



Scotchlite™

Reflective Material

6805 Silver High Gloss Pressure Sensitive Adhesive Film

Technical Data Sheet

November 1999

Description

3M™ Scotchlite™ Reflective Material - High Gloss is designed to enhance the visibility of the wearer, in daytime, nighttime, or low-light conditions. 3M™ Scotchlite™ Reflective Material - 6805 Silver High Gloss Pressure Sensitive Adhesive Film consists of highly retroreflective microprisms formed on flexible, glossy, and UV-stabilized polymeric film with a pressure sensitive adhesive (PSA) applied to the metalized microprism side.

Color

Product Number	Daytime Color	Reflected Color
6805	Silver	White

Retroreflective Performance

The coefficient of retroreflection (R_A , in cd/lux/m^2) 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. The R_A values are averages of readings taken from orientation angles that are 90 degrees apart unless stated differently. The 0° orientation angle is to be taken as downweb of 3M

supplied rolls. Please contact your 3M representative for the proposed specifications.

Product Number	Daytime Color	Entrance Angle	Observation Angle	Typical R_A	Minimum R_A
6805	Silver	-4.0°	0.2°	500	330
		40°	0.2°	400	65
		5.0°	0.33°	250	120
		40°	0.33°	125	30

Physical Performance

Scotchlite reflective material - 6805 silver high gloss pressure sensitive adhesive film subjected to the exposure tests listed below will maintain a minimum R_A of 100 cd/lux/m^2 at 0° orientation, -4° entrance angle and 0.2° observation angle unless stated otherwise.

Performance Feature	Test Method
Wet Reflectivity:	EN 471 Annex A
Solvent Resistance: Will not dissolve or pucker	Wiped with a soft cloth containing mineral spirits, kerosene, unleaded gasoline, methanol, or VM&P Naphtha

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 - 6805 Silver High Gloss Pressure Sensitive Adhesive Film are used together on a single surface or as a set, they should be matched to ensure uniform daytime color and reflectivity.

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

Rigid substrates: Scotchlite reflective material - 6805 silver high gloss pressure sensitive adhesive film has been designed for application to rigid substrates. It has a release liner on a pressure sensitive adhesive surface. Remove liner prior to application to clean, dry, smooth surface. Position the film and press firmly into place. Allow 72 hours for adhesion to reach its maximum strength. This film is not recommended for fabrics.

Screen Printing: Following are several inks that can be used for printing on top of the vinyl surface of Scotchlite reflective material - 6805 silver high gloss pressure sensitive adhesive film. 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 alcohol may help ink adhesion.

Ink	Ink Type	Manufacturer
3M™ Scotchlite™ Process Color Series 990	Transparent	3M Traffic Control Materials Division Intl: 651-733-8726, 1-800-553-1380, Fax: 651-733-5012
3M™ Scotchcal™ Screen Printing Ink Series 9700 UV	Transparent	3M Commercial Graphics Division Intl: 651-737-3136, 1-800-328-3908, Fax: 651-736-4233
9700 Series - All Purpose Screen Ink	Opaque & Transparent	Naz-Dar/KC Coatings Ph: 312-943-8338, Fax: 312-943-8215
3M™ Scotchcal™ Screen Printing Ink Series 4400	Transparent	3M Commercial Graphics Division Intl: 651-737-3136, 1-800-328-3908, Fax: 651-736-4233

NOTE: Scotchlite reflective material - 6805 silver high gloss pressure sensitive adhesive film is shipped with a polyester liner on top of the vinyl film for easy handling. This polyester liner can be removed either before or after application, but must be removed before screen printing.

NOTE: Dyes may migrate when placed in direct contact with vinyl and some fabrics. Prior to application, Scotchlite reflective material - 6805 silver high gloss pressure sensitive adhesive film must be kept separate and should be tested for dye migration.

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 - 6805 Silver High Gloss Pressure Sensitive Adhesive Film depends on cleaning method and wear conditions.

Wash: Do not wash



Bleach: Do not bleach



Dry: Do not dry



Iron: Do not iron



Dry-clean: Do not dry-clean



Product Availability

Scotchlite reflective material - 6805 silver high gloss pressure sensitive adhesive film is available in rolls with the following standard widths and roll lengths:

Product Number	Width	Width Tolerance	Splices Allowed	Standard Roll Length
6805	1", 2", 16" and 33"	±1/32" (±0.8mm)	2 per roll max.	50 yd.

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:

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.**



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