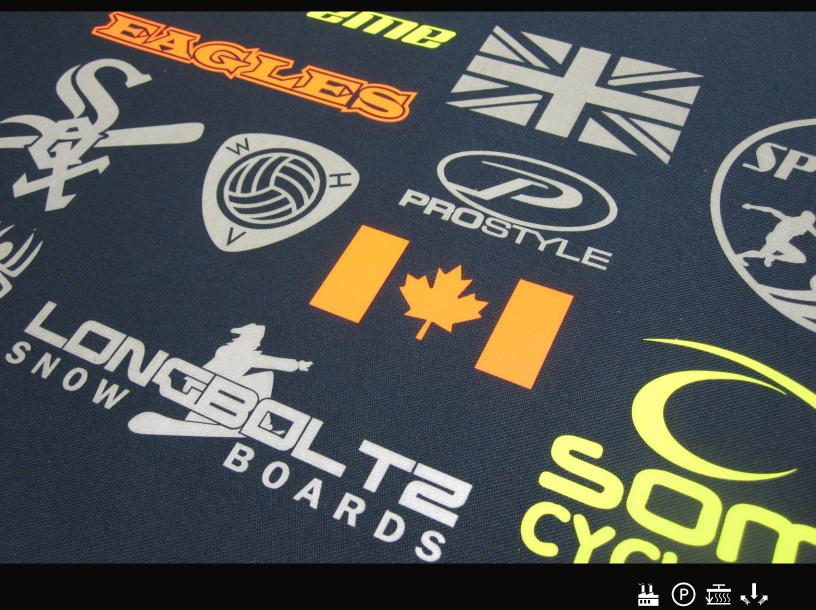
# **Reflective Transfers**

TekSpec<sup>®</sup> Product technical details





Industrial Drv-clean

Heat se

# TekSpec®

### 3M<sup>™</sup> Reflective Transfers

rev. 2023-02a

# PRODUCT DETAILS

Transfer Dimensions:

- Minimum transfer size is 0.5" x 0.5" (1.27cm x 1.27cm).
- Maximum transfer size is 14" x 20" (35.5cm x 50.8cm).

**Design Lettering Dimensions:** 

The text within a design should not be less than 10mm (0.39") in height.



Substrate Type: 3M<sup>™</sup> ScotchLite<sup>™</sup> Polyester transfer film

### **Transfer Films Colour Selection**

3M<sup>™</sup> Scotchlite<sup>™</sup> transfer films are available in a range of technical formats and colours, including fluorescent yellow, fluorescent orange, industrial launderable and flame resistant.

Current stock transfer film colours / types: 8725 Silver 8786 Fluorescent red-orange 8787 Fluorescent lime-yellow

Special order transfer film colours / types: 9720 Silver Industrial Wash 9740 Silver Industrial Wash Flame Resistant

# ORDERING GUIDELINES

#### Artwork & Set-up Fees:

**No fees\*.** Emblemtek will provide artwork on new emblem orders for customer Approval prior to production. There are no artwork or set-up fees when existing, electronic or physical designs or samples are provided to Emblemtek. Artwork fees may apply when designs are created from scratch.

Order Quantities:

Minimum 15. The minimum order quantity is 15 pieces.

### **Pre-production Samples:**

**Available \$.** Electronic (scan) or physical pre-production samples (single unit) are available for approved designs. Samples fees are applicable, relative to design detail and emblem size. See price guide for more information.

#### Pricing:

**Charted & quoted.** Charted pricing is available up to a certain size threshold, with larger quantities and larger emblem sizes custom quoted. See price guide for more information.

### **Delivery Times:**

Delivery times are relative to order quantity. Transfers greater than 6.00" x 6.00" (15.24cm x 15.24cm) may take longer to manufacture. See price guide for more information.

#### Ordering Guidelines:

**Order specifics**. During the design, artwork and ordering processes, there are specific details that we require in order to proceed with your request, such as:

Tranfer Type  $\bullet$  Transfer Colours  $\bullet$  Dimensions  $\bullet$  Quantity  $\bullet$  Special Delivery Needs

### Accepted Design / Artwork File Types

The chart below lists the various graphic and design file types that Emblemtek will accept for artwork and production purposes. Certain file types are preferred as noted.

