

Product Description

- Cast adhesive backed film for Solvent, UV, and Latex Inkjet printing
- This film utilizes 3M™ Controltac™ and 3M™ Comply™ technology
Controltac™ minimizes the initial contact area of the adhesive for easy sliding, tacking, snap-up and repositioning
Comply™ technology allows air to exit through air release channels to the edge of the graphic
- Expected Performance Life (unwarranted period for unprinted film with no graphic protection, applied to a flat, vertical, outdoor surface under Northern European climate conditions):
 - White: 10 years
 - Transparent: 8 years
 - Metallic: 6 years

Note: This document uses hyperlinks. Please follow the links for additional information.

Recommended types of graphic and use

- Indoor and outdoor graphics and signs
- Wraps for vehicles, straight trucks, semi-trucks and semi-trailers
- Bus graphics
- Rail car graphics (excluding stainless steel)
- Watercraft graphics (above the static water line only)
- Point-of-purchase graphics and displays, emblems or striping
- Small format original equipment manufacturer’s (OEM) decorative and identification graphics, cautionary and safety labeling

Surface types

flat	rivets	simple curves	compound curves	corrugations	deep channels and recesses
✓	✓	✓	✓	✓	✓
					

Product line

Product name	Description	Features
3M™ Print Wrap Film IJ180mC-10	white, opaque film with a glossy finish	Controltac™ and Comply™
3M™ Print Wrap Film IJ180mC-114	transparent film with a glossy finish	Controltac™ and Comply™
3M™ Print Wrap Film IJ180mC-120	silver metallic, opaque film with a glossy finish	Controltac™ and Comply™

[Follow the link for more 3M™ 180 Films](#)

Recommended Compatible Products

Follow the link for further information about selection and use of compatible protective overlaminates and printable clears.

See instruction bulletin ‘AT-1’ for information about selection and use of suitable application tapes for this product, please.

Follow the link 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™ MCS™ Warranty or 3M Performance Guarantee.

Physical Properties

The values displayed are the results of illustrative lab test measurements made according to the indicated external norm and shall not be considered as a commitment from 3M.

Characteristic	Value	
Material	Cast vinyl	
Thickness	Film without adhesive:	0.05 ± 0.005 mm
ISO 534	Film with adhesive:	0.08 – 0.10 ± 0.01 mm
Adhesive	Acrylic pressure-sensitive, repositionable	
Adhesive appearance	Opaque films: grey, transparent films: clear	
Adhesion	ABS	20 ± 2 N/25 mm
Indicative values	Aluminum etched	24.5 ± 2 N/25 mm
FTM 1, 24 h 23°C/50%RH	Paint	17.5 ± 4 N/25 mm
Applied shrinkage FTM 14	0.1 mm	
Liner	Polyethylene-coated paper	
Application method	Dry only	
Substrate types	Aluminum, chrome, glass, PMMA, PC*, resins, ABS, paint**	
	<p>The application of film onto glass can cause glass break by uneven heat absorption through sun exposure. 3M does not accept liability for glass breakage.</p> <p>* Polycarbonate substrates may require oven drying before use due to outgassing of encapsulated moisture from the polycarbonate causing the film to bubble. Refer to the manufacturers' instructions.</p> <p>** Check adhesion to powder-coated or water-based paints.</p> <p>Some composites and plastics tend to outgas. Test composites and plastics prior to application.</p>	
Application temperature	4 – 38°C	Flat
	10 – 38°C	Simple curves, corrugations and rivets
	16 – 32°C	Compound curves, deep channels, recesses and watercrafts
	3M recommends application at +18°C to +22°C for optimum ease of application.	
Temperature range after application	-53 to +107°C	
	(not for extended periods of time at the extremes)	
Chemical Resistance	<ul style="list-style-type: none"> • Resists mild alkalis, mild acids, and salt • Excellent resistance to water (does not include immersion) • Resists occasional fuel spills 	
Flammability	Flammability standards are different from country to country. Ask your local 3M contact for details, please.	

[Follow the link to check for available fire certificates.](#)

Adhesive Characteristics

All versions		1	2	3	4	5
Installation Characteristics	Challenging/High Skill					
						Easy/Low Skill
24-hour adhesion	Low					High
Long term adhesion	Low					High
Removability	Not Designed for Easy Removal					Designed for Easy Removal

[Follow the link for complete details about the criteria above and a comparison of all 3M films](#)

Warranty Information

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.

3M™ Performance Guarantee and MCS™ Warranty

3M provides a guarantee/warranty on a finished applied graphic within the framework of 3M™ Performance Guarantee and/or 3M™ MCS™ warranty programs.

[Follow the link 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™ MCS™ Warranty or 3M Performance Guarantee.](#)

Limited Remedy

Unsuitable End Uses

This bulletin provides technical information only.

Before using, the user must determine the suitability of the product for its required or intended use, and the user assumes all risk and liability whatsoever in connection therewith.

As outdoor graphics age, natural weathering occurs causing a gradual reduction in gloss, slight color changes, some lifting of the graphic at the edges or around rivets, and ultimately a minor amount of cracking. These changes are not evidence of product failure and are not covered by a 3M warranty.

Limitations of liability

All questions of warranty and liability relating to this product are governed by the terms and conditions of the sale, subject, where applicable, to the prevailing law.

3M Commercial Solutions products are not tested against automotive manufacturer specifications!

Graphic Manufacturing

Ink jet printing

A too high total physical ink amount on the film results in media characteristic changes, inadequate drying, overlamine lifting, and/or poor graphic performance. The maximum recommended total ink coverage for this film is 270%.

See the individual ink bulletins for details, please.

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 Graphic Warranty.

[Special Instructions for HP Latex 831/871 and HP 881/891](#)

Sheeting, Scoring and Film Cutting

[See 3M Instruction Bulletin 4.1 for Sheeting, Scoring and Film Cutting 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.

[See 3M Instruction Bulletin 4.22 for lamination basics.](#)

[See 3M Instruction Bulletin 5.5 for general procedures for interior and exterior dry application.](#)

[See 3M Instruction Bulletin 5.46 for application on substrates with recesses.](#)

Maintenance, Cleaning and Removal

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).

These films can be removed with the aid of heat and/or chemicals.

[See 3M Instruction Bulletin 6.5 for information about storage, handling, maintenance and removal of films and sheetings.](#)

Shelf Life, Storage and Shipping

The shelf life as defined below remains an indicative and maximum data, subject to many external and non-controllable factors. It may never be interpreted as warranty.

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: +4°C to +40°C, out of sunlight, original container in clean and dry area.

Shipping finished graphics: Flat or rolled printed side out on 6 inch (15 cm) or larger core.

Health and Safety

When handling any chemical products, read the manufacturer's container labels and the Safety Data Sheets (SDS) for important health, safety and environmental information.

[Follow the link to obtain SDS sheets for 3M products on 3M.com/SDS.](#)

[Follow the link to obtain information about substances of very high concern \(SVHC\).](#)

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

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