



Scotchlite™

Engineer Grade Reflective Sheeting

Series 2200/3200

Product Bulletin 2200/3200

January 2000

Replaces PB 2200/3200 dated September 1996

Health and Safety Information

Read all health hazard, precautionary and first aid statements found in the Material Safety Data Sheets, and/or product label of chemicals prior to handling or use.

Scotchlite sheetings series 2200 and 3200 are also described in the Scotchlite engineer grade reflective sheeting product bulletin.

These products conform to the following specifications:

U.S. Department of Transportation, Federal Highway Administration, STANDARD SPECIFICATIONS FOR CONSTRUCTION OF ROADS AND BRIDGES ON FEDERAL HIGHWAY PROJECTS, 1985-FP85, Type II, Section 718.

Federal Supply Service, General Services Administration, L-S-300C, SHEETING AND TAPE, REFLECTIVE: NON-EXPOSED LENS, Reflectivity 1.

Description

3M™ Scotchlite™ Engineer Grade Reflective Sheeting Series 2200 and 3200 are primarily intended for reflectorizing traffic control signs, and delineators that are exposed vertically in service. Applied to properly prepared sign substrate, Engineer Grade sheeting provides long term reflectivity and durability.

Series 2200 and 3200 sheetings are available in the following colors and adhesive types.

Table I

| | Heat Activated | Pressure Sensitive |
|----------------|----------------|--------------------|
| Color | Series | Adhesive |
| White | 2290 | 3290 |
| Parkway White* | 2290 | 3290 |
| Yellow | 2271 | 3271 |
| Red | 2272 | 3272 |
| Blue | 2275 | 3275 |
| Green | 2277 | 3277 |
| Brown | 2279 | 3279 |

Sheeting colors conform to Federal Specification FP-85 Section 718.01 (a) and L-S-300C Table IA.

*Described in the Scotchlite engineer grade reflective sheeting product bulletin.

Application

Engineer Grade sheeting should be conditioned prior to application to provide minimum sheeting temperature of 65°F (18°C) throughout the roll or sheeting stack. Series 2200 and 3200 sheeting should be applied with mechanical applicators to properly prepared substrates. The equipment and accessories that must be used are as follows:

Series 2200 Sheeting

1. Heat lamp vacuum applicator with temperature control.
2. Remove protective liner from adhesive and place glossy unprinted side of liner against sign face. Sheeting and liner may require perforation to aid in air evacuation. See Information Folder 2.1 for details.

Series 3200 Sheeting

Applications should be made with sheeting and substrate above 65°F (18°C).

1. 48" squeeze roll applicator.
2. Hand application. To obtain maximum initial adhesion use firm pressure with 2" (5cm) rubber roller or plastic squeegee PA1 or equivalent. Use multiple, heavy overlapping strokes. Resqueegee all edges. See Information Folder 1.5.

Process Colors

3M™ Scotchlite™ Engineer Grade Reflective Sheeting may be processed into traffic signs by screen processing using 3M™ Scotchlite™ Process Color Series 700 for use on Series 2200 and 3200 sheeting or Series 990 for use on Series 3200 sheeting ONLY. For screen processing of traffic signs, screen using P.E. 157 screen mesh using a fill pass. See Product Bulletins 700 and 990 for available colors and Information Folder 1.8 for details.

General Performance Considerations

The performance and durability of Scotchlite reflective sheeting will depend upon a number of factors including (but not limited to) substrate selection and preparation, compliance with recommended application procedures, sign placement, geographic area, exposure conditions, atmospheric conditions (e.g. fog, snow, rain), surface deposits (e.g. dirt, dew, frost), maintenance and age.

Maximum durability of Engineer Grade sheetings can be expected in applications subject to vertical exposure on stationary objects when processed and applied to properly prepared aluminum according to 3M recommendations provided in Information Folder 1.7 on Sign Base Surface Preparation.

The user must determine the suitability of any nonmetallic sign backing for its intended use. Applications to unprimed, excessively rough or non-weather-resistant surfaces, or exposure to severe or unusual conditions can shorten the performance of such applications.

Signs in mountainous areas that are covered by snow for prolonged periods may also have reduced durability.

Scotchlite process colors, when used according to 3M recommendations, are generally expected to provide performance comparable to colored reflective sheeting, except for certain lighter colors, such as yellow, gold, or heavily toned colors or blends containing yellow or gold, whose dura-

bility depends on how much of each color is used. Dilution of color and atmospheric conditions in certain geographic areas may result in reduced durability.

3M™ Scotchcal™ Film 3650-12 Black, Scotchcal™ Film 7720-12, 3M™ Controltac™ Film 180-12 Black, and 3M™ Scotchlite™ ElectroCut™ Film Series 1170 can be expected to perform satisfactorily for the life of the sign when direct applied to Engineer Grade sheeting, except where shortened durability is stated in the literature.

Literature Reference

| | |
|--------|---|
| PB 700 | 3M™ Scotchlite™ Process Color Series 700 |
| PB 990 | 3M™ Scotchlite™ Process Color Series 990 |
| IF 1.5 | Hand Application Instructions for 3M™ Scotchlite™ Reflective Sheeting and 3M™ Scotchcal™ Films with Pressure Sensitive Adhesive |
| IF 1.7 | Sign Base Surface Preparation for 3M™ Scotchlite™ Reflective Sheeting Application |
| IF 1.8 | Application of 3M™ Scotchlite™ Process Color 700 and 800 on Scotchlite Reflective Sheetings |
| IF 2.1 | Application of 3M™ Scotchlite™ Engineer Grade Sheeting Using HLVA |

FOR INFORMATION OR ASSISTANCE

CALL:

1-800-553-1380

IN CANADA CALL:

1-800-265-1840

Fax-on-Demand in the U.S. and Canada:

1-800-887-3238

Internet:

www.3M.com/tcm

3M assumes no responsibility for any injury, loss or damage arising out of the use of a product that is not of our manufacture. Where reference is made in literature to a commercially available product, made by another manufacturer, it shall be the user's responsibility to ascertain the precautionary measures for its use outlined by the manufacturer.

Important Notice

All statements, technical information and recommendations contained herein are based on tests we believe to be reliable, but the accuracy or completeness thereof is not guaranteed, and the following is made in lieu of all warranties, express or implied. Seller's and manufacturer's only obligation shall be to replace such quantity of the product proved to be defective. Neither seller nor manufacturer shall be liable for any injury, loss or damage, direct or consequential, arising out of the use of or the inability to use the product. Before using, user shall determine the suitability of the product for his/her intended use, and user assumes all risk and liability whatsoever in connection therewith. Statements or recommendations not contained herein shall have no force or effect unless in an agreement signed by officers of seller and manufacturer.



Traffic Control Materials Division

3M Center, Building 225-5S-08
P.O. Box 33225
St. Paul, MN 55133-3225
www.3M.com/tcm

3M Canada

P.O. Box 5757
London, Ontario N6A 4T1

3M México, S.A. de C.V.

Av. Santa Fe No. 55
Col. Santa Fe, Del. Alvaro Obregón
México, D.F. 01210



40% Pre-consumer waste paper
10% Post-consumer waste paper

© 2000, 3M IPC. All rights reserved.
75-0300-7765-7