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Product Description

- For Eco-Solvent, Solvent, UV and Latex Inkjet Printing and Screen Printing
- 5.9-mil vinyl film

Product Features

- 40% perforated pattern allows a full image to be seen on the outside of a window while allowing viewing through windows from the inside
- Pressure-sensitive adhesive
- Removable
- Expected Performance Life of 1 year (unwarranted period for unprinted film with no graphic protection, applied to a flat, vertical, outdoor surface)

Recommended Types of Graphics and End Uses

- Short to long-term, indoor and outdoor window graphics
- Retail promotions
- Building windows and dividers, interior and exterior
- Non-regulated vehicle and bus windows

Graphic Protection

Graphic protection can improve the appearance, performance and durability of your graphic. Always use only the graphic protection options recommended in this Bulletin for this film. See [3M Product Bulletin GP-1](#) for more details about these options.

- [3M™ Scotchcal™ Gloss Overlaminates 8518](#)
- [3M™ Scotchcal™ Optically Clear Overlaminates 8914](#)

Characteristics

These are typical values for unprocessed product. Processing may change the values.

Physical Characteristics

Characteristic	Value
Material	Vinyl with a 40% perforation pattern
Film Color	White on the image side, black on the reverse side
Thickness	Without adhesive: 5.9 mil (0.15 mm) With adhesive: 6.8 mil (0.17 mm)
Adhesive	Pressure-sensitive
Adhesive Color	Clear
Liner	Double-sided polycoated paper with solid white paper backing
Flammability	Call 1-800-328-3908, for information

Application Characteristics

Characteristic	Value
Finished Graphic Application Recommendation	Surface type: Flat and simple curves Substrate type: Transparent substrates such as transparent acrylic, glass, polycarbonate, painted metal between vehicle windows Application temperature: 50° – 100°F (10° – 38°C) air and substrate Application method: Dry
Temperature Range After Application	-30 °F to +150 °F (-25 °C to +65 °C) (not for extended periods of time at the extremes)
Graphic Removal	Up to 6 months, from glass, acrylic, polycarbonate; may require heat

Warranty Information

Warranty Coverage Overview

The warranty coverage for each graphic is based on the user both reading and following all applicable and current 3M Product and Instruction Bulletins. The warranty period for eligible graphics is as stated in the 3M Graphics Warranties Matrices found at 3MGraphics.com/warranties, at the time that the film was purchased. The warranty period may be reduced and stipulations may apply for certain constructions and applications, as covered in the 3M Graphics Warranties Bulletin found at 3MGraphics.com/warranties.

The warranties set forth in the Warranty Bulletin are made in lieu of all other express or implied warranties, including any implied warranty of merchantability, fitness for a particular purpose, or arising out of a course of dealing, custom or usage of trade.

3M Basic Product Warranty

3M Graphics Products are warranted to be free of defects in materials and manufacture at the time of shipment and to meet the specifications stated in its applicable 3M Graphics Product Bulletin and as further set forth in the 3M Graphics Warranties Bulletin.

Limited Remedy

The limited remedy applicable to each warranty is addressed in the 3M Graphics Warranties Bulletin found at 3MGraphics.com/warranties.

Limitation of Liability

Except where prohibited by law, 3M SHALL NOT UNDER ANY CIRCUMSTANCES BE LIABLE TO PURCHASER OR USER FOR ANY DIRECT (EXCEPT FOR THE LIMITED REMEDY PROVIDED IN THE 3M GRAPHICS WARRANTIES BULLETIN), INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, LABOR, NON-3M MATERIAL CHARGES, LOSS OF PROFITS, REVENUE, BUSINESS, OPPORTUNITY, OR GOODWILL) RESULTING FROM OR IN ANY WAY RELATED TO 3M'S GRAPHICS PRODUCTS, SERVICES, OR THIS BULLETIN. This limitation of liability applies regardless of the legal or equitable theory under which such losses or damages are sought.

Additional Limitations

See the 3M Graphics Warranties Bulletin at 3MGraphics.com/warranties, for terms, additional limitations of your warranty, if any, and limitations of liability.

Factors that Affect Graphic Performance Life

The actual performance life of a graphic is affected by:

- the combinations of graphics materials used.
- complete ink drying or curing.
- selection, condition and preparation of the substrate.
- surface texture.
- application methods.
- angle and direction of sun exposure.
- environmental conditions.
- cleaning or maintenance methods.

Graphics Manufacturing

Laws and Regulations

Some countries have laws or regulations requiring minimum light transmission that may limit or preclude the use of this product on regulated vehicle windows, which may include passenger vehicles and vans. The user is responsible for determining and complying with all applicable standards.

