

IJ8150

Quick Links

- [3M Graphics Warranties](#)
- [Technical Information Selector](#)
- [Safety Data Sheets \(SDS\)](#)
- [Flammability \(ASTM E84 Reports\)](#)
- [Videos](#)

Some of these links lead to web-based resources that are not product-specific.

Product Description

- For Solvent, UV and Latex Inkjet Printing and Screen Printing
- 2-mil optically clear, vinyl film

Product Features

- Pressure-sensitive adhesive
- Conforms to simple curves and mild compound curves as found on vehicle windows
- Removable without heat
- Expected Performance Life of 7 year (unwarranted period for unprinted film with no graphic protection, applied to a flat, vertical, outdoor surface)

Recommended Types of Graphics and End Uses

- Building windows and dividers, interior and exterior
- Non-regulated vehicle and bus windows

CAUTION

Glass surfaces exposed to sunlight will absorb heat. A glass surface covered by a film with high opacity or dark-colored ink, including films with small areas of high opacity or dark-colored ink, will absorb more heat. Heat absorption can create thermal stress that results in glass breakage, or thermal cracking. This can cause personal injury or property damage. 3M specifically does not recommend using a film with high opacity or dark-colored ink on glass surfaces with significant exposure to sunlight.

Recommended Compatible Products

See 3Mgraphics.com/warranties for a complete list of compatible products that are approved by 3M for use with the base film covered in this Bulletin and used for the creation of a graphic that may be eligible for the 3M™ MCS™ Warranty or 3M Performance Guarantee.

OEM Inkjet Inks and Printers for the 3M Performance Guarantee

See the [3M Performance Guarantee Matrix](#) for a complete list of compatible OEM Inkjet Inks and Printers that are approved by 3M for use with the base film covered in the Bulletin and used for the creation of a graphic that may be eligible for the 3M Performance Guarantee.

Screen Printing Inks for 3M™ MCS™ Warranty

- [3M™ Screen Printing Ink Series 1900 \(Solvent\)](#), line color and four color
- [3M™ Screen Printing UV Ink Series 9800](#), line color and four color

Graphic Protection for Inkjet Inks

- [3M™ Scotchcal™ Gloss Overlamine 8518](#)
- [3M™ Scotchcal™ Luster Overlamine 8519](#)
- [3M™ Scotchcal™ Matte Overlamine 8520](#)
- [3M™ Scotchcal™ Gloss Overlamine 8528](#) *with horizontal vehicle warranty*
- [3M™ Scotchcal™ Optically Clear Overlamine 8914](#)
- [3M™ Scotchcal™ Ultra Matte Overlamine 8915](#)
- [3M™ Screen Print UV Gloss Clear 9740i](#)
- [3M™ Screen Print Gloss Clear 1920DR](#)

Graphic Protection for Screen Printing Inks

- [3M™ Screen Print Matte Clear 9730UV](#)
- [3M™ Screen Print UV Gloss Clear 9740i](#)
- [3M™ Screen Print UV Gloss Clear 9800CL](#)
- [3M™ Screen Print Gloss Clear 1920DR](#)
- [3M™ Screen Print Matte Clear 1930](#)

Certificate of 3M™ MCS™ Warranty

Graphic manufacturers who produce digitally printed graphics made with all 3M Graphics Products, including 3M Ink purchased through a qualified 3M Distributor or 3M Printing Partner, may register to be recognized with a Certificate of 3M™ MCS™ Warranty. Only graphic manufacturers having a current Certificate of 3M™ MCS™ Warranty are eligible to extend this warranty to their customers.

NOTE: For non-digitally printed Finished Graphics, check your eligibility for the 3M™ MCS™ Warranty by viewing the Warranty Period found within the Product Bulletin or using the warranty selector at www.3mgraphics.com/warranties.

Characteristics

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

Physical Characteristics

| Characteristic | Value |
|----------------------------|---|
| Material | Cast vinyl |
| Film Color | Optically clear |
| Thickness | Without adhesive: 2 mil (0.05 mm) With adhesive: 3-4 mil (0.08-0.10 mm) |
| Adhesive | Pressure-sensitive |
| Adhesive Color | Clear |
| Liner | Transparent synthetic |
| Chemical Resistance | <ul style="list-style-type: none"> • Resists mild alkalis, mild acids, and salt • Excellent resistance to water (<i>does not include immersion</i>) • Resists occasional fuel spills |
| Flammability | ASTM E84 reports: IJ8150 , or go to the On-line Product Catalog at 3Mgraphics.com All other test reports: call 1-800-328-3908 |

Application Characteristics

| Characteristic | Value |
|--|--|
| Finished Graphic Application Recommendation | Surface type: Flat and simple curves and mild compound curves Substrate type: Transparent substrates such as acrylic, glass, and polycarbonate Application temperature: 50° – 100 °F (10° – 38 °C) air and substrate Application method: wet is preferred |
| Temperature Range After Application | -65 °F to +150 °F (-54 °C to +65 °C) (not for extended periods of time at the extremes) |
| Graphic Removal | Removable without heat for the Warranty Period from recommended substrates. See "Removal" on page 6 for important procedures. |

