



# Scotchcal™ Changeable Graphic Film

## IJ3555-10

### For Solvent, Latex and UV Inkjet Printing Only

#### 1. Product Description

##### A. Product Features and Advantages

- 4-mil, opaque white vinyl film with a matte finish
- Excellent hiding power
- Pressure-sensitive adhesive
- Changeable for clean removable without heat or chemicals

##### B. Recommended Types of Graphics and End Uses

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.

- Commercial vehicle, transit or fleet graphics, emblems or striping
- Outdoor and indoor graphics and signs
- Vending or dispensing machine and cooler graphics

##### C. Performance Overview

3M tests the performance of both individual products and finished graphic constructions. This table shows the best performance expected from this product both without a Warranty Period and with a Warranty Period.

For detailed graphic construction and application options along with specific Warranty Periods, please see the Warranty Information, Section 5.

<b>Expected Performance Life.</b> This is the estimated period of time the product should perform satisfactorily.	
Unprinted film with no graphic protection, applied to a flat vertical outdoor surface.	2 years Unwarranted Period
<b>3M™ MCS™ Warranty.</b> This is the maximum period of time 3M will warrant the finished graphic performance.	
Printed film with the best 3M ink and graphic protection option, applied to a flat, vertical, vehicle surface.	2 years Warranty Period
<b>3M Performance Guarantee.</b> This is the maximum period of time 3M will warrant the performance of the 3M materials used.	
Printed film with the best ink and graphic protection option, applied to a flat, vertical, vehicle surface.	2 years Warranty Period

##### D. Limitations of End Uses

This 3M product is not designed or recommended for the following uses. Please contact us to discuss other options.

###### (1) Unsuitable End Uses for This Film

- Graphics applied to:
  - corrugated, channels, complex curves, or highly-irregular surfaces or sharply raised areas.
  - stainless steel.
  - graphics printed with 3M four-color UV screen printing inks.
  - non-3M films.
  - paint that is not thoroughly cured or dried.
  - substrate surfaces that are not clean and smooth (little or no variation in texture).

- Film without graphic protection when:
  - used for vehicle graphics.
  - exposed to abrasive conditions, harsh cleaners or chemicals.
  - where warranty table does not indicate a construction option.
- Graphic removal from:
  - applications with poor paint-to-substrate adhesion.
  - painted wallboard.
  - existing graphics on flexible substrates that must remain intact.
  - aged paint or metal that may have surface oxidation or chalking.
  - outdoor, horizontal applications.
- Prespaced letters or emblems.
- Graphic subjected to gasoline vapors or spills at gas pumps, automobile fuel-tank ports, or top-feeding petroleum tankers.

## (2) Wall Graphics

Two-mil cast films are typically the best choice for indoor smooth surface wall graphics, although thicker films may be suitable for intermediate or short term applications. In any case, the user is responsible for determining the product's suitability, including adhesion and, if required, removal characteristics. Due to the wide variability of smooth indoor walls, neither finished graphics nor removal is warranted, even for removable or changeable films. [Instruction Bulletin 5.37](#) provides comprehensive information for the most successful wall graphics film selection and application.

## (3) Important Information About Bus Applications

Film used on buses must not be applied so as to restrict the safe use of emergency window exits. See the most current version of [Instruction Bulletin 5.4](#) for details.

## 2. Compatible Products

This section provides a list of 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 is covered by the 3M™ MCS™ Warranty or 3M Performance Guarantee. Refer to the Product and Instruction Bulletins listed in 3M Related Literature at the end of this Bulletin for more information about the compatible products.

See the **Warranty Information** section to determine which compatible products are approved for your graphic construction.

