



Premium Banners

with Electrostatically Imaged Graphics and 3M™ Panaflex™ Awning and Sign Facing 945GPS

Note: This bulletin has been completely revised; therefore black bars have not been used to indicate changes. Please read the entire bulletin thoroughly.

Description

This bulletin describes how to make single or double-sided, indoor or outdoor, premium banners using the listed materials.

Compatible 3M Products

Films

- 3M™ Panaflex™ Awning and Sign Facing 945GPS
- 3M™ Controltac *Plus* Electrostatic Flexible 8619 ES for exterior banner applications
- 3M™ Scotchcal™ Clear Graphic Film 8626 ES or 3M™ Scotchcal™ Translucent Graphic Film 8628 ES for framed or backlit banners
- 3M™ Scotchcal™ Changeable Graphic Film 8650 ES for interior applications.

Overlaminates

- 3M™ Scotchcal™ Luster Overlamine 8910 ES
- 3M™ Scotchcal™ Matte Overlamine 8911 ES
- 3M™ Scotchcal™ High Gloss Hot Transfer Flexible Overlamine 8921 ES

Note: Refer to Instruction Bulletin 4.16 for imaging, transferring and laminating 8619/8921.

Health and Safety

Caution

When handling any chemical products, read the manufacturers' container labels and the Material Safety Data Sheets (MSDS) for important health, safety and environmental information.

To obtain MSDS sheets for 3M products:

- By fax, call 1-800-364-0768 in the US and Canada or 1-650-556-8417 for all other locations.
- Electronically, visit us at <http://www.3m.com/msds>.
- By mail, or in case of an emergency, call 1-800-364-3577 or 1-651-737-6501.

When using any equipment, always follow the manufacturers' instructions for safe operation.

Electrostatic Imaging Guidelines

- Use Film 8650 ES for interior banners where easy removal of the graphic is desired.
- Wet apply clear film 8626 ES or translucent film 8628 ES when constructing backlit banners.
- Use a recommended overlamine to protect the toners.
- Wet apply overlaminates 8910 and 8911.
- After applying the graphic, let the banner lie flat 24 hours for adhesion to build.
- Roll banners, graphic facing out onto a 3 inch (or larger) diameter tube with liners inserted between layers.
- For banners with graphics on both sides, the entire construction must be shipped and stored flat. If rolled, the inside graphic could delaminate from the sign facing.
- If multiple banners must be stored or shipped flat together, insert liners between banners.

Note: For the full product names of the 3M products listed on this page, please see page 1.

All Banners

Requirement

To strengthen the banner and prevent edge fraying, fold overall the edges and stitch a nylon webbing material around all of the outside edges of the banner as shown in Figure 1. The recommended size of the webbing is 1 to 1-1/4 inches (2.5 to 3.2 cm) wide and 1/16 to 1/8 inches (0.16 to 0.32 cm) thick.

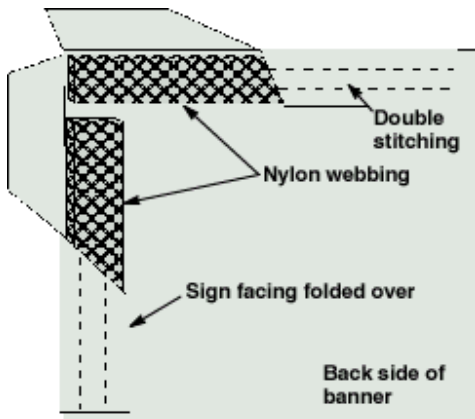


Figure 1. Nylon Webbing Requirement for All Banners

When and Where to Apply the Graphics

With respect to stitching, you can apply the graphics in one of the following ways:

- Apply the graphics first, then fold and stitch them along with the sign facing. The stitches will be visible.
- Stitch the sign facing first, then apply the graphic inside of the stitched area. The stitches and the outer edge of the sign facing will be visible.
- Stitch the sign facing first, then apply the graphic over the sign facing and the stitches, but leave a 1/16 inch (1.6 mm) gap along the outer edge (to minimize edge lifting). The stitches will not be directly visible, but there could be visible air bubbles or uneven contours around the folded/stitched areas.

