



Scotchcal™ Fluorescent Film

Series 3480

Product Bulletin

Product Description

These are tough cadmium-free vinyl fluorescent films which are highly conspicuous under all daylight conditions and provide the high attention value desired under conditions of poor visibility, particularly at dawn or dusk.

Product Line	Screen printing	3483	Yellow Orange, opaque, glossy, removable adhesive.
		3484	Red Orange, opaque, glossy, removable adhesive.
		3485	Saturn Yellow, opaque, glossy, removable adhesive.

Product Characteristics

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

Physical & Application

Material	cast vinyl	
Surface finish	glossy	
Thickness (film)	170 µm (0.170 mm)	
Adhesive type	solvent acrylic, pressure-sensitive	
Adhesive appearance	clear	
Liner	Kraft paper	
Adhesion	approx. 11 N/25 mm	FTM 1: 180° peel, substrate: glass; cond: 24 h 23°C/50%RH

Application method	wet or dry	
Applied shrinkage	< 0.5 mm	FTM 14
Application temperature	+4°C	minimum (air and substrate)
Service temperature	-34°C to +93°C	
Surface type	flat	
Substrate type	aluminum, glass, PMMA, PC*, ABS, paint	

PC*, PETG*: Might require drying with heat before use

Graphic removal	Fair to remove with heat and/or chemicals from supported substrates.
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Important quality notice! 3480

Freshly applied film of this series might build haze or dark spots on its surface. This is a versible process. It is caused by uneven UV-light radiation and will disappear with more sunlight exposure to the surface activating the fluoresced pigments.

No liability is given for ease or speed of removal of any graphic. Pay attention to adequate air and substrate temperature.

Storage

Shelf life	2 years from the date on the original box. Up to 2 years unprocessed, or processed within 1 year of processing.
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Storage conditions!	+4°C to +40°C, out of sunlight, original container in clean and dry area.
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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!

3M™ MCST™ Warranty

In addition, 3M provides a warranty on a finished applied graphic within the framework of 3M™ MCST™ warranty program.

Climatic zones

Graphic durability is largely determined by the climate and the angle of exposure. Find below a table showing the durability of a product according to the angle of exposure and the geographical location of the application.

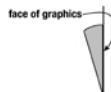
Zone 1 Northern Europe, Italy (north of Rome), Russia

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.

Interior:

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

Vertical outdoor exposure
colors

Zone 1

Zone 2

Zone 3

3 years

2 years

2 years

Interior application
interior

Zone 1

Zone 2

Zone 3

3 years

3 years

3 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.

Graphics applied to

- flexible substrates incl. 3M™ Panaflex™ Awning and Sign Facing 945GPS and 3M™ Panagraphics™ III Wide Width Flexible Substrate.
- low surface energy substrates or substrates with low surface energy coating.
- other than flat surfaces.
- painted or unpainted wallboards, gypsum boards and wallpapers.
- stainless steel.
- substrates with tendency of outgassing.
- surfaces that are not clean and smooth.
- surfaces with poor paint to substrate adhesion.

Graphic removal from

- signs or existing graphics that must remain intact.

Graphics subjected to

- gasoline vapors or spills.

Important Notice

- 3M Commercial Graphics Division products are not tested against automotive manufacturer specifications!
- Non vertical applications will have a significant decrease in durability!

Graphics Manufacturing

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

When to use an overprint clear or overlamine

See instruction bulletin GPO 'graphic protection options' for further information about selection and use of protective overlaminates and printable clears.

[> Product Bulletin Graphic Protection Options <](#)

Shipping finished graphics

Flat, or rolled film side out on 130 mm (5 inch) or larger core. These methods help to prevent the liner from wrinkling or application tape, if used, from popping off.

Converting Information 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.

A clear coat also prevents chalking on unprinted films. Use equipment designed to handle high viscosity materials and make sure the coating is evenly applied to the specifications given in the clear's Instruction Bulletin.

Application

See product bulletin ATR 'application tape recommendations' for information about selection and use of suitable application tapes for this product, please.

[> Product Bulletin Application Tape Recommendations <](#)

Refer to Instruction Bulletin 5.1 'select and prepare substrates for graphic application', for general application information.

[> Instruction Bulletin 5.1 'select and prepare substrates for graphic application' <](#)

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 films and sheetings', for general maintenance and cleaning information.

[> Instruction Bulletin 6.5 'Storage, Handling, Maintenance and Removal of Films and Sheetings' <](#)

Remarks

This bulletin provides technical information only.

Important notice

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.3Mgraphics.com for getting more:

- details about 3M™ MCS™ Warranty and 3M Performance Guarantee
- additional instruction bulletins
- a complete product overview about materials 3M is offering



Commercial Graphics

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