



Envision™ Print Wrap Film 480Cv3

1. Product Description

A. Product Features

- High performance, 2-mil white, non-PVC film with a luster finish
- Pressure-activated adhesive for easy sliding, tacking, snap up and repositioning
- Non-visible air release channels for fast and easy, bubble-free installations
- For inkjet printing with select solvent, eco-solvent, UV and latex inks and for screen printing with select solvent and UV inks. Refer to the Compatible Products and Warranty Information sections for the recommended printing platforms.
- Versatile, ideal for many long-term graphic applications and for short-term wall graphics on smooth or moderately textured surfaces
- Flexible, highly conformable over compound curves, corrugations and rivets and requires less heat during application than vinyl films
 - Stretch graphic constructions using selected inks with the 3M™ Envision™ Gloss Wrap Overlaminates 8548G up to 150% (for example, a 10 inch piece of film can stretch to 15 inches) without primer or relief cuts while maintain lifting resistance; see details and exceptions in Section 9.
- Removable film, resists tearing in cooler temperatures for fast removal



This product offers several environmental benefits. For more information about these benefits, visit 3Mgraphics.com/Sustainability.

- Non-PVC, phthalate-free film
- Contains no added chlorine or halogens
- Made in part from bio-based materials
- Manufactured using 60% less solvent

Also visit 3Mgraphics.com/EnvisionWrap to see actual demonstrations using film 480Cv3.

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. Please read the entire Bulletin for more details.

- Indoor and outdoor graphics and signs, including point-of-purchase and displays
- Fleet, vehicle, watercraft and transit
 - Commercial vehicles and fleet trucks and trailers; emblems or striping
 - Personal vehicle graphics and wraps
 - Watercraft graphics (above the static water line only)
 - Bus graphics
 - Rail cars and lead cars of trains, light rail and subways
 - Non-vertical and horizontal vehicle wraps, watercraft and transit when protected with overlaminates 8548G
- Small format original equipment manufacturer's (OEM) decorative and identification graphics, cautionary and safety labeling
- Smooth and Textured Walls
 - Graphics applied to indoor smooth wall surfaces
 - Graphics applied to indoor or outdoor moderately textured surfaces when protected with overlaminates 8548G



SIGN • LIGHTING • GRAPHICS • DISPLAY

Excellence in Distribution Since 1946

www.IECDelivers.com





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 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.

Expected Performance Life. 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.	11 years Unwarranted Period
3M™ MCS™ Warranty. 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.	7 years Warranty Period
3M Performance Guarantee. 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.	4 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:
 - stainless steel (we recommend using [3M™ Controltac™ Graphic Film IJ181](#) instead)
 - non-3M films (see Removal Warranty)
 - watercraft when the graphic is below the static water line
 - watercraft graphics that are not edge sealed
 - painted substrates with poor paint to substrate, or paint-to-paint bond
 - substrate surfaces that are not clean properly
- Using prespacing tape in cut and weeded applications where the tape must adhere to the exposed liner
- Film without graphic protection when they are:
 - printed vehicle graphics
 - watercraft graphics
 - exposure to abrasive conditions, harsh cleaners or chemicals
 - outdoor, horizontal applications
- Graphic removal from:
 - applications with poor paint-to-substrate adhesion
 - existing graphics that must remain intact; damage may occur during removal of film
 - watercraft
 - outdoor, horizontal applications (except graphics using overlaminate 8548G as described in this Bulletin)
- Graphics subjected to gasoline vapors or spills, including those at or on gas pumps, automobile fuel-tank ports, watercraft or top-feeding, petroleum tankers

E. Wall Graphics

This 2-mil film may be used for indoor smooth or textured surface wall graphics. However, the user is responsible for determining the product's suitability, including adhesion and, if required, removal characteristics. Due to the wide variability of wall surfaces, 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.

F. 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.



SIGN • LIGHTING • GRAPHICS • DISPLAY

Excellence in Distribution Since 1946

www.ICDelivers.com



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.