Interior Banners

Interior banners are assumed to have no wind loading. If you are constructing a banner that will be exposed to wind, follow the mounting and fabrication methods for exterior banners.

Exterior Banners

Wind and Other Factors

Exterior banners are assumed to have wind loads 20 to 60 lbf/ft² (100 to 300 kgf/m²): approximately equal to a 100 mph (160 km/h) non-constant wind.

Other factors contributing to the mounting and fabrication methods for exterior banners and not covered in the scope of this document are location and height above ground level. Please consider the other factors when you are designing banners for exterior use. Contact 3M Commercial Graphics Technical Service for assistance if necessary.

Requirement

Use positive-locking, adjustable attachment devices to secure exterior banners. You must be able to tension the banner.

Two-Sided Banners

Awning and sign facing 945GPS is finish coated for graphic application on one side only. Adhesive and decorating quality are significantly less on the back side of the sign facing. Use two pieces of sign facing stitched back to back for double-sided banners. If you put graphics on both sides of a single piece of sign facing, use a rivet brush on the back side after you apply the graphic to improve adhesion.

When two layers of sign facing are used to make a banner, such as with the two-sided banners, the layers should be separable for cleaning and removing moisture. You can make them separable using marine-grade snap fasteners as shown in Figure 2. The snap fasteners should be used on the entire vertical perimeter, spaced 6 to 8 inches (15 to 20 cm) apart. Permanent metal grommets may also be used however cleaning may not be as easy or thorough.

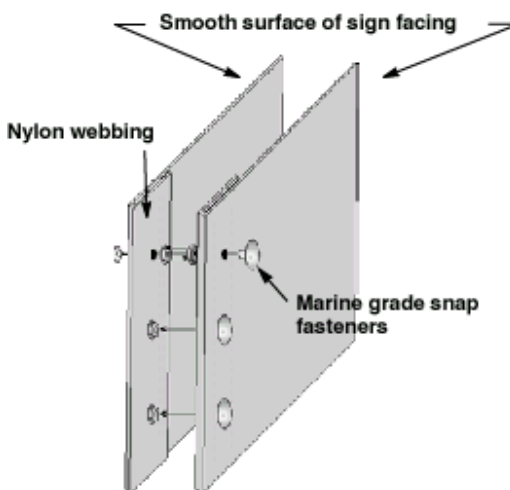


Figure 2. Two-Sided Banners: Two Pieces of Sign Facing

Note: For the full product names of the 3M products listed on this page, please see page 1.

Mounting and Fabrication Methods

Select a mounting/fabrication method from the table on page 3 according to the location, size and type of your banner.

Other methods may be used. Contact 3M Commercial Graphics Technical Service for assistance.

Location/Size	One-Sided	Two-Sided*
Interior, up to 30 ft ² (6 m ²)	Methods 1-4	Methods 2-4
Interior, up 30 to 60 ft ² (0 to 6 m ²)	Methods 2-4	Methods 3 or 4
Interior, over 60 ft ² (6 m ²)	Methods 3 or 4	Methods 3 or 4
Exterior, up to 30 ft ² (0 to 6 m ²)	Methods 5-8	Methods 6-8
Exterior, 30 to 60 ft ² (3 to 6 m ²)	Methods 6-8	Methods 7 or 8
Exterior, over 60 ft ² (6 m ²)	Methods 7 or 8	Methods 7 or 8

*If your two-sided banner is made using two pieces of sign facing as recommended (see Two Sided Banners, page 2) use the method indicated in the Two-Sided column. If your banner is made of only one piece of sign facing, use the method indicated in the One-Sided column.

Method 1

For interior, one-sided banners up to 30 ft² (3 m²)

Attach the top two corners (Figure 3) to the structure with metal grommets and double washers through both the nylon webbing and the sign facing. Grommets should be attached with double washers as reinforcement and could be of the locking design (Figure 4).