Graphic File Types:

- CorelDraw ver.13 / ver.X3 (.cdr) pref
- Adobe Illustrator ver.CS3 (.ai) pref
- Encapsulated PostScript (.eps) pref
- Adobe Portable Document File (.pdf) pref
- Joint Photographic Experts Group (.jpg) pref
- Portable Network Graphics (.png) pref
- Adobe Photoshop ver.CS3 (.psd)
- Corel Photo-Paint ver.13 / ver.X3 (.cpt)
- Targa Bitmap (.tga)
- Tagged Image File Format (.tiff)
- Windows Bitmap (.bmp)
- CompuServe Bitmap (.gif)









# TekSpec®

3M<sup>™</sup> Reflective Transfers

rev. 2023-02a

# APPLICATION & WASH GUIDELINES

#### **Application Methods**

Heat seal. 3M<sup>TM</sup> Reflective Transfers can be heat sealed on to garments and other textile products using a heat seal machine.

TRANSFER TYPE	HEAT SEAL APPLICATION			
8725 Silver 8786 Fluorescent red-orange 8787 Fluorescent lime-yellow	325°F to 350°F (165°C to 177°C)	30 to 40 PSI* (2 to 3 Bar)	10 to 20 seconds	
9720 Silver Industrial	325°F to 350°F (165°C to 177°C)	30 to 40 PSI* (2 to 3 Bar)	10 to 20 seconds	
9740 Silver Industrial FR	350°F to 375°F (175°C to 190°C)	30 to 40 PSI* (2 to 3 Bar)	20 seconds	

\* These recommended settings are based on manually operated or air operated heat seal machines with top iron heat only.

For application methods, washing and drying guidelines, please refer to the **3M<sup>TM</sup> Scotchlite<sup>TM</sup> Reflective Material Transfer Films data sheets** available on the web product page.

#### Heat Seal Notes & Tips:

Place the garment or textile on the bottom platen of the heat seal machine and ensure that the area that is to be transferred is as flat and smooth as possible. Place the transfer carrier over the area to be transferred and position the transfer so that the design is aligned to the garment or textile as required. Cycle the heat seal machine based on the temperature, pressure and time settings noted above. When the heat seal cycle is complete, remove the transfer carrier slowly from the garment or textile while still warm.

Due to the diverse nature of fabrics and textiles in the market place, customers are advised to carry out application, wash and any technical tests (including flame retardant) prior to placing orders.

- Thicker fabrics, which may absorb excess heat, may require longer cycle times as charted above.
- White materials (knits or blends) may scorch if heat seal temperatures are too high. It is recommended that fabrics be tested first.
- Pique knit and fleece materials may be sensitive to heat and pressure, with the possibility of being crushed.
- Rib-knit and stretch fabrics may pucker or distort when transfer are heat sealed to them. Transfers may not apply correctly to items such as toques and scarves. It is recommended that these fabrics be tested first.
- Treated fabrics finished with coatings, sizing or repellants may not allow for proper heat seal bonding. Items made with leather, suede, nylon, synthetics, nylon-shell, interlinings, rubberized coatings and reflective fabrics, such as jackets and luggage, may react poorly to heat seal temperatures depending on thickness, weave, texture and weight. It is recommended that these fabrics be tested first, with possible heat seal time and temperature adjustments.
- Caps can sometimes be difficult to work with for heat seal applications. To achieve a higher potential for heat seal application success on caps, it is recommended that transfers not be greater than 2-1/4" in height and 4" in width.

### Washing & Drying Guidelines

TRANSFER TYPE	WASH TYPE	WASH TEMPERATURE	DRY TYPE	IRON
8725 Silver 8786 Fluorescent red-orange 8787 Fluorescent lime-yellow	Home Care	Wash in domestic or commercial machine in water not exceeding 105°F (40°C)	Tumble dry at low heat	Cool iron
9720 Silver Industrial 9740 Silver Industrial FR	Industrial	Wash in commercial machine in water <b>not exceeding 140°F</b> (60°C)	not exceeding 130°F (55°C)	not exceeding 230°F (110°C)

tel: 800 267 9385 info@emblemtek.com

 For complete product details, please visit

 lemtek.com
 emblemtek.com/tekspec/

Emblemtek is pleased to offer you service in English or French, Canada's official languages. This literature is available in French. Emblemtek est fière de vous offrir un service en anglais ou en francais, langues officielles du Canada. Cette documentation est disponible en francais

It is the responsibility of the purchaser to be aware of Emblemtek's policies in full. All logo designs herein are registered by their respective companies. The details within this document are offered for informational purposes only, and are subject to change without notice. Emblemtek declines all

responsibility and liability for any errors or omissions that may exist. Teflon® is a registered trademark of E.I. duPont de Nemours & Company.