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

(1) Solvent Inks and Printers

- SIIT GX 3M Ink Series

Seiko I Infotech ColorPainter™ H Series H-74s, H2-74s, H-104s, H2-104s, W-54s and 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 Designjet L65500 & Scitex LX600, LX800, LX820 and LX850 Printers

HP Designjet L65500 & Scitex LX600, LX800, LX820 and LX850 Printers

HP Designjet L26100, L26500 and L28500 Printers

(3) UV Inkjet Inks and Printers

- 3M™ Piezo Inkjet Ink Series 2200UV
- 3M™ Piezo Inkjet Ink Series 2700UV
- 3M™ Piezo Inkjet Ink Series 2800UV
- EFI™ VUTEK® GS 3M™ Premium UV Inks
- EFI™ VUTEK® GSr 3M™ Premium UV Inks
- EFI™ R3225 3M™ UV Ink
- Mimaki LF-200 Ink Series*
* Manufactured by 3M

EFI™ VUTEK® PV200 Printer

Durst Rho 160R and 351R Printers

EFI™ VUTEK® QS2000, QS3200, QS3220 and QS220 Printers

EFI™ VUTEK® GS2000, GS3200 & GS3250 Printers, including GS Pro Series

EFI™ VUTEK® GS3250r and GS5000r Printers

EFI™ R3225 UV Roll-to-Roll Printer

Mimaki UJV-160, JFX-1631 & 1615R Printers

B. Screen Printing Inks for 3M™ MCS™ Warranty

- 3M™ Screen Printing Ink Series 1900, *line color and four color*
- 3M™ Screen Printing UV Ink Series 9800, *line color and four color*

C. OEM Inkjet Inks and Printers for 3M Performance Guarantee

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

D. Graphic Protection

- 3M™ Scotchcal™ Gloss Overlamine 8518
- 3M™ Scotchcal™ Luster Overlamine 8519
- 3M™ Scotchcal™ Matte Overlamine 8520
- 3M™ Envision™ Gloss Wrap Overlamine 8548G (*required for textured wall applications*)
- 3M™ Scotchcal™ Ultra Matte Overlamine 8915
- 3M™ Screen Print Dirt Resistant Gloss Clear 1920DR
- 3M™ Screen Print Low Gloss Clear 9730UV
- 3M™ Screen Print UV Gloss Clear 9740i

E. Other Products

- 3M™ Premasking Tape SCPM-3
- 3M™ Premasking Tape SCPM-44X
- 3M™ Prespacing Tape SCPS-55
- 3M™ Edge Sealer 3950
- 3M™ Edge Sealer Tape 8914
- 3M™ Vehicle Channel Applicator Tool VCAT-2
- 3M™ Roller L (larger hard roller)
- 3M™ Roller S (small hard roller)



SIGN • LIGHTING • GRAPHICS • DISPLAY

Excellence in Distribution Since 1946

www.IECDelivers.com



F. Tools for Textured Wall Surfaces

- 3M™ Textured Surface Applicator TSA-1
- 3M™ Textured Surface Applicator TSA-2
- 3M™ Textured Surface Applicator TSA-3
- 3M™ Textured Surface Applicator TSA-4
- Industrial heat gun with an electronic readout, capable of achieving and sustaining 1000°F (537°C). See [Instruction Bulletin 5.37](#) for examples of suitable heat guns.
- Heat and burn resistant gloves

Note: Do not attempt to apply this film to textured wall surfaces using a standard squeegee; you will not be successful.

3. Characteristics

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

A. Physical Characteristics

Characteristic	Value												
Material	High performance non-PVC polymer												
Film color	White, opaque												
Thickness	Without adhesive: 2 mil (0.05 mm) With adhesive: 3-4 mil (0.08-0.10 mm)												
Adhesive	Pressure-activated (slide, tack, snap up, reposition) with air release channels												
Adhesive color	Gray												
Film Liner	Polyethylene-coated paper												
Adhesion, Typical 24 hours after application	<table> <tr> <td>ABS</td> <td>2-4 pounds/inch (0.36-0.72 kg/cm)</td> </tr> <tr> <td>Acrylic enamel</td> <td>2-4 pounds/inch (0.36-0.72 kg/cm)</td> </tr> <tr> <td>Aluminum, anodized</td> <td>5-7 pounds/inch (0.89-1.26 kg/cm)</td> </tr> <tr> <td>Aluminum, etched</td> <td>4-6 pounds/inch (0.72-1.08 kg/cm)</td> </tr> <tr> <td>Fruehauf pre-painted panels</td> <td>2-4 pounds/inch (0.36-0.72 kg/cm)</td> </tr> <tr> <td>Automotive clear coats</td> <td>3-5 pounds/inch (0.54-0.89 kg/cm)</td> </tr> </table>	ABS	2-4 pounds/inch (0.36-0.72 kg/cm)	Acrylic enamel	2-4 pounds/inch (0.36-0.72 kg/cm)	Aluminum, anodized	5-7 pounds/inch (0.89-1.26 kg/cm)	Aluminum, etched	4-6 pounds/inch (0.72-1.08 kg/cm)	Fruehauf pre-painted panels	2-4 pounds/inch (0.36-0.72 kg/cm)	Automotive clear coats	3-5 pounds/inch (0.54-0.89 kg/cm)
ABS	2-4 pounds/inch (0.36-0.72 kg/cm)												
Acrylic enamel	2-4 pounds/inch (0.36-0.72 kg/cm)												
Aluminum, anodized	5-7 pounds/inch (0.89-1.26 kg/cm)												
Aluminum, etched	4-6 pounds/inch (0.72-1.08 kg/cm)												
Fruehauf pre-painted panels	2-4 pounds/inch (0.36-0.72 kg/cm)												
Automotive clear coats	3-5 pounds/inch (0.54-0.89 kg/cm)												
Tensile strength	11-13 pounds/inch at 73°F (1.98-2.34 kg/cm at 23°C)												
Chemical resistance	<ul style="list-style-type: none"> • Resists mild alkalis, mild acids, and salt • Excellent resistance to water (<i>does not include immersion</i>) • Resists occasional fuel spills 												
Flammability	Call 1-800-328-3908 for information												