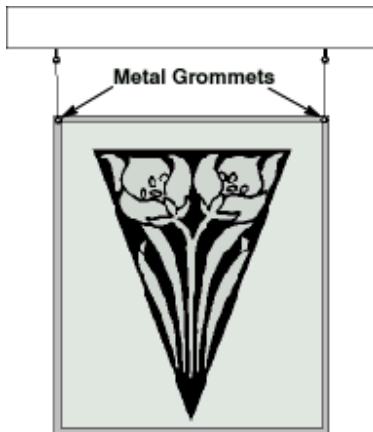


Figure 3. Method 1 Diagram

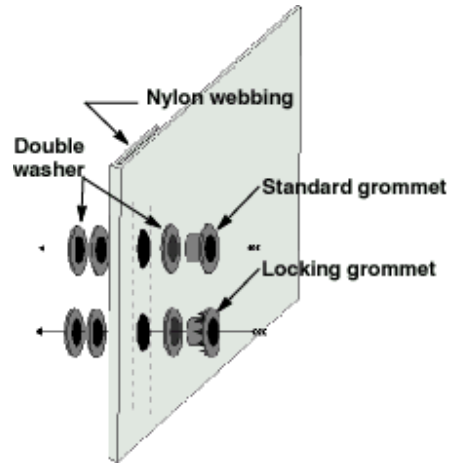


Figure 4. Standard and Locking Grommet Assembly

Method 2

For interior, one-sided banners 30 to 60 ft² (3 to 6 m²) and interior, two-sided banners up to 30 ft² (3 m²).

Use a continuous rigid pole through a stitched pocket in the top of the banner. Attach the pole to the structure on one or both ends.

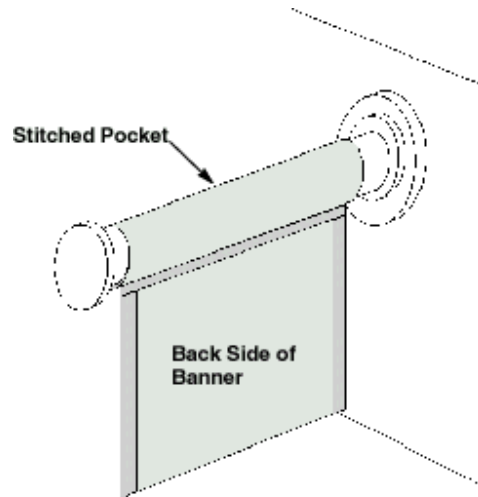


Figure 5. Method 2 Diagram

Note: For the full product names of the 3M products listed on this page, please see page 1.

Method 3

For interior, one-sided banners over 60 ft² (6 m²) and interior, two-sided banners 30 to 60 ft² (3 to 6 m²).

Use a continuous rigid pole through a stitched pocket in the top of the banner. Stitch an extra layer of sign facing around the pocket to reinforce the construction and attach the pole to the structure at both ends, if possible.

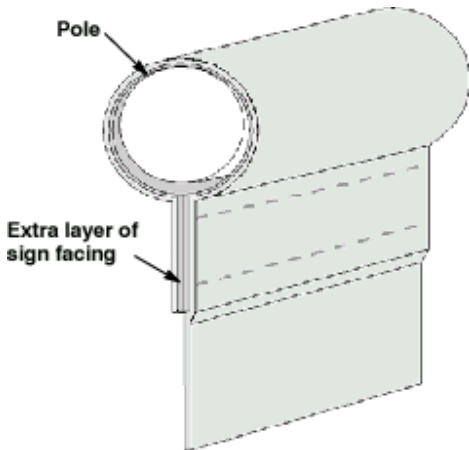


Figure 6. Method 3 Diagram

Method 4

For interior, one-sided banners over 60 ft² (6 m²) and interior, two-sided banners 30 to 60 ft² (3 to 6 m²).

Use additional layers of sign facing as gusseting stitched into the attachment corners and additional nylon webbing stitched across the corner and secured to a D-ring for attaching to the structure.