Pantone® is a registered trademark of Pantone Inc.Teflon® is a registered trademark of E. I. du Pont de Nemours TekSpec® is a registered trademark of Emblemtek Solutions Group Inc. Velcro® is a registered trademark of Velcro Industries B.V. 3M<sup>TM</sup> and ScotchLite<sup>TM</sup> are trademarks of 3M Corporation.

# Be identified. Be recognized!





Release 6, November 2022

# 3M<sup>™</sup> Scotchlite<sup>™</sup> Reflective Material - Transfer Films

### Description

3M<sup>™</sup> Scotchlite<sup>™</sup> Reflective Material - Transfer Films are designed for use on safety, athletic and casual garments. They are composed of wide-angle, exposed, retroreflective lenses bonded to a heat-activated adhesive. When properly used, these materials help enhance the visibility of the wearer in nighttime or low-light conditions when illuminated by a light source, such as headlights, by returning the light back toward the original source and reaching the automobile driver's eye.

Summary of Product Details							
3M™ Scotchlite™	M™ Scotchlite™ Initial Average Initial Wash <sup>a</sup>			Liner			
Reflective Material	Brightness (R <sub>A</sub> ) <sup>d</sup>	Brightness Film <sup>e</sup> (R <sub>A</sub> ) <sup>d</sup>	Home Cycles <sup>b</sup>	Dryclean Cycles <sup>c</sup>	Industrial Washable	Adhesive Side	Retroreflective Side
5807 Custom Cuttable Transfer Film	500	330	50	30		None	Clear Polyester Film
8711 Silver Graphic- Ready Transfer Film	500	330	25	10		Paper	None
8712 Silver Transfer Film <sup>e</sup>	500	330	25	10		Pink polyurethane	Paper
8725 Silver Transfer Film <sup>e</sup>	500	330	50	30		None	Paper
8725LL Linerless Silver Transfer Film <sup>e</sup>	500	330	50	30		None	None
8735 Flame Resistant Transfer Film	500	330	50	0		None	None
8787 Fluorescent lime-yellow Transfer Film	175	65	0	0		None	Paper
9720 Silver Industrial Wash Transfer Film	500	330	50	50	Yes	None	None <sup>f</sup>
9725 Silver Industrial Wash Transfer Film	500	330	100	50	Yes	None	None
9740 Industrial Wash Flame Resistant Transfer Film	500	330	50	50	Yes	None	None
9745 Silver Industrial Wash Flame Resistant Transfer Film	500	330	100	0	Yes	None	None

a. See Care Instructions section for Home Wash and Industrial Wash.

b. ISO 6330 Method 6N at 60 °C (140 °F) and  $R_A \ge 100$  (home wash).

c. ISO 3175-2 and  $R_A \ge 100$ .

d. Measured by 3M on new product at +5.0° entrance and 0.2° observation angles. Results are measured in R<sub>A</sub> (cd/lux/m<sup>2</sup>).

e. 3M™ Scotchlite™ Reflective Material- 8712 Silver Transfer Film and 3M™ Scotchlite™ Reflective Material-8725 Silver Transfer Film has "3M" imaged on their silver surface.

f. Roll widths 1" or less come with a paper liner.

# **Product Certification**

The following 3M<sup>™</sup> Scotchlite<sup>™</sup> Reflective Material, as listed in the table below, meet the requirements of the listed standards. Current certificates are available at <u>Scotchlite.com</u> or by request. Some products have Oeko-tex certification as well.