### A. Inkjet Printers and Inks for the 3M™ MCS™ Warranty

#### (1) Solvent Inkjet Inks and Printers

#### Ink Series

- 3M™ Piezo Inkjet Ink Series 1500v2
- 3M™ Piezo Inkjet Ink Series 4400
- 3M™ Piezo Inkjet Ink Series 4800
- SIIT GX 3M Ink Series

#### Printer

EFI™ VUTEK® 150, 2360/3360, 3300/5300 & 3000/5000 Printers  
 HP XLJet 1200 & 1500 Printers  
 HP Scitex TJ8300 & TJ8350 Series Digital Press  
 Seiko I Infotech ColorPainter™ H-74s, H2-74s, H-104s, H2-104s, W-54s & W-64s Printers

#### (2) Latex Inkjet Inks and Printers

- HP 3M™ LX600 Specialty Latex Ink
- HP LX610 Latex Ink a 3M™ MCS™ Warranty Component
- HP 792 Latex Ink a 3M™ MCS™ Warranty Component
- HP 881 Latex Ink a 3M™ MCS™ Warranty Component

HP Designjet L65500; Scitex LX600, LX800, LX820, LX850 Printers  
 HP Designjet L65500 Printer and Scitex LX600, LX800, LX820 & LX850 Printers  
 HP Designjet L26100, L26500, L28500; and Latex 210, 260 & 280 Printers  
 HP Latex 3000 Printer

**(3) UV Inkjet Inks and Printers**

- 3M™ Piezo Inkjet Ink Series 2200UV EFIT™ VUTEk® PV200 Printer
- 3M™ Piezo Inkjet Ink Series 2700UV Durst Rho 160R & 351R Printers
- 3M™ Piezo Inkjet Ink Series 2800UV EFIT™ VUTEk® QS2000, QS3200, QS3220 & QS220 Printers
- EFIT™ VUTEk® GS 3M™ Premium UV Inks EFIT™ VUTEk® GS2000, GS3200 & GS3250 Printers, including GS Pro Series
- EFIT™ VUTEk® GSr 3M™ Premium UV Inks EFIT™ VUTEk® GS5000r & 3250r Printers
- EFIT™ R3225 3M™ UV Ink EFIT™ R3225 UV Roll-to-Roll Printer
- Mimaki LF-200 Ink Series Mimaki UJV-160, JFX-1631 & 1615R Printers  
*Manufactured by 3M*
- Mimaki UV Ink LUS-200 Mimaki UJV500-160 Printers  
*Manufactured by 3M*

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

- For the most current information, please click here: [3M Performance Guarantee Matrix](#).

**C. Graphic Protection**

- 3M™ Scotchcal™ Gloss Overlamine 8518
- 3M™ Scotchcal™ Luster Overlamine 8519
- 3M™ Scotchcal™ Matte Overlamine 8520
- 3M™ Scotchcal™ Ultra Matte Overlamine 8915
- 3M™ Piezo Ink Jet Protective Clear 8530
- 3M™ High Gloss Graffiti Resistant Overlamine 8912
- 3M™ Screen Printing Gloss Clear 1920DR
- 3M™ Screen Printing Gloss UV Clear 9740i

**D. Application Tapes**

- 3M™ Premasking Tape SCPM-44X
- 3M™ Premasking Tape SCPM-3

**3. Characteristics**

These are typical values for unprocessed product; processing may change the values. Contact your 3M representative for a custom specification.

**A. Physical Characteristics**

Characteristic	Value
Material	Vinyl
Color	White, opaque
Gloss	Matte
Thickness	<b>Without adhesive:</b> 4-mil (0.10 mm) <b>With adhesive:</b> 4.5 to 5-mil (0.11-0.13 mm)
Adhesive type	Pressure sensitive
Adhesive color	Gray
Liner	Polyethylene-coated paper
Tensile strength	13.5 pounds/inch at 73°F (2.3 kg/cm at 23°C) (minimum)
Adhesion <i>24 hours after application</i>	<b>Aluminum, anodized:</b> 1.8 pounds/inch (0.32 kg/cm) <b>Fruehauf pre-painted panels:</b> 0.6 pounds/inch (0.12 kg/cm)
Chemical resistance	Resists mild alkalis, mild acids, and salt
Flammability	See ASTM E84 test report or go to the On-line Product Catalog at 3Mgraphics.com. All other test reports: call 1-800-328-3908.

