



# 3M™ Scotchcal™ Opaque Mirror Graphic Film

7755 SE-420, 7755 SE-431

## Product Bulletin

**Product Description** These special effect films are designed to either give a mirror silver or a mirror gold appearance.

<b>Product Line</b>	Electrocut	SC7755 SE-420	silver mirror, opaque, high-gloss, permanent adhesive.
	Electrocut and screen printing	SC7755 SE-431	silver gold, opaque, high-gloss, permanent adhesive.

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

<b>Physical &amp; Application</b>	Material	PVDF	
	Surface finish	high-gloss	
	Thickness (film)	7755 SE-420	80 µm (0.08 mm)
		7755 SE-431	110 µm (0.11 mm)
	Adhesive type	solvent acrylic; pressure-sensitive	
	Adhesive appearance	7755 SE-420	clear
		7755 SE-431	yellow
	Liner	transparent synthetic	
	Adhesion	15 N/25 mm	FTM 1: 180° peel, substrate: glass; cond: 24 h 23°C/50%RH
	Application method	dry only!	
	Applied shrinkage	< 0.4 mm	FTM 14
	Application temperature	+4°C	minimum (air and substrate)
	Service temperature after application	-29°C to +80°C	
	Surface type	flat	
	Substrate type	aluminum, glass, PMMA, ABS, paint	
	Graphic removal	Hard to remove from supported substrates.	
	<b>Important quality notice!</b>	The manufacturing process might generate some visual effects. Impressions as very tiny irregular spots on the surface are possible as well as milky color stripes. Those type of defects are excluded from any quality complaint.	

<b>Storage</b>	Shelf life	Use within two years from the date of manufacture on the sealed original box. Use within one year after opening the box.
	Storage conditions!	+4°C to +40°C, out of sunlight, original container in clean and dry area.

**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™ Performance In addition, 3M provides a guarantee/warranty on a finished applied graphic within  
 Guarantee and the framework of 3M™ Performance Guarantee and/or 3M MCS™ warranty  
 MCS™ Warranty programs.  
 Visit [www.3mgraphics.com](http://www.3mgraphics.com) 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 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  
 ±10° from vertical.

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

	Zone 1	Zone 2	Zone 3
<b>Vertical outdoor exposure</b>			
SC7755 SE-420	7 years	5 years	4 years
SC7755 SE-431	4 years	3 years	2 years
<b>Interior application</b>	<b>Zone 1</b>	<b>Zone 2</b>	<b>Zone 3</b>
interior	7 years	7 years	7 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. Panagraphics™.
  - low surface energy substrates or substrates with low surface energy coating.
  - other than flat surfaces.
  - stainless steel.
  - substrates with tendency of outgasing.
  - surfaces that are not clean and smooth.

Graphics subjected to - gasoline vapors or spills.

- Important Notice
- 3M Commercial Graphics Division products are not tested against automotive manufacturer specifications!
  - Non vertical applications are neither recommended nor warranted.
  - 3M accepts no liability for glass breakage. See instruction bulletin 5.1 for details.
  - The use of these films in multi-layer constructions is not recommended.

**Graphics Manufacturing** Graphic protection can improve the appearance, performance and durability of your graphic. Any 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 overlaminate 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**

### **Electronic Cutting**

- Based upon cutting evaluations the minimum height for text is 10 mm using upper and lowercase Helvetica Medium. The stroke width should not be lower than 1 mm.
- The variable characteristics of electronically controlled cutting equipment require users to verify their specific requirements.
- Sharpness of knife blade Dull blades impart a serrated look to the edge of the cut film.
- Weight of knife blade The ideal weight slightly scores the liner. Too little weight does not cut completely through the film and the adhesive. Excessive weight cuts the liner and causes the blade to drag, accelerating wear and creating a serrated cut edge on the film.
- Weeding The excess film should be weed (removed) as soon after cutting as practical. This is to minimize the effect of possible adhesive flow.
- Temperature and relative humidity Temperature and relative humidity are minor considerations, but avoid extreme or rapid fluctuating conditions.
- Roll storage Store the film in the same environment as the cutting equipment.
- Further information For more details refer to our instruction bulletin 4.1 'Sheeting, Scoring, Film Cutting', please  
[>Instruction Bulletin 4.1 'Sheeting, Scoring, Film cutting'<](#)

## **Converting Information**

- Formulations and processing conditions can affect ink durability. Refer to the Product and Instruction Bulletins for your ink for limitations and proper usage. Graphic protection can improve the appearance, performance and durability of your graphic.
- Important! Only SC7755 SE-431 (gold mirror) can be screen printed! Printing on SC7755 SE-420 is not recommended.

## **Screen Printing**

- 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.
- Notice! Film SC7755SE is heat sensitive. We recommend air drying of solvent printed graphics.

## **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'<](#)

## **Important Safety Remark**

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



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