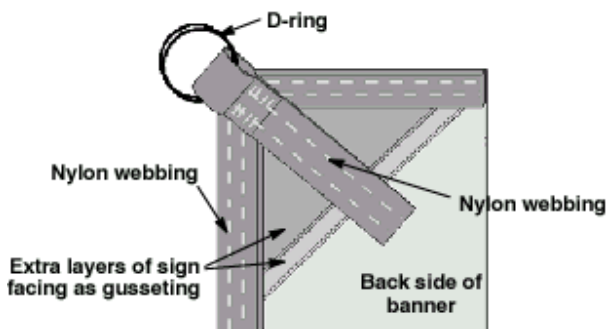


Figure 7. Method 4 Diagram

Method 5

For exterior, one-sided banners up to 30 ft² (3 m²)

Attach all four corners to the structure with metal grommets and double washers through corners of the sign facing and nylon webbing.

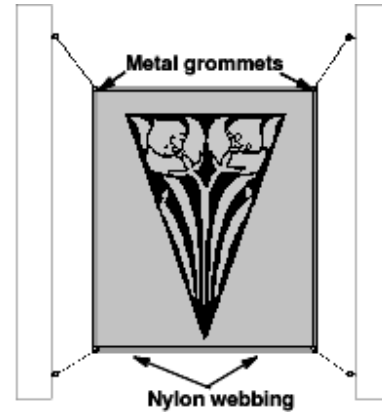


Figure 8. Method 5 Diagram

Method 6

For exterior, one-sided banners 30 to 60 ft² (3 to 6 m²) and exterior, two-sided banners up to 30 ft² (3 m²).

Use a continuous rigid pole through a stitched pocket in the top and bottom of the banner. Attach poles to the structure on one or both ends. Stitch nylon webbing at the pocket stitching area for reinforcement.

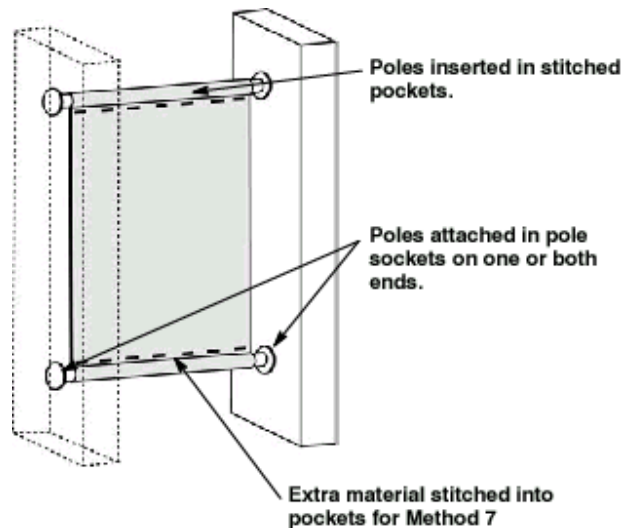


Figure 9. Method 6 and 7 Diagram

Method 7

For exterior, one-sided banners over 60 ft² (6 m²) and exterior, two-sided banners 30 to 60 ft² (3 to 6 m²).

Use a continuous rigid pole through a stitched pocket in the top and bottom of the banner. An extra layer of sign facing may be stitched around the pocket areas as reinforcement. Attach poles to the structure at both ends, if possible.

Method 8

For exterior, one-sided banners over 60 ft² (6 m²) and exterior, two-sided banners 30 to 60 ft² (3 to 6 m²).

Use metal grommets around all of the outside edges, through the sign facing and nylon webbing, spaced 6 to 12 inches. Thread rope through the grommets and around the vertical and/or horizontal mounting structure.

This method could be used in conjunction with pole pockets and mounting poles on the horizontal edges for additional strength.