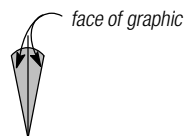
**B. Application Characteristics**

Characteristic	Value
Finished graphic application recommendation	<p><b>Surface type:</b> Flat, with and without rivets</p> <p><b>Substrate type:</b> Acrylic, aluminum, glass (uncoated), painted metal, polycarbonate, rigid vinyl, and painted wood (smooth)</p> <p><b>Application temperature:</b> 28° – 100°F (-2° – 38°C) <i>air and substrate</i></p> <p><b>Application method:</b> Dry</p>
Applied film shrinkage	0.015 inch (0.4 mm)
Finished graphic exposure temperature	-40° – +150°F (-40° – +66°C)
Graphic removal	Removable without heat and chemicals when ambient and substrate temperature are greater than 28°F (-2°C)

**4. Definitions**

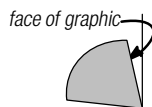
**A. Exposure**

**U.S. Vertical Exposure**



The face of the graphic is +/- 10° from vertical.

**U.S. Non-vertical Exposure**



The face of the graphic is greater than 10° from vertical and greater than 5° from horizontal. This includes non-vertical surfaces of vehicle wraps or fleet graphics.

**U.S. Desert Southwest Exposure**

Any outdoor graphic exposed to solar energy more than half of the daylight hours in Arizona, New Mexico and the desert areas of California, Nevada, Utah and Texas is subject to reduced warranties. Click here for a [detailed map](#).

**B. Changeable**

The film is easily removable with no adhesive residue.

**C. Graphic Construction**

The products used to make a graphic, which may include film and/or flexible substrate, graphic protection, ink, printer and application tape.

**D. Graphic Protection**

Overlamine films or clear coats used to protect the graphic and/or change gloss.

**E. Graphic Types**

*As identified in Product Durability Tables*

**Indoor Signs**

Stationary graphics applied indoors and *not* exposed to the elements.

**Outdoor Signs**

Stationary graphics applied outdoors and exposed to the elements.

**Vehicles**

**Straight Trucks. Semi-Tractors and Semi-Trailers.** Straight trucks, semi-tractors and semi-trailers used for commercial business purposes. Excludes air shields.

**5. Warranty Information**

**A. Warranty Coverage Overview**

The warranty coverage for each graphic is based on the user(s) both reading and following all applicable and current 3M Product and Instruction Bulletins. 3M will honor the Warranty Period stated in the base film's Product Bulletin that is current when the film was purchased. The Warranty Period may be reduced and stipulations may apply for certain constructions and applications, as covered in this Bulletin.

The following is made in lieu of all other express or implied warranties, including any implied warranty of merchantability or fitness for a particular purpose or implied warranty arising out of a course of dealing, custom or usage of trade.

**B. 3M Basic Product Warranty**

This product is warranted to be free of defects in materials and manufacture at the time of shipment and to meet the specifications stated in this Product Bulletin and as further set forth in the [3M Commercial Graphics Warranties Brochure](#).

**C. Limited Remedy**

3M will replace or refund the price of any 3M materials that do not meet this warranty within the specified time periods. These remedies are exclusive.

**D. 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 ABOVE), 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 SELLER'S 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 including breach of contract, breach of warranty, negligence, strict liability, or any other legal or equitable theory.

**E. Additional Limitations**

See the [3M Commercial Graphics Warranties Brochure](#) at 3Mgraphics.com, which gives the terms, additional limitations of the warranty, if any, and limitations of liability.

**F. 3M Performance Guarantee**

Subject to Stipulations set forth in Section H, below

Graphics constructed with the 3M materials specified and in the exposure specified in the Warranty Period, Section F, are eligible for the 3M Performance Guarantee. This warranty only covers the performance of the recommended 3M products used in the graphic construction when imaged with the printers and OEM inks listed in the most current version of the [Performance Guarantee Matrix](#). The Matrix may also list certain restrictions for using the film covered in this Bulletin. For warranties for other exposures, see Section H.