	Certifications								
Product Number Visibility Standards				NFPA				CGSB	
	ANSI 107-2020	CSA Z96:22	1951	1971	1975	1977	2112	155.20	155.22
Edition Year	2020	2020	2020	2018	2019	2022	2023	2017	2014 (R2019)
5807	Х	х							
8711	Х	х							
8712	Х	х							
8725 and 8725LL	Х	х							
8735	Х	х	Х	Х	х	х	х	Х	Х
9720	Х	х							
9725	Х	х							
9740	Х	х	Х	Х		х	х	Х	х
9745	Х	х	х	х		х	х	х	х

Full name of standards listed above:

- ANSI/ISEA 107-2020 American National Standard for High-Visibility Safety Apparel
- CSA Z96-15 (R2020) High-Visibility Safety Apparel
- NFPA 1951-2020 Standard on Protective Ensembles for Technical Rescue Incidents
- NFPA 1971-2018 Standard on Protective Clothing and Equipment for Structural Fire Fighting and Proximity Fire Fighting
- NFPA 1975-2019 Standard on Emergency Services Work Clothing Elements
- NFPA 1977-2022 Standard on Protective Clothing and Equipment for Wildland Fire Fighting
- NFPA 2112-2023 Standard on Flame-Resistant Garments for Protection of Industrial Personnel Against Flash Fire
- CAN/CGSB 155.20-2017 Workwear for Protection Against Hydrocarbon Flash Fire and Optionally Steam and Hot Fluids
- CAN/CGSB 155.22-2014 (R2019) Fireline Workwear for Wildland Firefighter

3M<sup>™</sup> Scotchlite<sup>™</sup> Reflective Material products are used globally. Please contact your local 3M representative for more information on certification to other high-visibility apparel and flame resistant standards.

### **Physical Performance**

These 3M<sup>™</sup> Scotchlite<sup>™</sup> Reflective Materials will meet or exceed the following performance specifications as noted. It is important to note that use, wear, and environmental conditions will affect performance. See product certificates on <u>Scotchlite.com</u> for testing laboratory and test date information.

Physical Performance	Test Method
Retroreflectivity (initial): R <sub>A</sub> ≥ requirement listed in ANSI 107- 2020 or CSA Z96-15 (R2020)	ASTM E808-01 (2016) and ASTM E809-08 or CIE 54.2:2001 (R')
Abrasion: R <sub>A</sub> ≥ 100	EN 530 Method 2, 5000 cycles
Flexing: R <sub>A</sub> ≥ 100	ISO 7854 Method A, 7500 cycles
Cold Fold: R <sub>A</sub> ≥ 100	ISO 4675, -20 °C (-4 °F)
Temperature Cycle: R <sub>A</sub> ≥ 100	12 hours @ 50 °C (122 °F) 20 hours @ -30 °C (-22 °F)

Physical Performance	Test Method
Wash: R <sub>A</sub> ≥ 100	ISO 6330 Method 6N, @ 60 °C (140 °F) number of cycles listed on page 1
Dry Clean: R <sub>A</sub> ≥ 100	ISO 3175-2 as noted in ISO 3759 number of cycles listed on page 1
Wet Reflectivity: R <sub>A</sub> ≥ 100	ANSI/ISEA 107-2020, Appendix B; CSA Z96-15 Clause 7.4.8; NFPA Section 8.45.4.3
Flame Resistance <sup>a</sup> : <4" char length, <2 second after flame	ASTM D6413-15, CAN/CGSB-4.2 No. 27-10
Heat Resistance <sup>a</sup> : Cannot melt, drip, separate or ignite	ISO 17493, 5 minutes @ 260°C (500 °F)
Convection Heat <sup>a</sup> : R <sub>A</sub> ≥ 100	After 10 minutes @ 140 °C (285 °F)

a. Only when retroreflective products compliant to NFPA or CGSB standards (listed under Certifications) are applied to compliant fabrics such as certain aramids, modacrylics, and FR treated cottons.

# **Application Instructions**

Whenever two or more pieces of 3M<sup>™</sup> Scotchlite<sup>™</sup> Reflective Materials are used together on a single surface or as a set, they should be matched to ensure uniform daytime color and nighttime retroreflectivity.

### Cutting

The material can be cut in various ways including die-cut, hand-cut or guillotined. Do not use 3M™ Scotchlite™ Reflective Material-Transfer Films that incorporate a liner in plotter cutting. After weeding, the exposed liner may adhere to the fabric during lamination. 3M™ Scotchlite™ Reflective Material – 5807 Custom Cuttable Transfer Film is recommended for these applications.

