

Overview

This instruction bulletin provides details on 3M premasking and prespacing tapes and their use with 3M graphic films. Topics include general usage guidelines, how and when to use these tapes, and the right techniques to apply these tapes to specific films, including guidance dependent upon the printing or cutting process used to process the graphic films.

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Product Description

- An application tape is an adhesive-backed translucent or clear material used as an aid in applying graphics
- Typical uses of application tapes include:
 - adding stiffness to graphics to make application easier,
 - protecting film from stretching during application,
 - protecting graphics from scratching during application,
 - aiding in the registration of cut graphic parts, and
 - protecting applied graphics from damage during other operations.

Product Lines

- 3M™ Premasking Tape SCPM-3
- 3M™ Premasking Tape SCPM-44X
- 3M™ Prespacing Tape SCPS-2
- 3M™ Prespacing Tape SCPS-53X
- 3M™ Prespacing Tape SCPS-55
- 3M™ Prespacing Tape SCPS-102

NOTE

3M does NOT recommend using application tape with Gloss Overlaminates 8518, 8528, 8914, or 8548G as doing so may result in a loss of gloss.

NOTE

All non-recommended and/or non-warranted applications are strictly on a user test-and-approve basis. Installers assume any associated risks, and must acknowledge that 3M has no liability for such applications. Contact your 3M representative with questions about graphic applications, end uses, and warranties.



Usage Recommendations

Application tape is not required for every film or type of application. Refer to the most current 3M product and instruction bulletins for information on specific constructions and end use recommendations.

Application Tape as An Application Aid

Application tape can reduce stretching, wrinkling, and air entrapment during hand application of the graphic film to the substrate. The tape increases the graphic's stiffness, making it easier to handle.

Application tape is typically recommended for graphics meeting at least one of the following criteria:

- Graphic constructions less than 4 mils thick (film or film and overlamine)
- Graphics 4 sq ft (0.4 sq m) or larger
- Striped or intricately-cut graphics
- Vinyl films printed with solvent-based inkjet inks
- Graphics applied at high temperatures

When to Use Premasking Tape

- To help increase stiffness and prevent stretching and damage during application
- When little or no liner is exposed
- If the graphic consists of large letters or wide stroke widths

When to Use Prespacing Tape

- To hold cut and weeded letters or graphics in registration after removing the film liner
- To protect cut graphic parts from scratching or damage during application
- When large amounts of liner are exposed
- When a graphic has small letters or narrow stroke widths

Prespacing Tape for Cut Graphics

- Applying application tape to prespaced cut graphic parts eliminates the time-consuming layout of individual parts on the application surface.

Premasking Tape in Overpaint Systems

Application tape can protect graphics from staining when overpainted with most finish paints. This allows installers to apply premasked graphics to the prime coat and then apply the finish coat around the graphic. This method effectively edge seals the graphic by embedding the graphic in the paint. The application tape should be removed while the paint is still tacky, but not when it is still wet.

Refer to [3M Instruction Bulletin Application: Trailers](#) for complete details.

NOTE

Do NOT use application tape on textured films such as [3M™ Wrap Film Series 2080](#) carbon fiber films. The graphic may not have enough initial adhesion to the substrate to allow the application tape to be removed without also lifting the graphic.

Removing Film from Liners

NOTE

Do NOT remove liners from graphic films with 3M™ Comply™ adhesive or from 3M™ Controltac™ graphic films and then attempt to reapply the film to the liner. The liners on these films play an important role in how the films apply to a substrate. Key application features will be lost if the liner is prematurely removed from the film.

3M recommends using 3M™ Prespacing Tape SCPS-55 for large-cut graphics made with films with 3M™ Comply™ adhesive where liner is exposed. In specific cases, 3M™ Prespacing Tape SCPS-102 may also be used. See the [“When to Use Prespacing Tape”](#) section above.

Application Tape Selection

For graphic applications with little or no exposed liner, use Table A to select the correct application tape:

Table A. Premasking Tape Selection

Recommended Graphic Protection Options	<ul style="list-style-type: none"> • None • Standard overlaminates¹ • Screen print solvent clears¹ • Any 3M branded solvent ink series 	<ul style="list-style-type: none"> • Screen print UV clears¹ • Any 3M branded UV ink series
Recommended Paper Application Tape	SCPM-3	SCPM-44X
Recommended Clear Application Tape	SCPS-102²	SCPS-102²

¹ Using SCPS-102 for these applications allows graphics to be shipped on a core, rather than as flat sheets.