*Warranty Period for 3M Product Performance, in Years*

**(1) Warranty Period for 3M Product Performance in a Standard U.S. Vertical Exposure**

Film	Graphic Protection	Vehicles, Outdoor & Indoor Signs	Inks and Printers**
IJ3555	8518 8519 8520 8915 1920DR 9740i	2 years	See the <a href="#">Performance Guarantee Matrix</a>

\*\* Some of the graphic protection products and graphic types may not be approved for this film on certain printing platforms. Always refer to the Performance Guarantee Matrix.

**G. 3M™ MCS™ Warranty**

Subject to Stipulations set forth in Section H.

Finished graphics constructed with the materials specified and the exposure specified in the Warranty Period tables, Section G.(1), is eligible for the 3M™ MCS™ Warranty. For warranties for other exposures, see Section H.

**(1) Warranty Period Table for Finished Graphics in a Standard U.S. Vertical Exposure**

VEH = Fleet and Standard Vehicle Graphics  
 OUT = General Outdoor Sign  
 IN = General Indoor Signs

*Warranty Period for Finished Graphics, In Years*

SOLVENT INKS	EFI™ VUTEK® 150, 2360/3360, 3300/5300 & 3000/5000 Printers			HP XLJet Series 1200 & 1500 Printers			HP Scitex TJ8300 & TJ8350 Digital Presses		
	3M™ Ink Series 1500v2			3M™ Ink Series 4400			3M™ Ink Series 4800		
Graphic Protection	VEH	OUT	IN	VEH	OUT	IN	VEH	OUT	IN
8518, 8519, 8520, 8915	2	2	2	2	2	2	2	2	2
1920DR	2	2	2	—	—	—	2	2	2
9740i	2	2	2	2	2	2	2	2	2
8530	2	2	2	2	2	2	2	2	2
none	—	2	2	—	2	2	—	2	2

Warranty Period for Finished Graphics, In Years

SOLVENT INKS	Seiko I Infotech ColorPainter™ H-74s, H2-74s, H-104s, H2-104s W-54s, & W-64s Printers		
	3M GX 3M Ink Series		
Graphic Protection	VEH	OUT	IN
8518, 8519, 8520, 8915	2	2	2
1920DR	2	2	2
9740i	2	2	2
none	—	2	2

LATEX INKS	Designjet L65500; Scitex LX600 & LX800 Printers			HP Designjet L65500 Printer and Scitex LX600, LX800, LX820 & LX850 Printers			HP Designjet L26100, L26500, L28500, Latex 210, 260, 280 Printers		
	HP 3M LX600 Specialty Latex Ink			HP 3M LX610 Latex Ink A 3M™ MCS™ Warranty Component			HP 792 Latex Ink A 3M™ MCS™ Warranty Component		
Graphic Protection	VEH	OUT	IN	VEH	IN	OUT	VEH	IN	OUT
8518, 8519, 8520, 8915	2	2	2	2	2	2	2	2	2
1920DR	2	2	2	2	2	2	2	2	2

LATEX INKS	HP Latex 3000 Printer		
	HP 881 Latex Ink a 3M™ MCS™ Warranty Component		
Graphic Protection	VEH	OUT	IN
8518, 8519, 8520, 8915	2	2	2
1920DR	2	2	2

UV INKS	EFI™ VUTEk® PV200 Printer			Durst Rho 160R & 351R Printers			EFI™ VUTEk® QS2000, QS3200, QS3220, & QS220 Printers		
	3M™ Ink Series 2200UV			3M™ Ink Series 2700UV			3M™ Ink Series 2800UV		
Graphic Protection	VEH	OUT	IN	VEH	OUT	IN	VEH	OUT	IN
8518, 8519, 8520, 8915	2	2	2	2	2	2	2	2	2
9740i	2	2	2	2	2	2	2	2	2
none	—	2	2	—	2	2	—	2	2