### Application of Heat Transfer Adhesive Backed Materials Using a Heat Press

- 1. Work on a flat surface where uniform heat and pressure can be applied. Avoid applying film over seams and stitches. Do not remove retroreflective side liner until after heat lamination process.
- 2. If the product has an adhesive side liner, remove it to expose the dry adhesive.
- 3. Place 3M<sup>™</sup> Scotchlite<sup>™</sup> Reflective Material on substrate with the adhesive side down and apply heat and pressure as described in the table below.
- 4. Allow application to cool to room temperature before removing the liner covering the retroreflective side. Place application on a flat surface and remove the liner by lifting one corner and pulling (about 45° angle) in a continuous, smooth manner. Optional: To prevent any excess adhesive transfer contamination, a non-stick slip sheet can be placed between the platen and laminating surface.

### Additional Precautions for Heat Lamination

- 1. The lamination temperature, time, and pressure listed below should be used as a guide. Each substrate and retroreflective film combination should be tested to determine the best set of conditions that will meet customer requirements.
- 2. Other lamination methods, such as roll to roll, heat fusing, and HF welding can also be used. The proper temperature, time, and pressure conditions must be tested for each fabric to assure adequate adhesion and physical performance.
- 3. Many fabrics can be used as lamination substrates; however, some substrates such as nylons and fabrics treated with a durable water repellent (DWR) finish are difficult to adhere to. 3M<sup>™</sup> Scotchlite<sup>™</sup> Reflective Material-Fabric is recommended for these applications.
- 4. Laminating 3M<sup>™</sup> Scotchlite<sup>™</sup> Reflective Material to the surface of other 3M<sup>™</sup> Scotchlite<sup>™</sup> Reflective Material can be difficult and caution is required when applying other materials to it.
- 5. It is recommended that initial and continuous testing be done on all heat lamination methods, retroreflective materials and fabrics to ensure that acceptable adhesion and physical performance is maintained, as input materials may vary. For specific application assistance, contact your local 3M Application Engineer.
- 6. Do not exceed lamination temperature listed below as the paper liner may become difficult to remove. If high temperatures are required for bond durability, follow the lamination steps 1-3 using the recommend temperature,

removed paper liner and then laminate again at the higher temperature (using a non-stick sheet to protect the reflective surface).

3M™ Scotchlite™ Reflective Material						
Product Number	uct Number Temperature Dwell Time (seconds)		Line Pressure			
5807	165-177 °C (325-350 °F)	10-20	Firm (30-40 psi)			
8711 8712	165-190 °C (325-375 °F)	10-20	Firm (30-40 psi)			
8725 8725LL	165-177 °C (325-350 °F)	10-20	Firm (30-40 psi)			
8735	175-190 °C (350-375 °F)	15-10	Firm (30-40 psi)			
8787 9720 9725 9745	165-177 °C (325-350 °F)	10-20	Firm (30-40 psi)			
9740	175-190 °C (350-375 °F)	15-20	Firm (30-40 psi)			

### Printing

Screen Printing – Images maybe printed on the surface of some 3M<sup>™</sup> Scotchlite<sup>™</sup> Reflective Material. All inks should be continuously tested to ensure acceptable adhesion in the event of changes occurring in the manufacturing process or composition of the ink. Prior to printing, wiping the surface with a soft cloth lightly dampened with isopropyl alcohol may help ink adhesion. Printed areas will not be retroreflective. Please refer to 3M Technical Bulletin <u>Recommendations for Screen</u>. <u>Printing Inks for 3M<sup>™</sup> Scotchlite<sup>™</sup> Reflective Material - Transfer Films, Pressure Sensitive Adhesive Films, Fabrics and Trims</u> for ink and application recommendations.

## **Essential Information**

While the use of 3M<sup>™</sup> Scotchlite<sup>™</sup> Reflective Material enhances visibility, no retroreflective material can guarantee absolute visibility, particularly in adverse weather conditions. Performance will vary depending upon actual use, exposure conditions, and maintenance. Customers should be aware that 3M presents a 3M<sup>™</sup> Scotchlite<sup>™</sup> Reflective Material product portfolio that offers a range of product attributes, and users should test the retroreflective material on their finished garments to satisfy conformance to their own requirements. All high visibility safety apparel items should be constructed in accordance with the appropriate standard(s).

