Revision G, Effective April 2015 (Replaces F, Oct '14)

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# **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<sup>TM</sup> MCS<sup>TM</sup> Warranty or the 3M Performance Guarantee. Please read the entire Bulletin for details.

# **Recommended Compatible Products**

See <u>3Mgraphics.com/warranties</u> 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<sup>TM</sup> MCS<sup>TM</sup> Warranty or 3M Performance Guarantee.

# **OEM Inkjet Inks and Printers for the 3M Performance Guarantee**

See the <u>3M Performance Guarantee Matrix</u> 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.

#### **Films**

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



### **Substrates**

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

### **Graphic Protection**

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

### **Application Tapes**

See <u>3M Instruction Bulletin AT-1</u> to determine what application tape is recommend for your film or finished graphic.

# **Certificate of 3M™ MCS™ Warranty**

Graphics manufacturers who produce 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  $3M^{TM}$  MCS<sup>TM</sup> Warranty. Only graphics manufacturers having a current Certificate of  $3M^{TM}$  MCS<sup>TM</sup> Warranty are eligible to extend this warranty to their customers.

### **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	IJ3630-20: 36% average IJ3730-50: 52% ± 2% IJ3730-60: 63% ± 2%
Chemical Resistance	Resists mild alkalis, mild acids, and salt     Excellent resistance to water (does not include immersion)

# **Application Characteristics**

Characteristic	Value
Finished Graphic Application Recommendation	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 substrates 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	Permanent

<sup>\*</sup>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 <u>3M Instruction Bulletin 5.7</u> for additional information.

### (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 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.

<sup>\*\*</sup>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.

# 3M<sup>™</sup> Scotchcal<sup>™</sup> Translucent Graphic Film IJ3630-20

# 3M<sup>™</sup> Envision<sup>™</sup> Translucent Film IJ3730-50 & -60

# **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 3MGraphics.com/warranties, for warranty period information specific to your film.

### **Additional Limitations**

See the 3M Graphics Warranties Bulletin at <u>3MGraphics.com/warranties</u>, 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 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**

$\Box$	CAUTION
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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.

#### **Total Ink Coverage**

The maximum recommended total ink coverage for this film is:

- **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.
- 250% when printed on the Mimaki JV5 Series printer with HS ink series (3M Performance Guarantee).

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, 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 or the 3M Performance Guarantee Matrix for OEM inks.

### **Completely Dry Graphics**



### (i) 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.

# **Construction Options**

See <u>3M Instruction Bulletin 4.26</u> for detailed information.

### **Maximum Three Layers of Film**



### (i) 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 <u>3M Instruction Bulletin 4.1</u> 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 <u>3M Instruction Bulletin 4.3</u> 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<sup>TM</sup> Envision<sup>TM</sup> 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.
- <u>3M Instruction Bulletin 5.4</u>. Application, Fleet Trucks.
- <u>3M Instruction Bulletin 5.5</u>. 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.
- <u>3M Instruction Bulletin 6.5</u>. 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 <u>3M Instruction Bulletin 6.1</u> for details.

### Removal

Removal requires heat and/or chemicals. The ease and rate of removal depends on a number of factors. See <u>3M Instruction Bulletin 6.5</u> 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 print room temperature before using

### **Shipping Finished Graphics**

Flat, or rolled printed side out on 5 inch (13 cm) or larger core. This helps prevent the liner, and, if used, the application tape from popping off.

# 3M<sup>™</sup> Scotchcal<sup>™</sup> Translucent Graphic Film IJ3630-20 3M<sup>™</sup> Envision<sup>™</sup> Translucent Film IJ3730-50 & -60

# **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 <u>3M.com/SDS</u>, 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.

**3M Commercial Solutions** 

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