CAUTION

Some states have laws or regulations requiring minimum light transmission that may limit or preclude the use of this product on regulated vehicle windows, which may include passenger vehicles and vans. The user is responsible for determining and complying with all applicable standards.

CAUTION

Applications that require an optically-clear view, such as vehicle window exteriors, must be laminated with 3M™ Scotchcal™ Optically Clear Overlaminates 8914. Failure to apply this overlaminates could result in obstructed or impaired viewing when the product becomes wet.

CAUTION

Before using any equipment, always read the manufacturer's instructions for safe operation.

Inkjet Printing

Always read and follow the ink manufacturer's written instructions on usage.

- **Sheeted film:** When used on a flat-bed inkjet printer, sheeted film may produce printing defects.
- **Ink limiting:** The recommended maximum ink limit is 250%.
- **If sheeted or stacked graphics will be stored:** If you plan to store sheeted and stacked finished graphics for an extended period of times, leave an unprinted margin (about 1/4 inch) to allow for possible shrinkage before trimming the graphic.

Do not exceed the recommended total ink coverage for the ink series used on this film. Having too high a total physical ink amount on the film results in media characteristic changes, incomplete drying, overlaminates lifting, and/or poor graphic performance.

Completely Dry Graphics

IMPORTANT NOTE

Incomplete drying can result in graphic failure including curling, increased shrinkage and adhesion failure, which are not covered under any 3M Graphic Warranty.

See the ink's 3M Product and Instruction Bulletin for more details.

Screen Printing

Formulations and processing conditions can affect ink durability. Refer to the Product and Instruction Bulletins for your ink for limitations and proper usage.

Cutting

See [3M Instruction Bulletin 4.1](#) for Sheeting, Scoring and Film Cutting details.

Graphic Protection

Graphic protection may improve the appearance, performance and durability of the graphic. Click on the graphic protection options listed in the "Recommended Compatible Products" on page 1 or see the [3M Graphics Market Product Catalog](#), for more information.

Application Tapes

There are two types of application tapes. See [3M Instruction Bulletin AT-1](#) to determine what application tape is recommend for your film or finished graphic.

Premasking Tape

Increases stiffness during application while preventing stretching and damage. Use when little or no liner is exposed. See [3M Instruction Bulletin 4.3](#) for complete details.

Prespacing Tape

Holds cut and weeded letters or graphics in place during application and after removing the film liner, while preventing stretching and damage. Use when large amounts of liner are exposed. See [3M Instruction Bulletin 4.3](#) for complete details.

Application and Installation

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

- [3M Instruction Bulletin 4.22](#). Hot and Cold Roll Lamination for 3M Overlaminates.
- [3M Instruction Bulletin 5.1](#). Select and Prepare Substrates for Graphic Application
- [3M Instruction Bulletin 5.4](#). Application, Fleet Trucks.
- [3M Instruction Bulletin 5.5](#). Application, General Procedures for Interior and Exterior Dry Application.
- [3M Instruction Bulletin 6.5](#). Storage, Handling, Maintenance, and Removal of Films and Sheetings.

Pressure-sensitive Adhesive

This film has a pressure-sensitive adhesive. It bonds to the surface even with light pressure and cannot be repositioned.

Maintenance and Cleaning

Use a cleaner designed for high-quality painted surfaces. The cleaner must be wet, non-abrasive, without strong solvents, and have a pH value between 3 and 11 (neither strongly acidic nor strongly alkaline). See [3M Instruction Bulletin 6.5](#) for details.

Removal

Removal may require heat. The ease and rate of removal depends on a number of factors. See [3M Instruction Bulletin 6.5](#) for details.

Shelf Life, Storage and Shipping

Shelf Life

The shelf life is **never more than 6 months** from the date of manufacture on the original box.

If you process the film, the shelf life is changed to **3 months** from the processing date, but not later than the 6 month maximum from the manufacturing date.

Storage Conditions

- 90°F (32°C) maximum
- Out of sunlight
- Clean, dry area
- Original container
- Bring the film to print room temperature before using

Shipping Finished Graphics

Flat, or rolled printed side out on 6 inch (15 cm) or larger core. This helps prevent the liner, if used, from popping off.

Health and Safety

CAUTION

When handling any chemical products, read the manufacturers' container labels and the Safety Data Sheets (SDS) for important health, safety and environmental information. To obtain SDS sheets for 3M products go to 3M.com/SDS, or 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.

Bulletin Change Summary

For the most current 3M Technical Information available to successfully use this product, please view this Bulletin electronically and click on the blue underlined links to view the relevant documents. This Bulletin has been substantially changed to remove warranty information and replace it with references to the new Graphics Warranties Website. Please read the entire Bulletin thoroughly.

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