

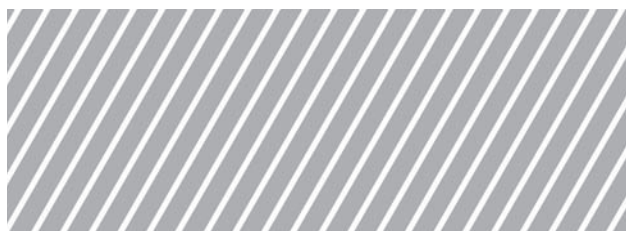
Technical Data Sheet

3M™ Scotchlite™ Reflective Material 5530 Segmented Industrial Wash Trim

Description

3M™ Scotchlite™ Reflective Material – Series 5500 Comfort Trim is comprised of industrial and home wash products. 3M™ Scotchlite™ Reflective Material – 5530 Segmented Industrial Wash Trim is a transfer film composed of wide angle, exposed retroreflective lenses bonded with a special polymer layer to a heat activated polyester adhesive. The trim is 2 inches wide and comprised of reflective patterned segments on a plastic liner. Note: width modification other than 2-inch will affect physical performance.

Scotchlite reflective material – 5530 segmented industrial wash trim should not be used for flame resistant applications.



Industrial Wash

Industrial laundering means regularly washing large amounts of clothing in a relatively short amount of time, with large machines (> 25 kg loads), aggressive detergent chemistry (pH 10.5 – 12) and high wash temperatures (up to 85° C). Garment finishing (tumble dry or tunnel finish) can limit garment life and should be considered as part of the cleaning process. Please refer to the Industrial Wash Guidelines for recommended wash conditions. Using harsher cleaning conditions may significantly reduce product performance.

Retroreflective Performance

The coefficient of retroreflection (R_A , in cd/lux/m²) is measured by methods traceable to either of the following retroreflective intensity testing procedures:

ASTM E809 and E810 (R_A)

CIE 54.2:2001 (R')

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

3M™ Scotchlite™ Reflective Material		
Entrance Angle	Observation Angle	Minimum R_A ¹
5.0°	0.2°	330
5.0°	0.33°	250

The reflective performance of Scotchlite reflective material – 5530 segmented industrial wash trim exceeds the ANSI/ISEA 107-2004 and CAN/CSA Z96-02 minimum coefficient of retroreflection for Level 2 retroreflective material.

Color

3M™ Scotchlite™ Reflective Material		
Product Number	Daytime Color	Reflected Color
5530	Silver	White

¹ ANSI/ISEA 107-2004 / CAN/CSA Z96-02 minimum coefficient of retroreflection for Level 2 retroreflective material.

Physical Performance

3M™ Scotchlite™ Reflective Material – 5530 Segmented Industrial Wash Trim is certified to meet ANSI/ISEA 107-2004 Level 2 retroreflective performance, and will meet or exceed the following specifications:

Initial Retroreflectivity: ($R_A \geq 100$) ²	ANSI/ISEA 107-2004 CAN/CSA Z96-02 Level 2 (Table 5)
Abrasion: ($R_A \geq 100$) ²	EN 530 Method 2 5000 cycles
Flexing: ($R_A \geq 100$) ²	ISO 7854 Method A 7500 cycles
Cold Fold: ($R_A \geq 100$) ²	ISO 4675 -20±1° C (-2±1° F)
Temperature Cycle: ($R_A \geq 100$) ²	12 hours @ 50±2° C (122±2° F) 20 hours @ -30±2° C (-20±2° F)
Wash (5530): ($R_A \geq 100$) ²	ISO 6330 Method 2A 100 cycles @ 60° C (140° F)
Dry-clean: ($R_A \geq 100$) ²	ISO 3175 Method 8.1 50 cycles
Wet Reflectivity: ($R_A \geq 100$) ²	ANSI/ISEA 107-2004 Annex A

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 Scotchlite reflective material – 5530 segmented industrial wash trim are used together on a single surface or as a set, they should be matched to ensure uniform daytime color and nighttime reflectivity.

Cutting: Scotchlite reflective material – 5530 segmented industrial wash trim can be hand-cut, die-cut or guillotined. Plotter cutting is not recommended. NOTE: Width modification other than 2-inch will affect physical performance.

