



Transit Wrap Graphic Film IJ46

For Inkjet Printing with Solvent and UV Inks

1. Product Description

Film IJ46-20 is a 4-mil matte vinyl film with a changeable, pressure-sensitive adhesive. Use it where a good quality film is needed for short-term promotional bus back and wrap graphics on transit vehicles. It is designed for use with solvent or UV inkjet inks.

A. 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. Characteristics

All values are typical for unprocessed film.

A. Physical Characteristics

Characteristic	Value
Material	Vinyl
Color	White opaque
Gloss	Matte
Film thickness	Without adhesive: 4 mil (0.10 mm) With adhesive: 4.5 mil (0.11 mm)
Adhesive type	Pressure sensitive
Adhesive color	Gray
Liner	Polycoated paper

B. Application Characteristics

Finished graphic application recommendations	Surface type: Flat, with and without rivets Substrate type: Metal, rigid plastic and painted substrates Application temperature: <i>air and substrate</i> 28° to 100°F (-2° to 38°C)
Application method	Dry
Finished graphic exposure temperature	-30° to +200°F (-34° to +93°C)
Graphic removal	Removable without heat (changeable)

3. Warranty and Durability

A. 3M Basic Product Warranty

This product has been tested and is believed to be a good product when used as recommended in this bulletin. The film is covered by the 3M Basic Product Warranty and is guaranteed to be free of physical and manufacturing defects. There is no warranty for printability, visual appearance, fitness for use or durability. See the 3M Graphics Market Center Warranty Brochure for the complete warranty and remedy details.

B. Expected Performance Life

1 year may be expected in a vertical exposure with typical usage.

3M Product and Instruction Bulletins provide practical recommendations for using this product in a way that maximizes performance, but using other 3M products or procedures with this film does not change the terms of the warranty.

C. Warranty and Limited Remedy

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: all 3M products are 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. 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. **In no case shall 3M be liable for any direct, indirect, or consequential damages, including any labor or non-3M materials charges.**

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

D. Definition of Vertical Exposure



face of graphic The face of the graphic is $\pm 10^\circ$ from vertical.

4. Fabrication

A. All Graphics

This film has been optimized to perform well with a variety of inkjet printers and inks. It is the graphic manufacturer's responsibility to determine the film's suitability for use with their printers and inks.

To maximize the film performance:

- The typical maximum ink limit is 250%.
- Thoroughly dry the ink and film or properly cure the ink before storing or installing a graphic.
- For solvent inkjet printing only, leave a small, unprinted margin (1/4 inch) on all edges. This helps to minimize edge curling when finished graphics will be sheeted and stacked for an extended period of time.
- Use graphic protection. 3M™ Scotchcal™ Gloss Overlamine 8508 or Luster Overlamine 8509 are cost-effective options for use with 3M's intermediate graphic films.
- Always use the dry application method.

5. Shelf Life, Storage and Shipping

A. Shelf Life

Total shelf life: 2 years from the date of manufacture on the original box.

If you do process the film, do so within 1 year and apply within 1 year of processing. (Example: If you process at month 6, apply by month 18.)

If you do not process the film, apply it within 2 years.

B. Storage Conditions

- 90°F (32°C) maximum
- Out of direct sunlight
- Clean, dry area
- Original container
- Bring the film to print room temperature before using

C. Shipping Finished Graphics

Flat (may be separated by paper), 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.

6. Health and Safety



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, 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.

7. 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](#) are available at 3Mgraphics.com. The techniques described in these Bulletins are required when applying a 3M warranted graphic, but are also practical recommendations when using promotional materials for non-warranted graphics. 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 Graphic Protection Products <i>overview of all graphic protection products and specific information on most overlaminates</i>	PB	GP-1
Application, substrate selection, preparation and substrate-specific application techniques	IB	5.1
Application, general procedures for indoor and outdoor dry applications	IB	5.5
Storage, handling, maintenance, removal	IB	6.5
3M Graphics Center Warranty Brochure		go to www.3Mgraphics.com/Warranties

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8. Bulletin Change Summary

Added 3M™ Scotchcal™ Gloss Overlamine 8508 as a possible overlamine to use.
Added example to Shelf Life.



Commercial Graphics Division
3M Center, Building 220-12E-04
PO Box 33220
St. Paul, MN 55144-3220 USA
General Info. 1-800-374-6772
Technical Info. 1-800-328-3908
Fax 1-651-736-4233

3M Canada
P.O. Box 5757
London, Ontario
Canada N6A 4T1
1-800-265-1840
Fax 519-452-6245

3M México, S.A. de C.V
Av. Santa Fe No. 55
Col. Santa Fe, Del. Alvaro Obregón
México, D.F. 01210
52-55-52-70-04-00
Fax 52-55-52-70-22-77

3M Puerto Rico, Inc.
Puerto Rico Industrial Park
350 Chardon Avenue, Suite 1100
San Juan PR 00918
787-620-3000
Fax 787-620-3018

www.3Mgraphics.com

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