

Commercial Solutions Division

3M™ Scotchcal™ Translucent Mirror Graphic Film

7755 SE-520

Product Description

These special effect films are unique translucent films that reflect the light to produce a glossy chrome appearance in a finished graphic.

This intermediate to long term film can be applied to any plastic sheet. Film SC7755 SE-520 can be thermoformed on a high temperature Copolyester sheet.

It is designed for use on first or second surface signs in an internally illuminated sign box.

For easier converting the films are delivered with a removable protective top film.

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|--------------|---------------------|-------------|---|
| Product Line | Illuminated signage | 7755 SE-520 | silver mirror, translucent, high-gloss, permanent adhesive. |
|--------------|---------------------|-------------|---|

Product Characteristics

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

| | | | |
|---|--|--|---|
| Physical & Application | Material | PVDF | |
| | Surface finish | high-gloss | |
| | Thickness (film) | 50 µm (0.05 mm) | |
| | Adhesive type | solvent acrylic, pressure-sensitive | |
| | Adhesive appearance | clear | |
| | Liner | double-sided Polyethylene coated paper | |
| | Adhesion | 15 N/25 mm | 180° peel, substrate: aluminium; cond: 24 h 23°C/50%RH |
| | Application method | wet or dry | |
| | Applied shrinkage | < 0.4 mm | FTM 14 |
| | Application temperature (minimum air and substrate) | +16°C for flat surfaces | |
| | Service temperature (after application) | -29°C to +80°C (not for extended periods of time at the extremes) | |
| | Surface type | flat | |
| | Substrate type | glass, PMMA, PC*, PETG*, ABS *Might require drying with heat before use | |
| | Notice! | Thermoforming of film SC7755 SE-520 is recommended on high temperature Copolyester only! | |
| | Graphic removal | Hard to remove from supported substrates. | |
| Important quality notice! | The manufacturing process might produce some visual effects. Slight variations of the grey tone are possible as well as dull milky stripes which might appear over the width of the material. Those type of defects are excluded from any quality complaint. | | |
| The values above are the results of illustrative lab test measurements and shall not be considered as a commitment from 3M. | | | |

Storage 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.

The shelf life as defined above remains an indicative and maximum data, subject to many external and non-controllable factors. It may never be interpreted as warranty.

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

Durability

The durabilities mentioned in the table below are the results of illustrative lab tests. The values show the best performance expected from these products, provided that the film will be processed and applied professionally according to 3M's recommendations.

The durability statements do not constitute warranties of quality, life and characteristics.

The durability of products is also influenced by:

- the type of substrate and thorough preparation of the surface (with 3M™ Surface Preparation System)
- application procedures
- environmental factors
- the method and the frequency of cleaning

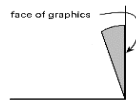
Unprocessed film The following durability data are given for unprocessed film only!

Climatic zones Graphic durability is largely determined by the climate and the angle of exposure. 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.

Vertical outdoor exposure

Zone 1

Zone 2

Zone 3

6 years

5 years

3 years

Interior application

Zone 1

Zone 2

Zone 3

interior

12 years

12 years

12 years

3M™ Performance Guarantee and MCS™ Warranty

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.

For detailed graphic construction and application options along with specific Warranty periods, please see the Warranty matrices and Warranty information on [3M Graphic Solutions/Warranties](#).

Visit www.3mgraphics.com for getting more details about 3M's comprehensive graphic solutions.

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™ Envision™ Flexible Substrate FS-1 and 3M™ Panagraphics™ III Wide Width Flexible Substrate.
- low surface energy substrates or substrates with low surface energy coating.
- stainless steel.
- substrates with tendency of outgassing.
- surfaces that are not clean and smooth.

Graphics subjected to

- gasoline vapors or spills.

Important Notice

- 3M Commercial Solutions products are not tested against automotive manufacturer specifications!

- Non vertical applications are neither recommended nor warranted.
- Thermoforming with high temperatures is not recommended!
- Printing on film is not recommended.
- The use of these films in multi-layer constructions is not recommended.
- Do not apply any graphic protection to film surface.

Graphics Manufacturing

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

Based upon cutting evaluations the minimum height for text is 25 mm using upper and lowercase Helvetica Medium. The stroke width should not be lower than 1 mm.

Electronic Cutting

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

There are unique health and safety considerations that must be understood prior to vacuum forming faces using translucent films.

Thermoforming

Refer to Instruction Bulletin 5.16 'Thermoforming' for special recommendations, limitations and processing requirements when forming with applied films.

[>Instruction Bulletin 5.16 'Thermoforming'<](#)

Elongation limit

Forming of applied film on sheets should not exceed 50% elongation.

Forming temperature

Film temperatures of more than 165°C may cause the silver appearance to lose gloss and become dull as the film is stretched. To low temperatures cause the film to wrinkle around the returns.

Diffusion

Without diffusion light sources will be seen through the translucent silver film when illuminated.

Notice!

Do not forget to remove the clear protective top film from the mirror surface before drying/forming.

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

Application to glass

The application of colored or printed film onto glass with sunlight exposure 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

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.

As outdoor graphics age, natural weathering occurs causing a gradual reduction in gloss, slight color changes, some lifting of the graphic at the edges or around rivets, and ultimately a minor amount of cracking.

These changes are not evidence of product failure and are not covered by a 3M warranty.

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



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