Warranty Information

Warranty Coverage Overview

The warranty coverage for eligible graphics is based on the user both reading and following all applicable and current 3M Graphics Product and Instruction Bulletins. The warranty period for eligible graphics is as stated in the 3M Graphics Warranties Matrices at the time that the film was purchased. Information found at 3MGraphics.com/warranties includes:

- [3M Graphics Warranties Bulletin](#)
 - This bulletin contains information on limitations and exceptions, and warranty period reductions for 3M Graphics Warranties. The warranty period may be reduced and stipulations may apply for certain constructions, applications, and graphic exposures as covered in this Bulletin.
- [3M Graphics Warranties Selector](#)
 - Use this selector to search for your vertical warranty period by product type, ink type, film name, and/or ink/printer platform.
- [U.S. Desert Southwest Region Map](#)
 - Use this map of hot, arid desert areas to determine if you are subject to reduced warranted durabilities.

The warranties set forth in this 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.

Warranty Period Matrices - Inkjet

See the 3M Graphics Warranties Matrices at 3MGraphics.com/warranties, for vertical warranty period information specific to your film.

Warranty Period Matrices - Screen Print

Table A. Screen Print Warranty Period (in years) for Finished Graphics in a Standard U.S. Vertical Exposure (see [3M Graphics Warranties Bulletin](#) for Graphic Type Definitions).

| Graphic Protection | No Ink | Screen Print Solvent Ink Series 1900 | | | Screen Print UV Ink Series 9800 | | | Screen Print UV Ink Series 9800 Metallic | | |
|--------------------|--------|--------------------------------------|-----|----|---------------------------------|-----|----|--|-----|----|
| | | VEH | OUT | IN | VEH | OUT | IN | VEH | OUT | IN |
| | None | | | | | | | | | |
| 1920DR | — | 5 | 5 | 8 | — | — | — | — | — | — |
| 1930 | — | 2 | 2 | 3 | — | — | — | — | — | — |
| 9740i | — | 5 | 5 | 8 | 5 | 5 | 8 | 5 | 5 | 8 |
| 9730UV | — | 3 | 3 | 8 | 3 | 3 | 8 | — | — | — |
| 9800CL | — | — | — | — | 5 | 5 | 5 | 5 | 5 | 5 |
| None | 3 | — | — | — | — | — | — | — | — | — |

NOTE: No horizontal warranty is offered for screen printed graphics using this film.

Additional Limitations

See the 3M Graphics Warranties Bulletin at 3MGraphics.com/warranties, for terms, additional limitations of your warranty, if any, information on reduced warranties for different exposures, 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



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.

- **270%** when printed with all approved 3M solvent inkjet inks.
- **280%** when printed with all approved 3M UV inkjet inks.
- **280%** when printed with all approved 3M latex inkjet inks.

Do not exceed the recommended total ink coverage for the ink series used on this product. Having too high a total physical ink amount on the product results in media characteristic changes, incomplete drying, overlamine lifting, and/or poor graphic performance. For additional details about total ink coverage, refer to the 3M Product and Instruction Bulletin for 3M inks or the [3M Performance Guarantee Matrix](#) for OEM inks.

Completely Dry Graphics

IMPORTANT NOTE

Incomplete drying or curing 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 Product Bulletin 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 recommended 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](#) Lamination Basics for Inkjet Printed Graphics
- [3M Instruction Bulletin 5.1](#) Select and Prepare Substrates for Graphic Application
- [3M Instruction Bulletin 5.36](#) Application Techniques for Automobiles, Vans and Buses. Complete the 3M Pre-Installation Inspection Record found in this Instruction Bulletin prior to manufacturing or applying a graphic to an automobile, van, or bus.
- [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 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 3 years** from the date of manufacture on the original box.

If you process the film, the shelf life is changed to **1 year** from the processing date, but not later than the 3 year maximum from the manufacturing date.

Storage Conditions

- 40° to 100 °F (4° to 38 °C)
- Out of sunlight
- Clean, dry area
- Original container
- Bring the film to room temperature before use

Shipping Finished Graphics

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

Health and Safety



When handling any chemical products, read the manufacturer's 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 manufacturer's 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.

Rev I JUN-2015:

- Added Glass Breakage Caution to "Recommended Types of Graphics and End Uses" on page 1.
- Updated "Warranty Coverage Overview" on page 3 to include links to specific areas on the 3M Graphics Warranties website to increase usability.
- Removed reference to 3M Instruction Bulletin 2.1 in "Application and Installation" on page 5.

3M™ Scotchcal™ Clear View Graphic Film

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