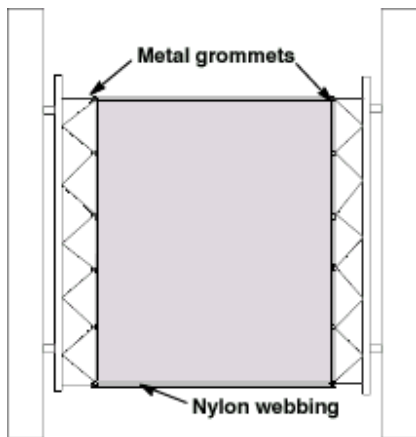


Figure 10. Method 8 Diagram

3M Related Literature

Listed below is related 3M technical literature that may be of interest. You may view and print these Bulletins from our Web site at www.scotchprint.com, or order them via our Fax-on-Demand (FOD) system. Call one of these phone numbers to order the desired bulletins, and specify the FOD document number provided in the chart.

United States or Canada: 1-800-364-0768
International: 1-651-732-6506

Subject	Bulletin No.	FOD No.
Product Bulletins		
3M™ Panaflex™ Awning and Sign Facing 945GPS	945	4006
3M™ Controltac™ Plus Flexible Graphic Film 8619 ES	8619	3528
3M™ Scotchcal™ Clear Graphic Film 8626 ES	8626	3533
3M™ Scotchcal™ Translucent Graphic Film 8628 ES	8628	3534
3M™ Scotchcal™ Luster Overlamine 8910 ES	8910	3519
3M™ Scotchcal™ Changeable Graphic Film 8650 ES	8650	3511
3M™ Scotchcal™ Matte Overlamine 8911 ES	8911	3520
3M™ Scotchcal™ Flexible Overlamine 8921 ES	8921	3530
Instruction Bulletins		
Image transfer and lamination: digitally imaged graphics for curtain-sided vehicles and premium banners	4.16	6516
Warranties		
Worldwide 3M™ MCS™ Warranty Packet (includes all Commercial Graphics MCS Warranties)		9503
Worldwide 3M™ MCS™ Warranty Overview-Folder		9504

Bulletin Change Summary

All references to wind slits removed. General revisions. Replaced/revised several illustrations.



Commercial Graphics Division
3M Center, Building 220-6W-06
PO Box 33220
St. Paul, MN 55144-1000
General Info. 1-800-374-6772
Technical Info. 1-800-328-3908
Fax 1-651-736-4233
Fax-on-Demand 1-800-364-0768 US/Canada or 1-651-732-6506 International
Fax-on-Demand Document Number 7018
www.scotchprint.com

3M Canada
P.O. Box 5757
London, Ontario
Canada N6A 4T1
1-800-265-1840
Fax 519-452-6245

3M México, S.A. de C.V.
Av. Santa Fe No. 55
Col. Santa Fe, Del. Alvaro Obregón
México, D.F. 01210
52-5-270-0400
Fax 52-5-270-2299

3M Puerto Rico, Inc.
Puerto Rico Industrial Park
P.O. Box 100
Carolina, PR 00986-0100
787-620-3000
Fax 787-750-3035

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Health & Safety

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Important Notice to Purchaser

The 3M products described in this publication are covered by a 3M warranty and limitation of liability.

3M's warranty provides that if 3M finds that goods are defective in material or workmanship they will be replaced or the price refunded at 3M's option but note that 3M does not accept liability for other direct losses (except for personal injury or death) or consequential losses relating to defective products or from information supplied by 3M.

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Commercial Graphics Department
3M United Kingdom PLC
3M Centre
Cain Road
Bracknell
Berkshire
RG12 8HT

Tel: 01344 857850
Fax: 01344 857939
e-mail: commgraphics.uk@mmm.com
www.3m.com/uk/graphicsolutions
www.scotchprint.com/uk

Sales Assistance

Commercial Graphics Group
3M United Kingdom PLC
3M House
28 Great Jackson Street
Manchester
M15 4PA
Tel: (0161) 237 6394
Free Fax: (0800) 378127
e-mail: commgraphics.uk@mmm.com
www.3m.com/uk/graphicsolutions
www.scotchprint.com/uk

3M Ireland, 3M House, Adelphi Centre,
Upper Georges Street,
Dun Laoghaire, Co Dublin, Ireland
Tel: 01280 355, Fax 01 280 3509
e-mail: commgraphics.uk@mmm.com
www.3m.com/uk/graphicsolutions
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