3M<sup>™</sup> Scotchlite<sup>™</sup> Reflective Material can contain 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 for a period of weeks (greater than 26.7° C (80° F) and greater than 70% relative humidity). These blemishes do not affect performance. Please see the 3M Technical Bulletin <u>Care Guidelines to Reduce Staining of 3M<sup>™</sup></u> <u>Scotchlite<sup>™</sup> Reflective Material</u> for more information.

3M<sup>™</sup> Scotchlite<sup>™</sup> Reflective Material-Transfer Films may not be compatible with some polyvinyl chloride (PVC, vinyl) films, especially those containing phosphate plasticizers. It is possible that some plasticizers might be able to migrate into the retroreflective material, making the retroreflective surface soft and sticky. We recommend that substrates always be tested prior to production to ensure that they meet your specific needs. For alternate products and additional information, please refer to 3M Technical Bulletin <u>Plasticizer Migration in 3M<sup>™</sup> Scotchlite<sup>™</sup> Reflective Material – 8712 Silver Transfer Film and Related Products.</u>

Exposure to sulfur compounds in dyes or in the environment will darken some retroreflective materials and may affect retroreflectivity. Fabrics finished with dyes containing sulfur compounds should not be used with the following trims:

- 3M<sup>™</sup> Scotchlite<sup>™</sup> Reflective Material 9720 Silver Industrial Wash Transfer Film
- 3M™ Scotchlite™ Reflective Material 9740 Silver Industrial Wash Flame Resistant Transfer Film

3M recommends that all customers, in accordance with good manufacturing practices, establish an ongoing quality system which includes maintaining lot/roll identification, and implementing continuous testing that reflects their garment needs throughout their production process. For lamination operations, to periodically check their equipment to ensure that the temperature set point matches the platen or roll temperature and that the temperature is uniform across the lamination area.

These 3M<sup>™</sup> Scotchlite<sup>™</sup> Reflective Materials are not certified for marine safety application requiring IMO type approval.

3M<sup>™</sup> Scotchlite<sup>™</sup> Reflective Material- 8711 Silver Graphic-Ready Transfer Film and 3M<sup>™</sup> Scotchlite<sup>™</sup> Reflective Material-8712 Silver Transfer Film performs best when laminated to polyester and polyester blend fabrics. They should not be used on knitted T-shirts or 100% cotton fabrics where good adhesion is required for extended use.

# **Care Instructions**

### (j) IMPORTANT NOTE

Test each application according to appropriate care instructions required for the finished product. Actual life of 3M™ Scotchlite™ Reflective Material depends on cleaning methods and wear conditions.

### Home Wash Guidelines

Home laundering means using a top- or front-loading consumer-type home washing machine with a consumer detergent at moderate water temperatures (up to 60 °C, 140 °F). Drying methods such as tumble drying at high temperatures, can limit garment life and should be considered as part of the cleaning process.

If bleach is needed, only non-chlorine bleach should be used. High alkaline treatments such as stain removal products should not be used. Garment care label guidelines need to consider the garment fabric as well as the recommendations for garment components such as retroreflective trim.

Care label recommendations for 3M<sup>™</sup> Scotchlite<sup>™</sup> Reflective Material are below:

	Care Label Recommendations						
Product	Product Wash		Iron	Dry-Cleaning	Bleach		
8711 8712	Machine wash warm, 40 °C (105 ° F)	Tumble dry low	Cool iron, 110° C (230° F)	P Dry-clean, normal cycle	Non- chlorine bleach when needed		
5807 8725 8725LL 9720 9725 9740	Machine wash hot, 60 °C (140 °F)	Tumble dry low	Cool iron, 110° C (230° F)	Dry-clean, normal cycle	Non- chlorine bleach when needed		
9745 8735	Machine wash hot, 60 °C (140 °F)	Tumble dry low	Cool iron, 110° C (230° F)	Do not dry clean	Non- chlorine bleach when needed		
8787	Do not wash	Tumble dry low	Cool iron, 110° C (230° F)	Do not dry clean	Non- chlorine bleach when needed		

### Industrial Wash Guidelines

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, 185 °F). Drying methods (tumble dry or tunnel finish) can limit garment life and should be considered as part of the cleaning process. Using harsher cleaning conditions than those recommended may significantly reduce product performance.

