

## IJ170Cv3 with Comply™ Adhesive

### Product Description

- For solvent, UV, and latex inkjet printing
- 2-mil, white, vinyl film with a luster finish

### Product Features

- Excellent hiding power
- Pressure-sensitive adhesive with non-visible air release channels for fast, easy, bubble-free installations
- Conforms to flat surfaces, with and without rivets, simple curves, and compound curves
- Removable with heat and/or chemicals
- Expected performance life of 10 years (unwarranted period for unprinted film with no graphic protection, applied to a flat, vertical, outdoor surface)

### Recommended Types of Graphics and End Uses

- Indoor and outdoor graphics and signs, including point-of-purchase and displays
- Commercial vehicles, straight trucks, semi-trucks, and semi-trailers; emblems or striping
  - Horizontal vehicle wraps when protected with 3M™ Overlamine 8528, 8548G, 8549L, or 8900
- Bus graphics
- Personal vehicle graphics and wraps
- Watercraft graphics (above the static water line only)

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

Visit [3Mgraphics.com/warranties](https://www.3Mgraphics.com/warranties) for a complete list of compatible products approved by 3M for use with the base film covered in this bulletin and used for the creation of graphics 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 for the creation of completed graphics that may be eligible for the 3M Performance Guarantee.

### Graphic Protection

- [3M™ Scotchcal™ Gloss Overlamine 8508](#)
- [3M™ Scotchcal™ Gloss Overlamine 8418G](#)
- [3M™ Scotchcal™ Gloss Overlamine 8518](#)
- [3M™ Scotchcal™ Luster Overlamine 8519](#)
- [3M™ Scotchcal™ Matte Overlamine 8520](#)
- [3M™ Scotchcal™ Gloss Overlamine 8528](#) with non-vertical vehicle warranty
- [3M™ Envision™ Gloss Wrap Overlamine 8548G](#) with non-vertical vehicle warranty
- [3M™ Envision™ Luster Wrap Overlamine 8549L](#) with non-vertical vehicle warranty
- [3M™ Envision™ Matte Wrap Overlamine 8550M](#) with non-vertical vehicle warranty
- [3M™ Scotchcal™ Ultra Matte Overlamine 8915](#)
- [3M™ Screen Print Gloss Clear 1920DR](#)
- [3M™ Screen Print UV Gloss Clear 9740i](#)
- [3M™ Screen Print UV Gloss Clear 9760LX](#)
- [3M™ Wrap Overlamine Series 8900](#)

#### 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.

## Other Products

- [3M™ Edge Sealer 3950](#)
- [3M™ Edge Sealer Tape 8914](#)

## Certificate of 3M™ MCS™ Warranty

Graphic manufacturers who produce digitally printed graphics made with all branded 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 this product bulletin or by using the warranty selector at [www.3mgraphics.com/warranties](http://www.3mgraphics.com/warranties).

## Characteristics

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

### Physical Characteristics

Characteristic	Value
Material	Cast vinyl
Film Color	White, opaque
Thickness	<b>Without adhesive:</b> 2 mil (0.05 mm) <b>With adhesive:</b> 3–4 mil (0.08–0.10 mm)
Adhesive	Pressure-sensitive with air release channels
Adhesive Color	Gray
Liner	Polyethylene-coated paper
Typical Adhesion 24 Hours After Application	<b>ABS:</b> 4–5 lbs/in. (0.72–0.89 kg/cm) <b>Acrylic:</b> 5–6 lbs/in. (0.89–1.08 kg/cm) <b>Aluminum, anodized:</b> 8–9 lbs/in. (1.43–1.61 kg/cm) <b>Aluminum, etched:</b> 7–8 lbs/in. (1.26–1.43 kg/cm) <b>Fruehauf pre-painted panels:</b> 4–6 lbs/in. (0.72–1.08 kg/cm)
Tensile Strength	5 lbs/in. at 73°F (0.9kg/cm at 23°C)
Chemical Resistance	<ul style="list-style-type: none"> <li>• Resists mild alkalis, mild acids, and salt</li> <li>• Excellent resistance to water (does not include immersion)</li> <li>• Resists occasional fuel spills</li> </ul>
Flammability	Call 3M at 1-800-328-3908.

### Application Characteristics

Characteristic	Value
Finished Graphic Application Recommendation	<b>Surface type:</b> flat, with and without rivets, simple curves, compound curves <b>Substrate type:</b> ABS resins, aluminum, chrome, glass, fiberglass reinforced plastics, paint (check adhesion to powder-coated or water-based paints), fiberglass with gel coat <b>Application method:</b> Dry
Application Temperature (Air and Substrate)	<b>Flat without rivets:</b> 40°F to 85°F (4°C to 29°C) <b>Curves or corrugations with rivets:</b> 50°F to 85°F (10°C to 29°C) <b>Compound curves and/or watercraft:</b> 60°F to 85°F (16°C to 29°C)
Temperature Range After Application	-65°F to +225°F (-60°C to +107°C) (Though not for extended periods of time at the extremes.)
Graphic Removal	Removable with heat and/or chemicals from most substrates.

## Factors Affecting Graphic Performance Life

The actual performance life of a graphic is affected by:

- The combination of graphic 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

### 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.

### Total Ink Coverage

The maximum recommended total ink coverage for this film is:

- **270%** when printed entirely with 3M approved solvent inkjet inks.
- **280%** when printed entirely with 3M approved UV inkjet inks.
- **280%** when printed entirely with 3M approved 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 this product. Having too much total physical ink 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 bulletins 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 Graphics warranty.

See the ink's 3M product and instruction bulletins for more details.