UV INKS	EFI™ VUTEk® GS5000r & GS3250r Printers			EFI™ VUTEk® GS2000, GS3200 & GS3250 Printers, including GS Pro Series			EFI™ R3225 UV Roll-to-Roll Printer		
	GSr 3M™ Premium UV Inks			GS 3M™ Premium UV Inks			R3225 3M™ UV Inks		
Graphic Protection	VEH	OUT	IN	VEH	OUT	IN	VEH	OUT	IN
8518, 8519, 8520, 8915	2	2	2	2	2	2	2	2	2
1920DR	—	—	—	—	—	—	2	2	2
9740i	2	2	2	2	2	2	2	2	2
none	—	2	2	—	2	2	—	2	2

Warranty Period for Finished Graphics, In Years

UV INKS	Mimaki UJV-160, JFX-1631 & 1615R Printers			Mimaki UJV500-160 Printer		
	Mimaki Ink Series LF-200			Mimaki UV Ink LUS-200 <i>Manufactured by 3M</i>		
Graphic Protection	VEH	OUT	IN	VEH	OUT	IN
8518, 8519, 8520, 8915	2	2	2	2	2	2
1920DR	—	—	—	2	2	2
9740i	—	—	—	2	2	2
none	—	—	—	—	2	2

**H. General Warranty Stipulations for 3M™ MCS™ Warranty and 3M Performance Guarantee**

These stipulations apply to both the 3M™ MCS™ Warranty and 3M Performance Guarantee. General provisions for these stipulations are covered in the [3M Commercial Graphics Warranty Brochure](#).

**(1) Reduced Warranty Period for Other Graphic Exposures**

For other graphic exposures, multiply the Warranty Period (in years) for your graphic construction as shown in the applicable Warranty Period tables, Section G. (1) and G.(1), by the percentage shown for the intended graphic exposure.

If the Graphic Exposure is:	Use this Percentage of U.S. Vertical Exposure, Warranty Period	Calculation Examples
U.S. Non-vertical	50% (0.5)	0.5 x 2 years = 1 year
Desert Southwest Vertical	70% (0.7)	0.7 x 2 years = 1.4 years
Desert Southwest Non-vertical	35% (0.35)	0.35 x 2 years = 0.7 years
Horizontal	0%	0

**(2) Removal Warranty without Heat or Chemicals**

**a. For the 3M™ MCS™ Warranty Only**

Within the stated Warranty Period, if this film cannot be removed without heat or chemicals, or more than 10% of the adhesive residue remains on the substrate, 3M will reimburse a reasonable portion of extra removal costs.

**b. For the 3M Performance Guarantee**

Within the stated Warranty Period, if this film cannot be removed without heat or chemicals, or more than 10% of the adhesive residue remains on the substrate, 3M will reimburse a reasonable portion of extra removal costs.

**a. Removal Warranty Exceptions**

The following exceptions are not covered by the Removal Warranty.

- Substrate damage due to:
  - removing film from a pre-existing graphic.
  - removing film that was applied to painted wallboard or unapproved substrates.
  - removing film from paint that is not firmly bonded to the substrate.
- No guarantee is made for:
  - paint staining. 3M does not warrant vehicle paint staining that may be visible after removing an inkjet printed graphic with an overlamine. To reduce the risk of this problem, always remove the graphic by the end of the Warranty Period.
  - ease or speed of removal of any graphic.
  - removal from paint that is improperly cured.
  - removal from aged paint or metals, surface oxidation or chalking; user must test, approve and accept liability for such applications.
  - removal from horizontally-exposed outdoor applications.

**(3) Paint Refurbishing Reimbursement Policy for Automobiles, Vans, Buses, Recreational Vehicles**

This Policy applies to automobiles, vans, buses, and recreational vehicles only, and specifically does not include Watercraft. Refer to [Instruction Bulletin 5.36](#) for complete details.

- A *Pre-Installation and Inspection Report* (in Bulletin 5.36) must be completed *prior to graphic installation* and submitted with any claim for paint damage sustained during the removal of 3M removable or changeable graphic film from vehicles.
- A separate report for each vehicle involved in a claim is required.

