Product Description

- 2-mil, white vinyl translucent film
- For Solvent, UV, and Latex Inkjet Printing and Cut Graphics

Product Features

- Matte surface finish eliminates glare and provides uniform color in reflected and transmitted light
- Pressure sensitive, permanent adhesive adheres to rigid and flexible substrates
- Clear, synthetic liner used on Envision™ Translucent Films IJ3730-50 and IJ3730-60 makes immediate proofing possible
- Expected Performance Life of 7 years (unwarranted period for unprinted film with no graphic protection, applied to a flat, vertical, outdoor surface)

Recommended Types of Graphics and End Uses

- For indoor or outdoor use on internally-illuminated sign faces or general digital print graphics
- For use with fluorescent bulbs or LEDs. Typically for best results, 3M recommends:
  - film IJ3630-20 for fluorescent light applications
  - film IJ3730-50 and IJ3730-60 for LED applications

When constructed and used as described in this Bulletin, these types of graphics and end uses may be warranted by the 3M™ MCS™ Warranty or the 3M Performance Guarantee. Please read the entire Bulletin for details.

Recommended Compatible Products

See 3M.com/graphicswarranties 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 described in this Bulletin and used for the creation of a completed graphic that may be eligible for the 3M Performance Guarantee.

Films

- 3M™ Diffuser Film 3635-30
- 3M™ Diffuser Film 3635-70
- 3M™ Envision™ Diffuser Film 3735-50
- 3M™ Envision™ Diffuser Film 3735-60
- 3M™ Blockout Film 3635-20B
- 3M™ Blockout Film 3635-22B
- 3M™ Dual-Color Film Series 3635-200
- 3M™ Scotchcal™ Graphic Film 3650-114

Substrates

- 3M™ Panagraphics™ III Wide-Width Flexible Substrate
- 3M™ Envision™ Flexible Substrate FS-1
- Flat, rigid substrates, see "Application Characteristics" on page 3

3M

Graphic Protection

- 3M™ Screen Print Gloss Clear 1920DR
- 3M™ Scotchcal™ Luster Overlaminate 3619
- 3M™ Scotchcal™ Matte Overlaminate 3620
- 3M™ Scotchcal™ Gloss Overlaminate 3658G
- 3M™ Scotchcal™ Matte Overlaminate 3660M
- 3M™ Scotchcal™ Gloss Overlaminate 8518
- 3M™ Scotchcal™ Luster Overlaminate 8519
- 3M™ Scotchcal™ Matte Overlaminate 8520
- 3M™ Scotchcal™ Ultra Matte Overlaminate 8915
- 3M™ Screen Print UV Gloss Clear 9740i

Application Tapes

See 3M Instruction Bulletin AT-1 to determine what application tape is recommended for the film or finished graphic.

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.3m.com/graphicswarranties.

Characteristics

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

Physical Characteristics

Characteristic	Value
Material	Vinyl
Film Color	Translucent white
Thickness	**Without adhesive:** 2 mil (0.05 mm) **With adhesive:** 3 – 4 mil (0.08 – 0.1 mm)
Adhesive	Pressure-sensitive, permanent
Adhesive Color	Clear
Liner	**IJ3630-20:** polyethylene-coated paper **IJ3730-50 and IJ3730-60:** clear, synthetic liner
Adhesion, Typical 24 hours after application	**Acrylic and uncoated, clear polycarbonate:** 4 pounds/inch (0.7 kg/cm)
Light Transmission, typical	**IJ3630-20:** 34% **IJ3730-50:** 50% **IJ3730-60:** 62%
Chemical Resistance	• Resists mild alkalis, mild acids, and salt • Excellent resistance to water *(does not include immersion)*

Application Characteristics

Characteristic	Value
Finished Graphic Application Recommen- dation	**Surface type:** Flat, without rivets **Surface type*:** 3M flexible substrates; rigid substrates such as flat acrylic, polycarbonate**, high temperature co-polyester sheet, glass **Application method:** Wet, typical or Dry laminated **Application temperature:** 60 °F (16 °C) minimum air, sub-strate
Temperature Range After Application	-50 to +170 °F (-45 to +77 °C) (not for extended periods of time at the extremes) Low temperatures impacts on film applied to flexible sub-strates may result in cracking of the film and/or substrate
Recommended Light Source (for best results)	**IJ3630-20:** Fluorescent bulbs **IJ3730-50 and IJ3730-60:** LEDs
Graphic Removal	Not removable

*These films typically adhere to solar-grade polycarbonate substrate. However, some lots of this substrate may inhibit adhesion. Contact Technical Service if you are having difficulty. See 3M Instruction Bulletin 5.7 for additional information.
**Polycarbonate substrates may require oven drying before use due to outgassing of moisture from the polycarbonate causing the film to bubble. Refer to the manufacturers' instructions.

