



# Light Management Film Series 3635

## Blockout Films 3635-20, 3635-22

## Diffuser Films 3635-30, 3635-70

## Day/Night Film 3635-91

### Product Description

3M™ Light Management Film Series 3635 has three distinct categories: blockout films, diffuser films, and day/night film. Each category of film has different properties to control light or to achieve special effects for various types of internally illuminated signs.

### Applications and Uses

These films are intended for use as specified in each of the Film Categories in this Bulletin. Any other applications are NOT warranted by 3M.

- Blockout Films 3635-20 and 3635-22**

These are durable, dimensionally stable vinyl opaque films which are designed for blocking out light when applied to internally illuminated signs, may be screen printed.

3635-20	White matte on the face side
	Black on the adhesive side
3635-22	Black matte on the face side
	White on the adhesive side

- Diffuser Films 3635-30 and 3635-70**

These are durable, dimensionally stable translucent films which are designed to provide light diffusion on internally illuminated signs; may be thermoformed

3635-30	White, 30% light transmission
3635-70	White, 60% light transmission

- Day/Night Film 3635-91**

This durable, dimensionally stable film is used to produce the appearance of dark graphics during the day, and white coloured graphics at night on internally illuminated signs (e.g. if the film is applied on a white substrate).

Commercial Graphics Division products are not tested against automotive manufacturers' specifications and are therefore not warranted for use in fabricating graphics for automotive OEM's.

**Note:**

Series 3635-30/-70 are not intended nor warranted for application to the first (front) surface of sign faces unless this film is completely covered by another layer of 3M™ Scotchcal™ 3630 Film.

### Effective Exterior Performance Life

When processed in accordance with 3M recommended procedures and exposed vertically, the following performance may be expected. Performance estimates are based upon field experience and exposure tests conducted throughout Europe.

Only Blockout Film 3635-20 is warranted for printing.

## Warranties (Years)

Application	Zone	With 3640/3642		
		1	2	3
3635-20/-22	V	10	7	5
	H	-	-	-
3635-30/-70 (Vertical Exposure Only)	V	10	7	5
	H	-	-	-
3635-91	V	9	6	4
	H	-	-	-
<b>Blockout Film 3635-20. Printed with ink series:</b>		<b>Ink Clear:</b>		
1900 Series. Line inks		5	4	3
9700 Series UV Inks		7	5	3

**Zones:** 1: Northern & Central Europe. 2: Mediterranean Europe. 3: Middle East & Northern Africa.

**V** - Vertical or within 10° of vertical exposure.

**H** - Horizontal, or more than 10° of vertical exposure.

The film's warranted period will vary, depending on which substrate the film is applied to. This matrix indicates the films intended use. For other applications, contact your local 3M sales representative.

## Fabrication

### Premasking / Prespacing

Conditions	3M Application Tapes
<b>Unprocessed</b>	
General Premasking	SCPS-100
General Prespacing	SCPS-2
<b>Processed: (3635-20 only)</b>	
<b>Series 1900 Inks</b>	
General Premasking	SCPS-100
General Prespacing	SCPS-100
<b>9700 Series UV ink</b>	
General Premasking	SCPM-44X
General Prespacing	SCPS-2

## 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

## Physical Properties

Property	Metric Units
Thickness	0.08mm - 0.10mm
Tensile Strength	0.9kg/cm min. at 23°C
Elongation (ISO 1184-1983)	
Series 3635-20/-22	50% at 23°C
Series 3635-30/-70	100% at 23°C
Dimensional Stability	0.4mm
Reverse Impact Resistance	No effect
Temperature Range	
Series 3635-20/-22/-30/-70/-91	-29°C to +80°C
Light Transmission	3635-20 less than 1% 3635-22 less than 1% 3635-30 30% 3635-70 60% 3635-91 47%
Adhesive	Transparent Pressure Sensitive
Application Temperature Range*	16°C – 38°C
Liner	78lb White Kraft Paper
Adhesion to Acrylic Panels	0.7kg/cm

\*For applications nearing the minimum temperature range, please contact your local technical service representative to confirm suitability of application

## Chemical Resistance

Chemical Agent	Exposure Time	Results
Water at 32°C	24 hours	No effect
50/50 Ethylene Glycol / Water Reference Fuel	24 hours	No effect
85% Mineral Spirits / 15% Xylol	1 hour	No effect
SAE 20 Motor Oil	24 hours	No effect
JP-4 Fuel	1 hour	No effect
10% Hydrochloric Acid	10 mins	No effect
10% Ammonium Hydroxide	10 mins	No effect
VM&P Naphtha	10 mins	No effect
Mineral Spirits	10 mins	No effect
Methyl Alcohol	10 mins	No effect

## Shelf Life

The shelf life of the film is 3 years from the date of manufacture on the original box. If you do process the film, do so within 2 years and apply within 1 year. If you do not process the film apply within 3 years.

## Storage

Film, sheeting and markings must be stored in a clean area, free from excessive moisture and direct sunlight, with ambient temperatures of 4°C to 38°C in original container.

## Related 3M Literature

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

Subject	Bulletins	
	Product	Instruction
Design of Markings		2.1
Scotchcal™ Series 1900 Inks	1900	3.11, 3.12
Scotchcal™ Series 9700 UV Inks	9700	3.4
Scoring and Cutting		4.1
Premasking and Prespacing		4.3
Surface Preparation		5.1,
Application		5.5, 5.7
Storage, Maintenance and Removal		6.5
Scotchcal™ Translucent Films	3630	

## Health & Safety

Refer to the package label and the Material Safety Data Sheet for health, safety, and handling information on the products referenced in this bulletin. For 3M products, if necessary, you may contact our Toxicology/Product Responsibility Department on 01344 858000.

## Important Notice to Purchaser

The 3M products described in this publication are covered by a 3M warranty and limitation of liability.

3M's warranty provides that if 3M finds that goods are defective in material or workmanship they will be replaced or the price refunded at 3M's option but note that 3M does not accept liability for other direct losses (except for personal injury or death) or consequential losses relating to defective products or from information supplied by 3M.

Purchasers and users of 3M products, and not 3M supplying companies, are always solely responsible for deciding on the suitability of the 3M product for their required or intended use.

## Technical Assistance

For help on specific questions relating to 3M Commercial Graphics Division Products, contact your local Technical Service Representative.

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