Refer to the table on page one for the retroreflective materials suitable for applications that will be exposed to industrial laundering.

Industrial wash guidelines for Scotchlite reflective material - transfer films are:

Industrial Wash Guidelines				
Washing				
Special instructions:	Stain treatment wash processing may reduce life of 3M™ Scotchlite™ Reflective Material.			
Wash chemistry:	Lower pH (nearer to neutral) and lower 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. Low to medium alkaline, high surfactant detergents are preferred.			
Maximum wash temperature:	75 °C (165 °F)			
Break/suds cycles:	Less than 20 minutes total.			
Drying/Pressing				
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

3M<sup>™</sup> Scotchlite<sup>™</sup> Reflective Material – Transfer Films are available in rolls with the following standard width and lengths:

Product Number	Roll Width	Standard Roll Length
5807 Custom Cuttable Transfer Film	304.8 mm (12 in.) 482.6 mm (19 in.) 609.6 mm (24 in.)	5 m (5.47 yd) 25 m (27.34 yd) 50 m (55 yd)
All Others	< 150 mm (< 6 in.)	100 m (109 yd) 200 m (218 yd)
	150 mm ≤ w < 900 mm (6 in. ≤ w < 36 in.)	50 m (55 yd) 100 m (109 yd)
	≥ 900 mm (≥ 36 in.)	50 m (55 yd)

# Storage and Shelf Life

Store in a cool (4 to 32 °C, 40 to 90 °F), dry area (less than 70% relative humidity) and use within one year of date of receipt from 3M. Store rolls in original shipping cartons. Return partially used rolls to the carton or suspend horizontally through the core. Cut pieces should be stored flat. Ensure that the lot/roll identification remains with product rolls and cut pieces.

# Contact us

For current technical literature and technical support, go to <u>Scotchlite.com</u>, or call Customer Service at 800-328-7098. To purchase, go to <u>Scotchlite.com</u> and click on Support for a list of our distributors.

# **Important Notice**

**Product Selection and Use:** Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of reflective material in a particular application. As a result, customer is solely responsible for evaluating the product and determining whether it is appropriate and suitable for customer's application, including conducting a workplace hazard assessment and reviewing all applicable regulations and standards (e.g., OSHA, ANSI, etc.), as well as determining the proper amount and placement of reflective material. While reflective material can enhance visibility, no reflective product can ensure visibility or safety under all possible conditions. Failure to properly evaluate, select, and use a 3M product in accordance with all applicable instructions and with appropriate safety equipment, or to meet all applicable safety regulations, may result in injury, sickness, death, and/or harm to property. 3M may change the product, specification, and availability; therefore, customer should contact 3M for latest information before specifying the product.

**Warranty, Limited Remedy, and Disclaimer:** Unless a different warranty is specifically stated on the applicable 3M product packaging or product literature (in which case such warranty governs), 3M warrants that each 3M product meets the applicable 3M product specification at the time 3M ships the product. 3M MAKES NO OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ARISING OUT OF A COURSE OF DEALING, CUSTOM, OR USAGE OF TRADE. If a 3M product does not conform to this warranty, then the sole and exclusive remedy is, at 3M's option, replacement or repair of the 3M product or refund of the purchase price. Warranty claims must be made within one (1) year from the date of 3M's shipment.

**Limitation of Liability:** Except for the limited remedy stated above, and except to the extent prohibited by applicable law, 3M will not be liable for any loss or damage arising from or related to the 3M product, whether direct, indirect, special, incidental, or consequential (including, but not limited to, lost profits or business opportunity), regardless of the legal or equitable theory asserted, including, but not limited to, warranty, contract, negligence, or strict liability.

#### **Personal Safety Division**

3M Center, Building 235-2F-06 St. Paul, MN 55144-1000 800-328-7098 Scotchlite.com 3M PSD products are occupational use only. **3M Canada** P.O. Box 5757 London, Ontario N6A 4T1 800-267-4414 Technical Service 800-364-3577 3M HELPS 3M.ca/Scotchlite © 2022. All rights reserved. 3M and Scotchlite are trademarks of 3M Company and affiliates. Used under license in Canada. All other trademarks are property of their respective owners. Please recycle. Release 6, November 2022

