Product Description

- Calendered adhesive backed film for Solvent, UV, Latex Inkjet printing and Screen Printing
- This film can use 3M™ Comply™ technology
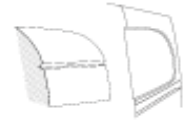 Comply™ technology allows air to exit through air release channels to the edge of the graphic
- This film can use 3M™ Controltac™ technology
  Controltac™ minimizes the initial contact area of the adhesive for easy sliding, tacking, snap-up and repositioning
- Removable versions of product line can be used in conjunction with the recommended overlaminate as base film to produce graphics for floors
- Expected Performance Life (unwarranted period for unprinted film with no graphic protection, applied to a flat, vertical, non-vertical outdoor surface):

  - White   7 years
  - Transparent   5 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
- Bus graphics
- Point-of-purchase graphics and displays, emblems or striping
- Removable versions: Floor graphics on most indoor hard surface flooring

Surface types

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

Note: Expect tenting with applications onto rivets.

Product line

Product name	Description	Features
3M™ Scotchcal™ Graphic Film IJ40-10	white, opaque film with a glossy finish	
3M™ Scotchcal™ Graphic Film IJ40-10T	white, opaque film with a glossy finish	
3M™ Scotchcal™ Graphic Film IJ40-10R	white, opaque film with a glossy finish	
3M™ Scotchcal™ Graphic Film IJ40-20	white, opaque film with a matte finish	
3M™ Scotchcal™ Graphic Film IJ40-20R	white, opaque film with a matte finish	
3M™ Controltac™ Print Film 40C-10	white, opaque film with a glossy finish	Controltac™ and Comply™
3M™ Controltac™ Print Film 40C-10R	white, opaque film with a glossy finish	Controltac™ and Comply™
3M™ Controltac™ Print Film 40C-114R	transparent film with a glossy finish	Controltac™ and Comply™
3M™ Controltac™ Print Film 40C-20	white, opaque film with a matte finish	Controltac™ and Comply™

3M™ Controltac™ Print Film 40C-20R	white, opaque film with a matte finish	Controltac™ and Comply™
3M™ Scotchcal™ Graphic Film IJ40-114	transparent film with a glossy finish	
3M™ Scotchcal™ Graphic Film IJ40-124	transparent film with a matte finish	
3M™ Scotchcal™ Graphic Film IJ40-124R	transparent film with a matte finish	

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.

Physical Properties

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

Value	Characteristic	
Material	Calendered vinyl (Polymeric)	
Thickness	Film without adhesive:	0,075 ± 0,005 mm
ISO 534	Film with adhesive:	0,10 ± 0,01 mm
Adhesive	Acrylic, pressure-sensitive	
Adhesive appearance	Grey	
Adhesion (permanent version)		
Indicative values	Aluminum etched	13,5 ± 2 N/25 mm
FTM 1, 24 h 23°C/50%RH	Paint	15,5 ± 2 N/25 mm
Adhesion (removable version)		
Indicative values	Aluminum etched	8,5 ± 2 N/25 mm
FTM 1, 24 h 23°C/50%RH	Paint	8,5 ± 2 N/25 mm
Applied shrinkage FTM 14		0,4 mm
Liner	Polyethylene-coated paper	
Application method	Wet or dry. Note: Versions with Comply™: Dry only!	
Substrate types	Aluminum, glass, PMMA, PC*, ABS, paint**	
	Use for floors: ceramic, finished wood, marble, sealed concrete, terrazzo, waxed vinyl	
	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.	
	* Might require drying with heat before use.	
	** Check adhesion to powder-coated or water-based paints.	
Application temperature	10 – 38 °C	All surface shapes
	16 – 32 °C	Use for floors
3M recommends application at +18°C to +22°C for optimum ease of application.		
Temperature range after application	-50 to +90 °C	
	(not for extended periods of time at the extremes)	
Chemical Resistance	● 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.	

3M

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 complete list of intermediate products in Europe, Middle East and Africa eligible for the 3M™ MCS™ Warranty.

Limited Remedy

Unsuitable End Uses

3M recommended product end uses are listed in each 3M graphics product bulletin. End uses not listed in the applicable 3M Graphics Product Bulletins are typically not eligible for 3M Graphics Warranties. For non-recommended and/or non-warranted end uses or applications, users must test and approve the end uses or applications, assume any associated risks, and acknowledge that 3M has no liability for such end uses or applications. Please contact your 3M representative with any questions about graphic applications, end uses, and warranties.

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, overlaminate 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

Screen printing

Formulations and processing conditions can affect ink durability. Refer to the 3M Product and Instruction Bulletins for your ink for limitations and proper usage. Graphic protection can improve the appearance, performance and durability of your graphic.

Whether you apply screen print clears with traditional screening methods or roller coating, use equipment designed to handle high viscosity materials and make sure the coating is evenly applied to the specifications in the clear's 3M Instruction Bulletin.

See the individual ink bulletins for details, please.

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 to obtain general information about ink drying and lamination of printed graphics.

See 3M Instruction Bulletin 5.5 for general procedures for interior and exterior dry application.

See 3M Instruction Bulletin 6.5 for information about storage, handling, maintenance and removal of films and sheetings.

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).

Removable version: These films can be removed without any aids such as heat and chemicals without leaving adhesive residue.

Permanent versions: 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 2 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 2-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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