Heat Lamination: The following recommendation is a general guideline for **heat press lamination**. Other lamination methods such as roll to roll, heat fusing, and High Frequency (HF) welding can also be used. **Important note:** The proper temperature/pressure/time conditions must be tested for each fabric to assure adequate adhesion and physical performance. Many fabrics can be used as lamination substrates, however, nylons and fabrics treated with a durable water repellent (DWR) finish are difficult to adhere to and are not recommended. For specific application assistance, contact 3M Technical Service.

Work on a flat surface where uniform heat and pressure can be applied. Avoid applying film over seams and stitches. Place film on fabric (substrate) adhesive side down and apply heat and pressure as described below. Allow the application to cool to room temperature before removing the plastic liner. Place application on a flat surface and remove the plastic liner by lifting one corner and pulling at about a 45° angle in a continuous, smooth manner.

3M™ Scotchlite™ Reflective Material		
Temperature	Dwell Time	Pressure
350-375° F (175-190° C)	10-20 seconds	Firm (30-40 psi line pressure)

² Measured at 5.0° entrance angle and 0.2° observation angle.

Care and Maintenance Instructions

Important: Test each application according to appropriate care instructions required for the finished product. Actual life of 3M™ Scotchlite™ Reflective Material – 5530 Segmented Industrial Wash Trim will depend on cleaning method and wear conditions. Care label recommendations:

Home Wash Guideline

- Wash:**  Machine wash hot, 60° C (140° F)
- Bleach:**  Only non-chlorine bleach when needed
- Dry:**  Tumble dry low
- Iron:**  Use cool iron, 110° C (230° F)
- Dry-clean:**  Dry-clean, normal cycle

Industrial Wash Guideline

Stain treatment wash processing may reduce life of Scotchlite reflective material – 5530 segmented industrial wash trim.

Wash chemistry: Lower pH and active alkalinity will increase the lifetime performance of the retroreflective material. Actual lifetime will be dependent upon the detergent system and dosage level.

Do not use solvenated surfactants.

Do not use chlorine or perborate bleach.

Maximum Wash Temperature Detergents 75° C (167° F)
Low to medium alkaline, high-surfactant detergents are preferred.

Break/suds cycles Less than 20 minutes total

Drying:
Tunnel dry Maximum inlet temperature of 160° C (320° F)
Drying time not to exceed 7 minutes
Fabric temperature not to exceed 135° C (275° F)

Tumble dry Maximum exhaust temperature 90° C (195° F)

Pressing Do not exceed 150° C (300° F)

Product Availability

Scotchlite reflective material – 5530 segmented industrial wash trim is available in rolls with the following standard width and roll length:

3M™ Scotchlite™ Reflective Material		
Width	Width Tolerance	Standard Roll Length
50.8 mm (2.0")	± .5 mm (± .02")	100 m, 200 m

Order and Product Information

To order 3M™ Scotchlite™ Reflective Material Products contact 3M Visibility and Insulation Solutions Customer Service at 800-328-7098.

Storage and Shelf Life

Store in a cool, dry area and use within one year 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 User

LIMITED WARRANTY: In the event any 3M™ Scotchlite™ Reflective Material is found to be defective in material, workmanship, or not in conformation with any express warranty, 3M's only obligation and your exclusive remedy shall be to replace or refund the purchase price, at 3M's option, of such product upon timely notification thereof and substantiation that the product has been stored, maintained and used in accordance with 3M's written instructions.

EXCLUSIONS TO WARRANTY: THIS WARRANTY IS EXCLUSIVE AND IN LIEU OF ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OTHER WARRANTY OR CONDITION OF QUALITY, EXCEPT OF TITLE AND AGAINST PATENT INFRINGEMENT.

LIMITATION OF LIABILITY: Except as provided above, 3M shall not be liable in contract or tort for any loss or damage, whether direct, indirect, incidental, special or consequential, (including, without limitation, lost profits, goodwill and business opportunity) arising out of the sale, use or misuse of the product, or the user's inability to use the product. **THE REMEDIES SET FORTH HEREIN ARE EXCLUSIVE.**

Because of the unlimited variety of potential applications for these products, BEFORE production use, the user (which may be a product designer, product specifier, 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 may change the product, specifications and availability of the product as improvements are made; therefore, user should contact 3M for latest information before specifying the product.

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