² SCPS-102 may NOT adhere well to silicone-coated liners, but it can be used for graphics made with 3M™ Scotchlite™ Reflective Film Series 680CR and IJ680CR-10.

For graphic applications with large amounts of exposed liner, use Table B to select the correct application tape:

Table B. Prespacing Tape Selection

Film with Comply™ Adhesive?	No		Yes
Recommended Graphic Protection Options	<ul style="list-style-type: none"> • None • Standard overlaminates¹ • Screen print solvent clears¹ • Any 3M branded solvent ink series 	<ul style="list-style-type: none"> • Screen print UV clears¹ • Any 3M branded UV ink series 	<ul style="list-style-type: none"> • None • Standard overlaminates¹ • Screen print solvent clears¹ • Screen print UV clears¹ • Any 3M™ branded UV ink series
Recommended Paper Application Tape	SCPS-2	SCPS-53X	SCPS-55
Recommended Clear Application Tape	SCPS-102²	SCPS-102²	SCPS-102²

¹ Using SCPS-102 for these applications allows graphics to be shipped on a core, rather than as flat sheets.

² SCPS-102 may NOT adhere well to silicone-coated liners, but it can be used for graphics made with 3M™ Scotchlite™ Reflective Film Series 680CR and IJ680CR-10.

For applications using 3M™ Crystal glass finish films, use Table C to select the correct application tape:

Table C. Application Tape Recommendations for 3M™ Crystal Glass Finishes

Recommended Premasking Tapes for 3M™ Crystal Glass Finishes		Recommended Prespacing Tapes for 3M™ Crystal Glass Finishes	
Dusted (unprinted)	Frosted (unprinted)	Dusted (unprinted)	Frosted (unprinted)
SCPM-3, SCPM-44X		SCPS-2, SCPS-53X	SCPS-53X, SCPS-55

Procedure for Prespacing Graphics

1. Follow the recommended cutting sizes found in each film's product bulletin.
2. Only cut through the film and adhesive. Do NOT cut through the liner.
3. Weed (remove) the background material that will not be used in the graphic.

NOTE

Carefully avoid lifting very narrow characters from the liner.

4. Apply the appropriate application tape as specified in Table A, Table B, and Table C.
5. Trim the graphic to size.

NOTE

Always identify the easiest place to start part pick up before removing the liner. This is particularly important if the cut graphics include small letters, narrow stroke widths, or intricate designs, or if the installer applies prespacing tape to the exposed liner of a film with 3M™ Comply™ adhesive.

6. If the prespacing tape does NOT adequately pick up the cut graphic parts or adhere well to the liner, process the graphic with its prespacing tape in a heat lamp vacuum applicator at 150°F to 180°F (66°C to 82°C). The duration of this process is dependent upon the type of equipment used. Typically, a two-minute cycle with little or no dwell time at the peak temperature provides satisfactory results.
7. If removing the prespacing tape does not remove all of the prespaced cut graphic parts from the liner easily, reapply the tape with a squeegee to secure the elements back to the liner. Then gently pull the graphic, liner-side down, over the edge of a surface. This helps loosen any embedded kiss cut edges. See Figure 1.

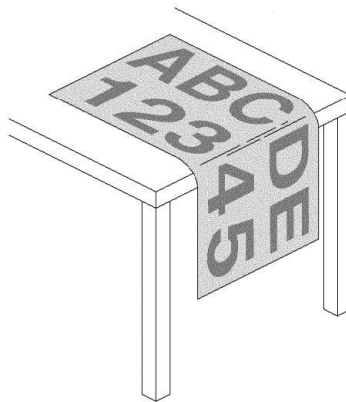


Figure 1. Loosening Prespaced Graphics from a Liner

Printing Instructions on Application Tapes

Users can print application instructions and registry marks that aid in positioning and application directly on the application tape surface. Screen printing, hand printing/stamping, and press printing are all successful methods for printing on application tapes. Check with an ink manufacturer for assistance selecting and using an ink for printing on application tape. 3M does NOT provide an ink for this use.

Refer to the ink container labels and the ink manufacturer's safety data sheets for health, safety, and handling information.

Preparation of Printed Graphics Before Applying Application Tape

Ensure that printed graphics are thoroughly dried or cured before applying application tape. For specific recommendations, see the 3M instruction bulletins for the inks being used.

If sheets must be stacked, wrap the stacks with polyethylene and seal them to help prevent uneven moisture absorption or loss during storage and shipping, both of which result in the edges of the sheets waving or curling.

