



3M™ Scotchcal™ Translucent Graphic Film Series 2330

Product Bulletin

Product Description

3M™ Scotchcal™ Translucent Graphic Film Series 2330 is a medium term calandered translucent vinyl film, suitable for external and internal use.

Advantages

- Affordable solution for internally illuminated signs as well as window graphics
- Stabilised calandered vinyl films
- Uniform colour in both reflected and transmitted light
- Low surface gloss to eliminate glare

Application and End Uses

Scotchcal Translucent Graphic Film Series 2330 is intended only for use with the listed compatible products and the following applications. Any other application is NOT warranted by 3M or covered by the worldwide 3M™ MCS™ (Matched Component System) Warranty unless 3M gives prior its written approval for the application.

- Exterior/interior markings requiring short to medium term durability
- Application to flat acrylic, polycarbonate, fiberglass and glass.
- Can be applied to either the interior or exterior surface of the transparent substrates listed below.

Limitations of End Uses

The following uses and applications are specifically NOT warranted.

- Application to other than flat surfaces
- Exposure to petroleum products or solvents
- Thermoforming of Scotchcal translucent graphic film series 2330, when applied to thermoformable plastics

Compatible Products

- Selected 3M Premasking and Prespacing Tapes

Product Line

(3M™ Scotchcal™ Translucent Graphic Film Series 2330)

Product	Colour	Product	Colour
2330-10	White	2330-84	Azure Blue
2330-12	Black *	2330-86	Vivid Blue
2330-14	Grey	2330-88	Deep Blue
2330-93	Grey White	2330-87	Cobalt Blue
2330-22	Canary Yellow	2330-89	Royal Blue
2330-24	Yellow	2330-90	Sapphire Blue
2330-26	Golden Yellow	2330-79	Bright Teal
2330-32	Orange	2330-72	Light Green
2330-445	Light Red	2330-745	Bright Green
2330-465	Red	2330-76	Dark Green
2330-48	Cherry Red	2330-74	Vivid Green
2330-49	Burgundy	2330-78	Forest Green
2330-45	Pink Red	2330-96	Camel
2330-61	Pastel Pink	2330-92	Brown
2330-64	Dark Pink	2330-58	Aluminium
2330-66	Violet	2330-545	Gold
2330-63	Magenta		

* This film is opaque, not translucent

Main Characteristics

Film Type	Calandered
Film Opacity	Translucent
Adhesive Type	Clear, permanent, pressure sensitive
Film thickness, including adhesive	0.08mm (80 micron) 0.1mm (100 micron)
Liner	Kraft paper 137g/m ²
Suitable application substrate	Glass, Polycarbonate, Acrylic, Panaflex, Panagraphics
Application Temperature*	>+10°C
Removal	Removable with heat

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

Chemical & Physical Properties

Dimensional stability	<0.3mm (300 micron)
Temperature range after application	-40°C - +90°C
Tensile strength	md >18N/mm ² cd >18N/mm ²
Chemical Resistance	Resists mild acids, Alkalis and salts. Excellent water resistance

Peel adhesion

Substrate	Units N/25mm
Glass	> 18
Acrylic	> 16

Effective Performance Life

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

Warranty Zones/Years		Zone		
Unprinted 3M™ Scotchcal™ Translucent Graphic Film Series 2330 Film**		1	2	3
2330	Durability	7	5	3
Black & White	MCS™ Warranty	5	4	3
2330	Durability	5	4	3
Colours	MCS™ Warranty	5	4	3

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

The above durability and 3M™ MCS™ Warranties are applicable only for vertical or within 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

Vacuum Forming

These films cannot be vacuum formed.

Cutting

Individual pieces can be hand cut, die-cut, "kiss" cut or cut with most computer driven cutting devices. Multiple pieces can be cut using various techniques, such as guillotine cutting and die cutting.

Overlapping

When it is necessary to join pieces of film or when making multiple colour graphics it is recommended to overlap the film by about 3mm. For best appearance, dark colours should overlap lighter colours.

Application

These films may be applied using either the detergent and water or dry application methods (hand application or roll applicator). For hand applications, the detergent and water application method is preferred. Use of dry application by hand may leave some dark streaks or bubbles that could be visible in transmitted light.

Premasking / Prespacing

Conditions	3M Application Tapes
Unprocessed	
General Premasking	SCPM-19
General Prespacing	SCPS-100

Shelf Life

Follow these guidelines to store and ship this film and the processed graphics.

- The shelf life of the film is 1 year and should be applied within 1 year of the receipt of film if unprocessed. Processed film should be applied within 6 months of processing and within 1 year of receipt of the film.

- Store the film in a clean, dry area out of the direct sunlight and at less than 35°C.

Product Data

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.

Property	Metric Units
Thickness of film Including adhesive	0.08mm 0.1mm
Temperature Range	-30°C to +60°C
Adhesive	Clear Pressure Sensitive
Minimum Application Temperature	16°C

Chemical Resistances Characteristics

- Resists mild acids, alkalis, and salts
- Excellent water resistance

3M Related Literature

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

Subject	Bulletin No.
Instruction Bulletins	
Design of Graphics	2.1
Premasking and Prespacing	4.3
Surface Preparation (Non-vehicular)	5.1
Application to Flat rigid signs	5.7
Flat glass	5.8
Panaflex	5.9
Storage, Handling and Maintenance	6.5
Warranty of Products AS&G	

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.

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