



Scotchlite™

Reflective Material 8965 White Fabric

Technical Data Sheet

August 1998

Description

3M™ Scotchlite™ Reflective Material - 8965 White Fabric is composed of wide angle, exposed retroreflective lenses bonded to a durable cloth backing (65% polyester, 35% cotton). This fabric's backing is printed with the 3M™ Scotchlite™ Reflective Material logo; it verifies Scotchlite reflective material has been purchased.

Retroreflective Performance

The coefficient of retroreflection (R_A) is measured by test 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°	100	60
+5.0°	0.33°	70	45

Color

Product Number	Daytime Color	Reflected Color
8965	White	White

Physical Performance

Scotchlite reflective material - 8965 white fabric will maintain a minimum R_A of 20 after exposure to the following performance tests:

- Abrasion:EN 530 Method 2
5000 cycles
- Flexing:ISO 7854 Method A
7500 cycles
- Cold Fold:ISO 4675 (-20°C)
- Temperature Cycle:12 hours @ (50±5)°C
20 hours @ (-30±2)°C
- Wet Reflectivity:EN 471 Annex A

Performance

While use of 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 Scotchlite reflective material - 8965 white 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 it 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.

Screen Printing: 3M™ Scotchlite™ Reflective Material - 8965 White Fabric offers good screen print ink adhesion. The choice of ink will depend on application and care instructions. Contact your local 3M Technical Service Representative for further information.

Sublimation Printing: Scotchlite reflective material - 8965 white fabric offers good ink adhesion and durability for sublimated colors and images. Recommended contact for sublimation information is Holt Mfg. (919) 227-5561. For further information contact your local 3M Technical Service Representative.

Care and Maintenance Instructions

Important: Test each application according to appropriate care instructions required for the finished product. Actual life of Scotchlite reflective material - 8965 white fabric depends on cleaning method and wear conditions.

Wash: Machine wash warm, 60°C (140°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

Scotchlite reflective material - 8965 white 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	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.

Important Notice to Purchaser:

3M makes the following limited warranty in place of any others, express or implied, including any implied warranties of MERCHANTABILITY or fitness for a particular purpose or any implied warranty commonly found in the industry: 3M shall replace or, at its option, refund the price paid 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 converter or end product manufacturer must determine that the Products are suitable for the intended use and are compatible with other component materials. Purchaser 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. **Neither 3M nor any 3M authorized converter shall be liable for any incidental, special, or consequential damages relating to the use or inability to use the Products regardless of legal theory asserted.**



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