



3M™ Scotchcal™ Graphic Film with Comply™ v3 adhesive IJ170Cv3-10

Product Bulletin

Product Description

This cast film offer great versatility, making them perfect for indoor and outdoor signs, fleet graphics and watercraft. 3M™ Comply™ air release channels in the adhesive for fast, easy, bubble-free application

Product Line

Inkjet printing IJ170Cv3-10 White , opaque, gloss, permanent adhesive with 3M Comply air release channels

Product Characteristics

These are typical values for unprocessed products. Contact your 3M representative for a custom specification.

Physical & Application

Material Cast vinyl

Surface finish Gloss

Thickness (film) 50µm (0.05mm)

Adhesive type Solvent acrylic; pressure-sensitive

Adhesive appearance Grey

Liner Double-sided polyethylene coated paper

Adhesion Approx. 18 N/25mm
FTM 1: 180° peel, substrate: glass; cond 24 h in 23°C/50%RH

Application method Dry only

Applied shrinkage < 0.1 [mm] FTM 14
Application temperature +10°C minimum (vinyl, air and substrate)

Service temperature -60°C to +107°C

Surface type Flat to curved, incl. rivets and corrugations

Substrate type Aluminium, glass, PMMA, PC*, ABS, paint
PC*: PETG may require drying with heat before use

Graphic removal Remove with heat and/or chemical from supported substrates within the warranty period at 10°C (50°F) minimum (air and substrate).
• Use a removal angle of <90° for optimal results
No liability is given for ease or speed of removal of any graphic.

Storage

Shelf life The shelf life for unprocessed film is 2 years from the date of manufacture (i.e. the date marked on the original packaging) or process within 1 year of manufacture and apply within 1 year of processing.

Storage conditions Store in the original packaging/box at temperatures of +4°C to +40°C, out of sunlight, in a clean and dry area. Bring the film to room temperature before use.

Flammability Flammability standards are different from country to country. Ask your local 3M contact for details, please.

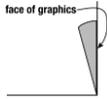
Durability

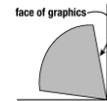
Unprocessed film The following durability data are given for unprocessed film only.

Climatic zones Graphic durability is largely determined by the climate and the angle of exposure. The table below shows durability for these products according to the angle of exposure and the geographical location of the application.

Zone 1 Northern Europe, Italy (north of Rome), Russia
 Zone 2 Mediterranean area without North Africa, South Africa
 Zone 3 Gulf area, Africa

Exposure types

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

Non-vertical:  The face of the graphic is greater than 10° from vertical and greater than 5° from horizontal

Interior: Interior means an application inside a building without direct exposure to sunlight.

	Zone 1	Zone 2	Zone 3
Vertical outdoor exposure			
White/black	8 Years	7 years	5 years
Non- Vertical outdoor exposure			
White/black	4 Years	3.5 years	2.5 years
Interior application			
interior	10 years	10 years	10 years

Limitations of End Uses 3M specifically does not recommend or warrant the following uses, but please contact us to discuss your needs to recommend other products.

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- Graphics applied to
- flexible substrates incl. 3M™ Panagraphics™ III Flexible Substrate
 - low surface energy substrates or substrates with low surface energy coating
 - other than flat surfaces or moderately curved/corrugated surfaces
 - painted or unpainted wallboards, gypsum boards and wallpapers
 - stainless steel
 - surfaces that are not clean and more than moderately textured.
 - Surfaces with poor paint to substrate adhesion
 - Watercraft when the graphic is applied below the static water line
 - Watercraft graphics that are not edge sealed

- Graphic Removal from Graphics subjected to Important Notice
- Signs or existing graphics that must remain intact
 - Petroleum vapours or spills
 - 3M Commercial Solutions products are not tested against automotive manufacturer specifications.
- Important Notice
- Non-vertical applications will have a significantly reduced durability.

Graphics Manufacturer

Graphic protection can improve the appearance, performance and durability of printed graphics. Any printed graphic exposed to abrasive conditions (including vehicles), hard cleaners or chemicals must include graphic protection in order to be warranted.

When to use an
overprint clear or
overlamine
Shipping finished
graphics

See instruction bulletin [Graphic Protection Options](#) for further information about selection and use of protective overlaminates and printable clears.

Converting Information Inkjet Printing

Flat, or rolled film side out on 150mm (6 inch) or larger core. These methods help to prevent the liner from wrinkling or application tape, if used, from popping off.

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%.

Adequately Dry
Graphics

Inadequate drying can result in graphic failure including curling, increased shrinkage and adhesion failure, laminate to lift which are not covered under warranty. Build enough time into your process to ensure adequate drying of the graphic.

Poorly dried film becomes soft and stretchy, and the adhesive becomes too aggressive. 3M recommends at least a minimum drying time of 24 hrs before further processing. Dry the graphic unrolled (hang or lay flat) or at least as a loose wound roll standing upright.

Application

See instruction bulletin 4.3 [3M™ Application Tapes Premasking and Prespacing for Films](#) for information about selection and use of suitable application tapes for this product, please.

Refer to Instruction Bulletin 5.1 [Substrate Selection, Preparation and Substrate Specific Application Techniques](#) for substrate preparation techniques.

Maintenance and Cleaning

Use a cleaner designed for high-quality painted surfaces. The cleaner must be wet, non-abrasive, without strong solvents, and have a pH value between 3 and 11 (neither strongly acidic nor strongly alkaline).

Refer to Instruction Bulletin 6.5 [Storage, Handling, Maintenance and Removal of 3M Films](#) for general maintenance and cleaning information.

Remarks

Important notice

This bulletin provides technical information only.

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. 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.

Additional Information

Visit the web site of your local subsidiary at www.3M.co.uk/graphicsolutions

- details about 3M™ MCS™ Warranty and 3M Performance Guarantee
- additional instruction bulletins
- An overview of the 3M Commercial Graphics range of graphic films

Health & Safety

Refer to the package label and the Material Safety Data Sheet for health, safety, and handling information on the products referenced in this bulletin. For 3M products, if necessary, you may contact our Toxicology/Product Responsibility Department on 01344 858000.

Important Notice to Purchaser

The 3M products described in this publication are covered by a 3M warranty and limitation of liability.

3M's warranty provides that if 3M finds that goods are defective in material or workmanship they will be replaced or the price refunded at 3M's option but note that 3M does not accept liability for other direct losses (except for personal injury or death) or consequential losses relating to defective products or from information supplied by 3M.

Purchasers and users of 3M products, and not 3M supplying companies, are always solely responsible for deciding on the suitability of the 3M product for their required or intended use.

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