B. Application Characteristics

Characteristic	Value
Finished graphic application recommendation	<p>Sign and vehicle applications:</p> <ul style="list-style-type: none"> • Surface type: Flat, with and without rivets, simple curves, compound curves, corrugations and deep channels • Substrate type: ABS resins, aluminum, chrome, glass, fiberglass reinforced plastics, paint (check adhesion to powder-coated or water-based paints), fiberglass with gel coat <p>Wall applications: Indoor smooth surface walls, moderately-textured surfaces such as concrete block, brick, industrial stucco and tile, as found on flat walls and/or simple curved architectural elements such as columns. See Instruction Bulletin 5.37 for details.</p> <p>Application temperature: (<i>air and substrate</i>)</p> <ul style="list-style-type: none"> • Flat without rivets: 40°-100°F (4°-38°C) • Curves or corrugations with rivets: 50°-100°F (10°-38°C) • Compound Curves and/or watercraft: 60°-90°F (16°-32°C) • Walls: 40°-100°F (4°-38°C)



SIGN • LIGHTING • GRAPHICS • DISPLAY

Excellence in Distribution Since 1946

www.IECDelivers.com



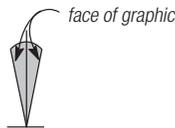
Application Characteristics, continued...

Characteristic	Value
Finished graphic application recommendation	Application method: Dry
Applied shrinkage	Less than 0.015 inches (0.4 mm)
Temperature range after application	-65° to 225°F (-60° to 107°C)
Graphic removal	<p>Most substrates: Removable with heat and/or chemicals within the Warranty Period at 50°F (10°C) minimum (air and substrate)</p> <p>Wall applications: Varies with type of substrate; using heat enhances removal of film; may leave adhesive residue, may remove some surface paint or finish, may damage mortar.</p>

4. Definitions

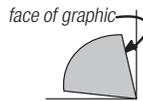
A. Exposure Types

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. Horizontal Exposure



The face of the graphic is +/- 5° from horizontal.

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. A detailed map is available at 3Mgraphics.com under Tools and Support, Warranties.

B. Graphic Construction

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

C. Graphic Protection

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

D. Graphic Types

As identified in the warranty tables

Indoor Signs

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

Outdoor Signs

Stationary graphics applied outdoors and exposed to the elements.

OEM

Labels and decorative graphics produced for and used by original equipment manufacturers. May also be called decals.

Vehicle

Vehicle. Buses, vans, passenger vehicles, delivery trucks, pickup trucks, enclosed trailers. Certain restrictions may apply as noted in the applicable Product Bulletin.

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

Recreational Vehicle (RV). Vehicles used for personal pleasure, such as campers, motor homes and trailers, that are not used in connection with any commercial or business enterprise.



SIGN • LIGHTING • GRAPHICS • DISPLAY

Excellence in Distribution Since 1946

www.ICDelivers.com



Graphic Types, continued...

Watercraft. Boats intended for personal pleasure such as runabouts and speedboats having aluminum and/or smooth fiberglass/gel coat bodies, including boats used in fishing tournaments and off-shore racing boats, but not 1 to 3 person personal watercraft or other boats used in connection with commercial or business enterprise. 3M specifically excludes all other recreational vehicles from this definition.

Rail. Rail cars and lead cars of trains, light rail and subways, but not locomotives or engines.

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 Warranty Brochure](#).

Note: When used to produce wall graphics, this film is only covered by the 3M Basic Product Warranty. See Section 7. for the Expected Performance Life (unwarranted time period) of a wall graphic and key factors that affect its performance.

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.



SIGN • LIGHTING • GRAPHICS • DISPLAY

Excellence in Distribution Since 1946

www.ICDelivers.com