(i) **IMPORTANT NOTE**

The user is responsible for determining and complying with all applicable building codes that affect the use of materials in interior and exterior awning, banner and sign face applications, including flammability standards. For more information on flammability requirements, contact your local building code officials. For information on the results of flammability testing on 3M flexible substrates, call 1-800-328-3908.

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 3M.com/graphicswarranties 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 3M.com/graphicswarranties.

Limitation of Liability

Except to the extent prohibited by law, 3M SHALL NOT UNDER ANY CIRCUMSTANCES BE LIABLE TO PURCHASER OR USER FOR ANY DIRECT (EXCEPT FOR THE LIMITED REMEDY PROVIDED HEREIN), 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

See the 3M Graphics Warranties Matrices at 3M.com/graphicswarranties, for vertical warranty period information specific to your 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 correct combinations of 3M-recommended graphics products
- the ink formulation
- 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

⚠ CAUTION

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

Inkjet Printing

Total Ink Coverage

Backlit images require greater density. This can be achieved by using the printer's double strike input mode (if available). When using this mode, you have reached the maximum total ink coverage when you can no longer obtain color consistency throughout the graphic and/or the graphic cannot be adequately dried after printing.

- **For most graphics:** 280% total ink coverage. See the Ink's Product Bulletin for more information.
  - Solvent ink: 270% total ink coverage. See the Ink's Product Bulletin for more information.
- **For three layer prints with white ink:** 660% (280% colors + 100% white + 280% colors maximum). The ink and printer combinations this is approved for are:
  - EFI™ VUTEk® QS2000, QS3200, QS3220, and QS220 Printers using 3M™ Piezo Inkjet Series 2800UV
  - EFI™ VUTEk® Pv200 Printers using 3M™ Piezo Inkjet Series 2200UV
  - EFI™ VUTEk® GS5000r Printers using EFI™ VUTEk® GSr 3M™ Premium UV Inks
- **For 1500v2, direct inkjet printing:** Printing in double strike mode is required to ensure adequate backlit color density and image durability.
- **For 4400, direct inkjet printing:** Printing in SD backlit mode is required to ensure adequate backlit color density and image durability.

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, overlaminate lifting, and/or poor graphic performance. For additional details about total ink coverage, refer to the 3M Product and Instruction Bulletin for 3M 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 specific ink's 3M Product and Instruction Bulletin for more details.

Construction Options

See 3M Instruction Bulletin 4.26 for detailed information.

Maximum Three Layers of Film

> ⓘ **IMPORTANT NOTE**
>
> A third layer of film on any one surface is warranted only if the top layer is an approved overlaminate and no more than two layers of any film are even with the edges of the substrate.
>
> NEVER place an overlap over an existing overlap, which creates four layers.

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.

> ⓘ **IMPORTANT NOTE**
>
> During installation, scratches may occur on films without graphic protection.

Application Tapes

There are two types of application tapes. See 3M Instruction Bulletin AT-1 to determine what application tape is recommended for the 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 4.60. 3M™ Envision™ Translucent and Diffuser Films. Guidelines for Backlit Signs.
- 3M Instruction Bulletin 5.1 Select and Prepare Substrates for Graphic Application
- 3M Instruction Bulletin 5.30 Application of 3M Pressure-Sensitive Films to 3M Flexible Substrates
- 3M Instruction Bulletin 5.4. Application, Fleet Trucks.
- 3M Instruction Bulletin 5.5 Application, General Procedures for Interior and Exterior Dry Application
  - For roll application, the dry method is acceptable.
- 3M Instruction Bulletin 5.7 Application, Wet Method for Translucent, Inkjet, Screen Printed and Cut Graphics
  - For applications by hand, the detergent and water application method is recommended for this pressure-sensitive film. Dry application by hand may leave dark streaks or bubbles that could be visible in transmitted light.
- 3M Instruction Bulletin 6.5 Storage, Handling, Maintenance, and Removal of Films and Sheetings

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 6.1 for details.

Removal

Removal requires heat and/or chemicals. 3M makes no claims as to the ease or speed of removal. This product may not remove similarly to other products in the same category. See 3M Instruction Bulletin 6.5 for details.

Shelf Life, Storage and Shipping

Shelf Life

The shelf life is **never more than 1 year** from the date of manufacture on the original box.

Storage Conditions

- At an ambient temperature less than 86 °F (30 °C)
- 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, and, if used, the application tape 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 manufacturer's instructions for safe operation.

3M