



# 3M™ Scotchcal™ Graphic Film

## Series IJ25

### Product Bulletin

#### Product Description

These monomeric calendered films offer great versatility making them perfect for indoor and outdoor signs and fleet graphics.

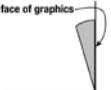
The boardy film construction is designed for easy application of printed graphics without the need of an overlaminant or application tape.

Furthermore the removable version 3M™ Scotchcal™ IJ25-10R is tested and approved for use in conjunction with the recommended overlaminant as base film to produce graphics for floors.

<b>Product Line</b>	Screen and inkjet printing	IJ25-10	white, opaque, glossy, permanent adhesive (grey).
		IJ25-10R	white, opaque, glossy, removable adhesive (grey).
		IJ25-10TR	white, opaque, glossy, removable adhesive (clear).
		IJ25-20R	white, opaque, matte, removable adhesive (grey).

#### Product Characteristics

<b>Physical &amp; Application</b>	Material	calendered vinyl (monomeric)	
	Surface finish	glossy and matte (see product line)	
	Thickness (film)	100 µm (0.1 mm)	
	Adhesive type	waterbased acrylic: pressure-sensitive	
	Adhesive appearance	grey	
	Liner	Kraft paper	
	Adhesion	approx. 12 N/25 mm	FTM 1: 180° peel, substrate: glass; cond: 24 h 23°C/50%RH
		removable films of series	approx. 8 N/25 mm
	Application method	dry only!	
	Applied shrinkage	< 0.5 mm	FTM 14
	Application temperature minimum (air and substrate)	+6°C use for floors: IJ25-10R	for flat surfaces +16°C
	Service temperature after application	-40°C to +90°C	
	Surface type	flat	
	Substrate type	glass, PMMA, PC*, flexible sign making substrates	
		use for floors: IJ25-10R	ceramic, finished wood, marble, sealed concrete, terrazzo, waxed vinyl
		*: Might require drying with heat before use	
	Graphic removal	Removable without heat and/or chemicals from supported substrates.	
		Statement given for removable versions only!	
		No liability is given for ease or speed of removal of any graphic. Pay attention to adequate air and substrate temperature.	
<b>Storage</b>	Shelf life	Use within 2 years from the date of manufacture on the sealed original box. Use within 1 year after opening the box.	
	Storage conditions	+4°C to +40°C, out of sunlight, original container in clean and dry area.	
<b>Flammability</b>	Flammability standards are different from country to country. Ask your local 3M contact for details, please.		

<b>Durability</b>	Unprocessed film 3M™ Performance Guarantee and MCS™ Warranty	The following durability data are given for unprocessed film only! In addition, 3M provides a guarantee/warranty on a finished applied graphic within the framework of 3M™ Performance Guarantee and/or 3M™ MCS™ warranty programs. Visit <a href="http://www.3mgraphics.com">www.3mgraphics.com</a> for getting more details about 3M's comprehensive graphic solutions.
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 Zone 2 Zone 3	Northern Europe, Italy (north of Rome), Russia Mediterranean area without North Africa, South Africa Gulf area, Africa
Exposure types	Vertical:  Interior:	 The face of the graphic is ±10° from vertical. Interior means an application inside a building without direct exposure to elements.
<b>Vertical outdoor exposure</b>	<b>Zone 1</b>	<b>Zone 2</b>
white	3 years	2 years
<b>Interior application</b>	<b>Zone 1</b>	<b>Zone 2</b>
interior	3 years	3 years
Notice!	Use for floors: durability (interior) - 3 months	

## Limitations of End Uses

Graphics applied to

- flexible substrates incl. 3M™ Panographics™ 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.
- surfaces that are not clean and smooth.
- surfaces with poor paint to substrate adhesion.
- loose, broken or unsound flooring material.

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!
- Wet application method is not recommended for this film.
- Non vertical applications will have a significant decrease in durability!

## **Special Information**

3M™ Scotchcal™ IJ25-10R is tested and approved for use in conjunction with the recommended overlaminates as base film to produce graphic for floors.

Following limitations of end use apply in addition to the limitations of end use in the table above.

Graphic applied to

- exterior applications
- substrates other than recommended for graphics for floors
- areas with vehicle traffic except of light slow moving traffic

Important Notice

- Film has to be protected with the recommended protective overlaminates to provide the needed skid resistance.
- Place the floor graphic far enough away from entryways that they stay dry!

## **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 overlaminates

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

Graphic for Floors

To create a graphic for floors this film has to be protected with the recommended overlaminates. No printable clear available!

[> 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**

### **Inkjet Printing**

Adequately Dry

Inadequate drying can result in graphic failure including curling, increased shrinkage and adhesion failure, 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 or at least as a loose wound roll standing upright.

## **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.

Abrasion and Loss of Gloss

Abrasion damage and loss of gloss are not covered by any 3M warranty. This is considered normal wear and tear.

## **Application**

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

Graphics for Floors

Application Tapes

Graphic for floors do not require a premask or prespacing tape for application.

Avoid Lifting

Cut radiiuses on any sharp corners of the graphic after lamination. Do not apply finished graphic to the edge of tiles. Keep always a distance of a few centimeter to the joints (not edge of graphic to edge of tile).

[> 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'](#)<

## Important Safety Remark

### Application to Glass

The application of colored or printed film onto glass can lead to glass breakage through thermal expansion of the glass. The local conditions must be examined for the danger of glass break by uneven heat absorption through sun exposure. Type of glass (insulation glass, float glass, LSG, toughened safety glass, semi-tempered glass, etc.), glass dimension, joint condition, flexibility of the sealant, quality of the edge finishing, geographical orientation and partial shadow during sun exposure are the determining factors.

Light color designs and application on the outside of the window are to be preferred. A free non-applied framework of 4 mm around the entire window front can help to dissipate the absorbed warmth. According to common knowledge a thermal crack can occur at temperature differences of approx. 130°C (toughened safety glass), approx. 40°C (float glass) or approx. 110°C (semi-tempered glass).

Coldest place is usually under the framework in the embedded joined window part, the warmest place is typically on the darkest place in the format. Because of the many above mentioned factors, glass breakage cannot be fully predicted, therefore 3M does not accept liability for glass breakage when using this film for window graphics.

## 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](http://www.3Mgraphics.com) for getting:

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



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