



Scotchcal™ 7755 SE

Mirror Gold and Silver Films

Product Description

"Scotchcal" Series 7755 SE Mirror Gold and Silver Films are durable, dimensionally stable, glossy opaque films on a transparent Stable-Lite liner. These films are designed for use on electronically controlled cutters with or without vacuum hold-down capabilities. They are also intended for production of screen printed, hot and cold kiss-cut graphics which require a true gold or silver look and which will withstand severe weather and handling conditions.

"Scotchcal" Series 7755 SE Films have adhesives which ideally suit them for use on windows or other transparent substrates by presenting the same appearance from both sides. They are also for use on opaque substrates.

These films are intended for use on flat surfaces and simple curved surfaces. Application to corrugated and compound surfaces are not recommended nor warranted. In addition, it is not recommended to apply these films to substrates that have a tendency for outgasing.

"Scotchcal" 7755 SE Mirror Gold and Silver Films laminated on suitable plastic substrates can be bent and shaped using a thermoforming process producing simple curved plastic panels. Series 7755 SE Films are not intended for use where markings may be subjected to spillage of petroleum products or solvents.

The warranty for and durability of "Scotchcal" Series 7755 SE Film for commercial vehicles as stated herein does not extend to automotive or personal vehicle applications which must conform to OEM Automotive specifications.

Colours

- 7755-420 Mirror Silver
- 7755-431 Mirror Gold

Adhesive

Clear Pressure Sensitive

Minimum Application Temperature

Film and Substrate: 4°C

Liner

Stable-Lite Translucent Film without logo print

Effective Performance Life

When fabricated and applied in accordance with 3M recommended procedures, the following performance typically may be expected. Performance statements are based upon representative experience obtained from testing throughout Europe. Actual performance will be determined by substrate selection and preparation, maintenance of the marking and exposure conditions.

Vertical Exposure

	Unprinted	1900 Series	
		1920 clear	1940 clear
Northern / Central Europe	7 years	6 years	4 years
Mediterranean Europe	5 years	5 years	3 years
Middle East / North Africa	4 years	4 years	2 years

Exceptions to the above are:

The warranty applies to films that are exposed at a vertical angle (defined as 90°±10°). A significant decrease in durability may be experienced if films are exposed other than vertical. Thus horizontal exposure is not recommended

This bulletin does not contain detailed processing or application procedures for the subject product. The appropriate Instruction Bulletins referenced may be obtained by contacting your sales representative or distributor.

Fabrication

Screenprinting

"Scotchcal" Series 1900

Thinning recommendations: Inks should be thinned down to print viscosity by using a mixture of CGS-30 and CGS-50 at a 1:1 ratio. The clear coat should be thinned with 30 per cent of the above mentioned CGS-30 and CGS-50 solvent mixture.

Overprint Clear

For stated durability, screen printing inks must be clear coated.

"Scotchcal" Overprint Clear Gloss 1920DR

"Scotchcal" Overprint Clear Matte 1940

Minimum Cutting Heights

The minimum height recommended for text is 10 mm for both mirror gold and silver. This is based upon cutting and weeding evaluations using uppercase Helvetica Medium copy. Users are encouraged to do their own evaluation for specific heights and design detail required for a particular job. The variable characteristics of electronically controlled cutting equipment requires users to verify their specific requirements.

Factors which affect cutting quality and capability that the user needs to take into consideration are:

- a. Sharpness of knife blade (dull blades impart a serrated look to the edge of the cut film).
- b. Weight on knife blade.
 - a) Ideal weight will result in a slight scoring of the liner.
 - b) Too light a weight will cause incomplete cutting through film and adhesive.
 - c) Excessive weight results in cut liner, the blade dragging (which will accelerate wear) and cause a serrated edge on the film.

Weeding

It is recommended that 7755 SE Films have the excess film weeded (removed) as soon after cutting as practical. This is to minimise the effect of possible adhesive flow, 24 or more hours after cutting.

Kiss Cutting

- a. Cold Kiss Cutting
Steel rule dies have to be used for kiss cutting "Scotchcal" 7755 SE Series films. It is recommended that a sheet made out of steel be used as a support during kiss cutting.
Note: The stripping rubbers mounted close to the die must not exceed the height of the knife by more than 0.5 mm.

- b. Hot Kiss Cutting
Etched zinc or magnesium as well as steel rule dies can be used for hot kiss cutting of "Scotchcal" 7755 SE Series films.

Application

Scotchcal™ 7755 SE is not recommended or warranted for application on stainless steel substrates.

Thermoforming

Thermoforming of the mirror gold and mirror silver films is principally possible, however the film should not be stretched by the thermoforming process. This limits the field of application down to simple curved plastic shields. Please contact 3M Technical Service for details if you intend to thermoform "Scotchcal" 7755 SE Series films.

Premasking / Prespacing

Conditions	3M Application Tapes
Unprocessed	
General Premasking	SCPS-100
General Prespacing	SCPS-2
Series 1900 Inks	
General Premasking	SCPM-19
General Prespacing	SCPS-100

Chemical and Physical Properties

Values given are typical and are not for use in specifications. If a custom specification is desired, a request should be submitted through your sales representative. The data given below is for unprinted film or film which has been printed and clear coated.

Physical Properties

Property	Metric Units
Thickness (ISO 4593)	0.09 mm - 0.11 mm
Tensile Strength (ISO 1184-1983)	45 N/25 mm min at 23°C
Elongation* (ISO 1184-1983)	50% at 23°C
Dimensional Stability (FTM 14)	< -0.8 mm
Temperature Range	-35°C to +95°C

Adhesion (FTM1)

7755-431 Mirror Gold	
Substrate	Metric Units (N/25 mm)
Acrylic	17 N/25 mm
Alodine	23 N/25 mm
Fruehauf Panels	18 N/25 mm
Imron Paint (Urethane)	21 N/25 mm
Polycarbonate	9 N/25 mm

7755-420 Mirror Silver	
Substrate	Metric Units (N/25 mm)
Acrylic	15 N/25 mm
Alodine	18 N/25 mm
Fruehauf Panels	14 N/25 mm
Imron Paint (Urethane)	16 N/25 mm
Polycarbonate	6 N/25 mm

Note: ISO refers to standards of the International Standards Organisation. FTM (Fimat Test Methods) refers to test methods listed by Fimat, the Association of European Tape Manufacturers

Chemical Resistance

Chemical Agent	Exposure Time	Results
Reference Fuel (85% Mineral Spirits / 15% Xylol)	1 hour	Severe edge softening
#1 Diesel Fuel	1 hour	Severe edge softening
10% Hydrochloric Acid	10 mins	No effect
10% Ammonium Hydroxide	10 mins	No effect

Shelf Life

Unprinted film may be stored by the fabricator for a period of up to one year and, after printing, markings may be stored for an additional year. Film and markings must be stored in a clean area, free from excessive moisture and direct sunlight, with ambient temperatures of 38°C or less.

Related 3M Literature

Listed below is related 3M Technical Literature which may be of interest:

Subject	Instruction Bulletin
Design of Markings	2.1
Scoring and Cutting	4.1
Premasking and Prespacing	4.3
Surface Preparation	5.1, 5.2
Application	5.5
Storage, Maintenance and Removal	6.5
Warranty of products	-

For Further Assistance

For help on specific questions relating to 3M Commercial Graphics products, please contact your local 3M Technical service person or contact:

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