, Ontario, Canada N6A 4T1  
800-364-3577

### **3M Mexico**

Avenida Santa Fe #55  
Col. Santa Fe, CP01210  
Delegacion Alvaro Obregon  
Telephone: 270-21-62  
Fax: 270-22-94



*10% post-consumer waste paper*

Milnor is a registered trademark of Pellerin  
Milnor Corporation.  
Printed in the USA.  
Copyright © 2001, 3M  
All rights reserved.  
75-0500-1006-7