**(4) Application Outside the U.S.**

Contact the 3M organization for that country.

**(5) Application to Glass**

3M accepts no liability for glass breakage when using this film for window graphics. See [Instruction Bulletin 5.1](#) for details.

**(6) Abrasion and Loss of Gloss**

Abrasion damage and loss of gloss are not covered by any 3M Warranty. This is considered normal wear and tear. However, to help maintain the appearance of your graphic, use the recommended graphic protection whenever:

- it is required for the construction and end use as shown in the Warranty Period tables.
- whenever the graphic, **including printed vehicle graphics**, is exposed to abrasive conditions, harsh cleaners or chemicals.

**(7) Graphics Made with Components Not Sold or Recommended by 3M**

The 3M™ MCS™ Warranty does not, under any circumstances, cover graphics made with inks, film, graphic protection and/or application tapes that are not sold or recommended by 3M.

The 3M Performance Guarantee does not, under any circumstances, cover OEM inks, even those approved by 3M for this program, or any type of 3M product failure that results from their use.

The user is solely responsible for the graphic appearance, performance and durability of graphic constructions that include any non recommended or qualified products.

**6. Factors that Affect Graphic Performance Life**

The actual performance life of a graphic is affected by all of the following:

- the combination of graphics materials used.
- 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.

**7. Graphics Manufacturing**



**CAUTION**

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Before using any equipment, always follow the manufacturers' instructions for safe operation.

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**A. Inkjet Ink**

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

**(1) 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 and latex ink.
- **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. Too high a total physical ink amount on the film results in media characteristic changes, incomplete drying, overlamine lifting, and/or poor graphic performance. For additional details, please see the applicable 3M [Product & Instruction Bulletin](#) for 3M branded or co-branded inks, or the [Performance Guarantee Matrix](#) for OEM inks.

**(2) Completely Dry Graphics**

**Important Note!**

Incomplete drying can result in graphic failure including curling, increased shrinkage and adhesion failure, which are not covered under warranty.

Always build enough time into your process to ensure complete drying of the graphic. Poorly dried film may become soft and stretchy, and the adhesive may become too aggressive. This can cause difficulty when applying an overlamine, rolling the graphic, and applying the film. See the ink's Instruction Bulletin for more details.

**B. Cutting**

The following are common cutting methods for this film. See [Instruction Bulletin 4.1](#) for details.

- Bandsawing
- Hot kiss cutting
- Drum-type electronic cutting
- Flat-bed electronic cutting
- Guillotine
- Hand cut

**C. Application Tapes**

**(1) When to Use Premasking Tape**

- Use as an application aid to increase stiffness, and prevent stretching and damage during application.
- Use when little or no liner is exposed.

**(2) How to Select a Tape**

Locate the graphic protection on your graphic in the table below and use the corresponding tape. See [Instruction Bulletin 4.3](#) for complete details.

**EXAMPLE:** If the film is protected by clear coat 1920DR and you want to premask the film, use premasking tape SCPM-3.

Application Tape	Select the tape based on what is on top of the graphic		
	None	8518, 8519, 8520, 8915 8908, 8909 8530, 1920DR	9740i
Premasking SCPM-3	■ All solvent inks	■	—
Premasking SCPM-44X	■ All UV inks	—	■
Prespacing Tape	—	—	—

— = No tape is recommended for this construction.

**8. Application and Installation**

Install the film using the dry application method.

Refer to the **3M Related Literature** section, located at the end of this bulletin, for a list of the Instruction Bulletins that may be needed to apply or install this film.

**A. Adhesive**

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

Always work from the center out to the edges of the graphic to reduce the risk of trapping air and creating bubbles. Use an air release tool to aid in removing air bubbles. See [Instruction Bulletin 5.4](#) for details.

**B. Rivets**

For the best appearance and durability, 3M recommends cutting around the rivet and then re-squeegeeing around the rivet.