Hand Premasking Procedure

1. Lay an appropriately-sized piece of application tape adhesive-side-up on a table. See Figure 2.
2. Align the graphic face-down on the application tape adhesive. See Figure 3.
3. Squeegee the graphic from the liner side to adhere it to the application tape. Work from the center of the graphic out. See Figure 4.

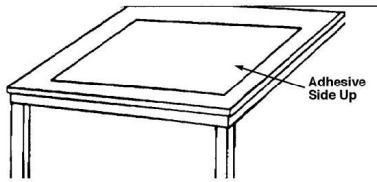


Figure 2. Lay the Application Tape Adhesive-Side-Up

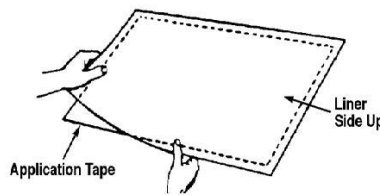


Figure 3. Align the Graphic Face Down

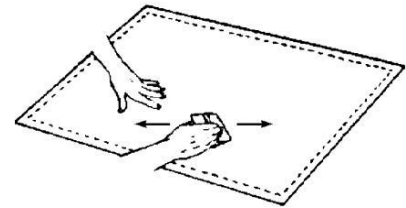


Figure 4. Squeegee the Graphic and Application Tape

4. Flip the entire graphic/application tape assembly over and squeegee the application tape side. Again, work from the center out.
5. Trim the graphic to size or cut it to shape.

Mechanical Lamination

Numerous mechanical laminators are available. Follow the manufacturer's operating and safety procedures. See [3M Instruction Bulletin Production: Lamination](#) for detailed suggestions.

Suggestions When Using 3M™ Application Tapes

- Do NOT apply brake pressure to the application tape feed roller. Brake pressure stretches the tape during lamination, causing the application tape to shrink on the finished graphic.
- The application tape laminator should have at least one rubber squeeze roller at the nip site.
- The recommended nip pressure setting depends on the device used. In general, higher pressures and temperatures provide higher adhesion of the application tape to the film and exposed liner. Excessive pressure can cause the application tape or the film's liner to curl.
- An edge guide and feed table can be used to keep the graphic aligned with the application tape.
- After completing a job, the laminator may be left threaded, but be sure to remove the pressure from the squeeze rollers. Prolonged pressure flattens the rollers, which can cause lamination problems.

Techniques for Removing the Liner and Application Tape

- When removing the liner, always peel it away from the graphic construction.
 - Never peel the graphic construction away from the liner, as this can distort and stretch the graphic.
- To remove the application tape after the graphic film is properly applied to the substrate:
 - Remove the application tape by peeling it away from the graphic film at approximately an 180° angle.
 - Re-squeegee all edges of the graphic film to ensure good adhesion of the film to the substrate.
- Click [here](#) to watch a video on prespacing cut graphics and see how to peel application tape away from a graphic.

3M Related Literature

In addition to other 3M bulletins specified in this document, the following bulletins provide details users may need to successfully apply a graphic.

- [3M Instruction Bulletin Production: Graphic Design, Handling, and Storage](#)
- [3M Instruction Bulletin Production: Lamination](#)
- [3M Instruction Bulletin Application: Trailers](#)
 - Complete the 3M Pre-Installation Inspection Record found in Application: Trailers prior to manufacturing or applying a graphic to an automobile, van, or bus.
- [3M Instruction Bulletin Application: Watercraft](#)
 - Complete the 3M Pre-Installation Inspection Record found in Application: Watercraft prior to manufacturing or applying a graphic to a watercraft.

Health and Safety

Tools and Equipment Usage

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

Chemicals

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

[Follow this link to obtain SDS sheets for 3M products.](#)

[Follow this link to obtain information about substances of very high concern \(SVHC\) for EU products.](#)

Warranty Information

Technical Information

Technical information, guidance, and other statements provided by 3M are based upon records, tests, or experience that 3M believes to be reliable, but the accuracy, completeness, and representative nature of such information is not guaranteed. Such information is intended for people with knowledge and technical skills sufficient to assess and apply their own informed judgment to the information. No license to any intellectual property rights is granted or implied with respect to this technical information.

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 a 3M product in a particular application. 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, reviewing all applicable regulations and standards, and reviewing the product label and use instructions. Failure to properly evaluate, select, and use a 3M product in accordance with instructions or to meet all applicable safety regulations may result in injury, sickness, death, and/or harm to property.

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Commercial Branding and Transportation

3M Center, Building 223-3N-30
St. Paul, MN 55144

1-800-328-3908
3M.com/Graphics

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Revision A, December 2024 Please recycle.