## 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 this product bulletin or see the [3M Graphics Materials 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 your film or finished graphic.

### Premasking Tape

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

Prespacing tape holds cut and weeded letters or graphics in place during application and after removal of 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 users may need to successfully apply a graphic.

- [3M Instruction Bulletin 4.22](#) Lamination Basics for Inkjet Printed Graphics
- [3M Instruction Bulletin 5.36](#) Application Techniques for Automobiles, Vans and Buses
  - Complete the 3M Pre-Installation Inspection Record found in 5.36 prior to manufacturing or applying a graphic to an automobile, van, or bus.
- [3M Instruction Bulletin 5.37](#) A Guide to Understanding and Applying Graphics to Common Smooth and Textured Wall Surfaces
- [3M Instruction Bulletin 5.4](#) Application: Fleet Trucks.
- [3M Instruction Bulletin 5.42](#) Application: Special Considerations for Watercraft
  - Complete the 3M Pre-Installation Inspection Record found in 5.42 prior to manufacturing or applying a graphic to a watercraft.
- [3M Instruction Bulletin 5.5](#) Application, General Procedures for Interior and Exterior Dry Application
- [3M Product and Instruction Bulletin V-Tools](#) 3M™ Vehicle Channel Applicator Tools.

### IMPORTANT NOTE

UV inkjet inks may crack if too much heat is used during graphic application to complex curves and deep contours as well as around rivets. When using heat during application, make sure the film surface temperature does not exceed 212°F (100°C). For best results, **always do a test application** of a printed graphic to determine how much heat can be used without damaging the image.

3M recommends using additional heat in the post-application process for vehicle graphics. During this process, 3M recommends using only a heat gun to ensure the film surface temperature reaches a minimum of 200°F (93° C) and does not exceed 225°F (107° C), or the lowest specified maximum temperature for any other component, whichever is lower.

## Pressure-sensitive Adhesive

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

## Working with Air Release Channels

Air release channels are a characteristic of films with Comply™ adhesive that allow trapped air to exit through the edges of the graphic.

- The channels will be damaged and effective air removal affected if you remove and attempt to change liners or reapply the same liner.
- For the best results, always work from the center of a graphic out to its edges to allow trapped air to exit through the air release channels. If the channels are closed off by firm pressure and air is trapped, use an air release tool to aid in removing air bubbles. See [3M Instruction Bulletin 5.4](#) for details.

## 3M™ Tape Primer 94

3M recommends using primer where the film will be stretched, particularly on the edges of the film, to maximize a graphic's bond to its substrate.

## 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 requires heat and/or chemicals. See [3M Instruction Bulletin 6.5](#) for details.

3M makes no claims as to the speed of removal. This product may not remove similarly to other products in the same category.

## Shelf Life, Storage, and Shipping

### Shelf Life

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

Processing the film changes its shelf life to **one year** from the processing date, but no later than three years from the manufacturing date.

### Storage Conditions

- 40°F to 100°F (4°C 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 a 6 in. (15 cm) or larger core. This helps prevent the application tape, 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 for 3M products go to [3M.com/SDS](https://www.3m.com/SDS). To request SDS by mail, or in case of an urgent situation, call 1-800-364-3577 or 1-651-737-6501.

When using any equipment, always follow the manufacturer's instructions for safe operation.

## 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 the film was purchased. Information found at [3M.com/graphicswarranties](https://www.3m.com/graphicswarranties) includes:

- [3M Graphics Warranties Bulletin](#)
  - This bulletin contains information on limitations, 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.

### Technical Information

The technical information, guidance, and other statements contained in this document or otherwise provided by 3M are based upon records, tests, or experience that 3M believes to be reliable, but the accuracy, completeness, and representative nature of such information is not guaranteed. Such information is intended for people with knowledge and technical skills sufficient to assess and apply their own informed judgment to the information. No license under any 3M or third party intellectual property rights is granted or implied with this information.

### Product Selection and Use

Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application. Customer is solely responsible for evaluating the product and determining whether it is appropriate and suitable for customer's application, including conducting a workplace hazard assessment, reviewing all applicable regulations and standards, and reviewing the product label and use instructions. Failure to properly evaluate, select, and use a 3M product in accordance with instructions or to meet all applicable safety regulations may result in injury, sickness, death, and/or harm to property.

### Warranty, Limited Remedy, and Disclaimer

Unless a different warranty is specifically stated on the applicable 3M product packaging or product literature (in which case such warranty governs), 3M warrants that each 3M product meets the applicable 3M product specification at the time 3M ships the product. 3M MAKES NO OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ARISING OUT OF A COURSE OF DEALING, CUSTOM, OR USAGE OF TRADE. If a 3M product does not conform to this warranty, the sole and exclusive remedy is, at 3M's option, replacement of the 3M product or refund of the purchase price.

### Limitation of Liability

Except for the limited remedy stated above, and except to the extent prohibited by law, 3M will not be liable for any loss or damage arising from or related to the 3M product, whether direct, indirect, special, incidental, or consequential (including, but not limited to, lost profits or business opportunity), regardless of the legal or equitable theory asserted, including, but not limited to, warranty, contract, negligence, or strict liability.

#### Commercial Solutions

3M Center, Building 220-12E-04  
St. Paul, MN 55144

1-800-328-3908  
[3M.com/Graphics](https://www.3m.com/Graphics)

© 3M 2021. All rights reserved.

3M, Comply, Envision, MCS, and Scotchcal are trademarks of 3M. Used under license in Canada.

All other trademarks are property of their respective owners.

Revision N, March 2022 Please recycle.