## 9. 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.)

Refer to [Instruction Bulletin 6.5](#) for general maintenance and cleaning information.

## 10. Removal

This film can be easily removed without heat or chemicals. Most graphics can be removed and leave little or no adhesive residue on the substrate. The ease and rate of removal depends on a number of factors. See [Instruction Bulletin 6.5](#) for details.

## 11. Shelf Life, Storage and Shipping

### A. Shelf Life

**Total shelf life: 2 years** from the date on the original box

Up to 2 years unprocessed, **OR** process within 1 year **and** apply within 1 year of processing

### B. 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

### C. 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.

## 12. Health and Safety



### CAUTION

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

## 13. 3M Related Literature

Before starting any job, be sure you have the most current Product and Instruction Bulletins.

The information in 3M Product and Instruction Bulletins is subject to change. [Current Bulletins](#) Current Bulletins are available at 3Mgraphics.com. The following applicable Bulletins provide information and processes you need to properly make the graphics described in this Bulletin. Additional Bulletins may be needed as indicated in the 3M Related Literature section of other 3M components you use.

Bulletin types: PB = Product Bulletin; PB-IB = Product & Instruction Bulletin; IB = Instruction Bulletin

Subject	Type	Bulletin No.
3M™ Piezo Inkjet Ink Series 2200UV	PB-IB	2200UV
3M™ Piezo Inkjet Ink Series 2700UV	PB-IB	2700UV
3M™ Piezo Inkjet Ink Series 2800UV	PB-IB	2800UV
EFI™ VUTEk® GS 3M™ Premium UV Inks	PB-IB	GS
EFI™ VUTEk® GSr 3M™ Premium UV Inks	PB-IB	GSr
Mimaki Ink Series LF-200 <i>manufactured by 3M</i>	PB-IB	LF-200
EFI™ R3225 3M™ UV Ink	PB-IB	R3225
3M™ Piezo Inkjet Ink Series 1500v2	PB-IB	1500
3M™ Piezo Inkjet Ink Series 4400	PB-IB	4400
3M™ Piezo Inkjet Ink Series 4800	PB-IB	4800
SIIT GX 3M Ink Series	PB-IB	GX

Subject	Type	Bulletin No.
HP 3M LX600 Specialty Latex Ink	PB-IB	LX600
HP LX610 Latex Ink, A 3M™ MCS™ Warranty Component	PB-IB	LX610
HP 792 Latex Ink, A 3M™ MCS™ Warranty Component	PB-IB	792
3M Graphic Protection Products - Hot and Cold Roll Lamination	PB IB	GP-1 4.22
3M™ Piezo Inkjet Protective Clear 8530	PB	8530
3M™ Screen Print Gloss Clear 1920DR and Low Gloss 1930 - Applying screen printing clear 1920DR and 1930	PB IB	1900 3.12
3M™ Screen Print Gloss Clear 9740i	PB-IB	UV Clears
Scoring and cutting	IB	4.1
Using 3M Application Tapes; Premasking and Prespacing for Films	IB	4.3
Application, Substrate Selection, Preparation and Substrate-Specific Application Techniques	IB	5.1
Application, Special Applications and Vehicles	IB	5.4
Application, General Procedures for Indoor and Outdoor Dry Applications	IB	5.5
Application: Guidelines for Auto, Van, Bus and Inspection Forms	IB	5.36
Storage, Handling, Maintenance, Removal	IB	6.5
<a href="#">3M Commercial Graphics Warranty Brochure</a>		

## 14. Bulletin Change Summary

Black bars in margins indicate a change or addition. Updated Flammability information in Section 3.A. **Added:** HP 792 Latex Ink is now approved for use with HP Latex 210, 260 and 280 Printers as well as HP Designjet L26100, L26500, L28500 Printers. Mimaki Ink Series LUS-200, manufactured by 3M, for Mimaki UJV500-160 Printer; HP 881 Latex Ink, a 3M™ MCS™ Warranty Component for HP Latex 3000 Printer.



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