

Product Description

- Vinyl translucent film for Screen Printing, Cut Graphics and Thermoforming
- Designed for fluorescent or LED lighting applications
- Expected Performance Life (unwarranted period for unprinted film with no graphic protection, applied to a flat, vertical outdoor surface under Northern European climate conditions):
 - White/Black 10 years
 - All Colors 10 years
 - Metallic 5 years

Note: This document uses hyperlinks. Please follow the links for additional information.

Recommended types of graphic and use

- Indoor and outdoor use on internally-illuminated sign faces
- First and second surface application on rigid substrates
- First surface application only on 3M™ flexible substrates
- Thermoforming on rigid plastic substrates
- For LED back-lit applications 3M recommends 3M™ Envision™ Translucent Film Series 3730, IJ3730-50 and IJ3730-60

Surface types

Flat

Product Line

Product name	Description
3M™ Scotchcal™ Graphic Film 3630-X	X = color code, translucent film with a semi-matte finish. Wide selection of colors. Special colors available on request.
3M™ Scotchcal™ Graphic Film IJ3630-20	white, translucent film with a semi-matte finish
3M™ Scotchcal™ Graphic Film IJ3630LED-20	white, translucent film with a semi-matte finish

Recommended Compatible Products

[Follow the link for further information about selection and use of compatible protective overlaminates and printable clears.](#)

[See instruction bulletin 'AT-1' for information about selection and use of suitable application tapes for this product, please.](#)

Physical Properties

The values displayed are the results of illustrative lab test measurements made according to the indicated external norm and shall not be considered as a commitment from 3M.

Characteristic	Value
Material	Cast vinyl
Thickness	Film without adhesive: 0.05 ± 0.005 mm
ISO 534	Film with adhesive: 0.08 – 0.1 ± 0.005 mm
Adhesive	Acrylic, pressure-sensitive
Adhesive appearance	Clear
Indicative values FTM 1, 24 h 23°C/50%RH	Acrylic and uncoated, clear polycarbonate 15 ± 2 N/25 mm
Applied shrinkage FTM 14	0.3 mm
Liner	Transparent synthetic Inkjet print products: back-sided polyethylene coated paper
Application method	Wet or dry
Substrate types	glass, PMMA, PC*, PETG*, flexible sign making substrates The application of film onto glass can cause glass break by uneven heat absorption through sun exposure. 3M does not accept liability for glass breakage. * Polycarbonate substrates may require oven drying before use due to outgassing of moisture from the polycarbonate causing the film to bubble. Refer to the manufacturers' instructions.
Application temperature	+16°C Flat
Temperature range after application	-44 to +77°C (not for extended periods of time at the extremes)
Chemical Resistance	<ul style="list-style-type: none"> Resists mild alkalis, mild acids, and salt Excellent resistance to water (does not include immersion)
Flammability	Flammability standards are different from country to country. Ask your local 3M contact for details, please. Follow the link to check for available fire certificates.

Warranty Information

3M Basic Product Warranty

3M Graphics Products are warranted to be free of defects in materials and manufacture at the time of shipment and to meet the specifications stated in its applicable 3M Graphics Product Bulletin and as further set forth in the 3M Graphics Warranties Bulletin.

3M™ Performance Guarantee and MCS™ Warranty

3M provides a guarantee/warranty on a finished applied graphic within the framework of 3M™ Performance Guarantee and/or 3M™ MCS™ warranty programs.

[Follow the link for a complete list of compatible products that are approved by 3M for use with the base film covered in this Bulletin and used for the creation of a graphic that may be eligible for the 3M™ MCS™ Warranty or 3M Performance Guarantee.](#)

Limited Remedy

Unsuitable End Uses

3M recommended product end uses are listed in each 3M graphics product bulletin. End uses not listed in the applicable 3M Graphics Product Bulletins are typically not eligible for 3M Graphics Warranties. For non-recommended and/or non-warranted end uses or applications, users must test and approve the end uses or applications, assume any associated risks, and acknowledge that 3M has no liability for such end uses or applications. Please contact your 3M representative with any questions about graphic applications, end uses, and warranties.

Limitations of liability

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.

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

Graphic Manufacturing

Matching

Whenever two or more pieces of the same translucent graphic film are seamed together as a continuous band of colored graphic film, they should be matched to assure uniform daytime and night appearance.

Material from a single roll or lot must be used on a single graphic or sign for identical matching.

In general, translucent graphic film from a roll must be matched as shown in FIGURE 1. The dark line represents one edge of the film.

The matching edges are always swung to meet each other. Panels 1 and 2 are a matched set. Pieces 1, 2 and 3 are matched, etc. By following this method you can match as many sheets from a roll as are required for any size sign.

Exact match between different run numbers should not be assumed.

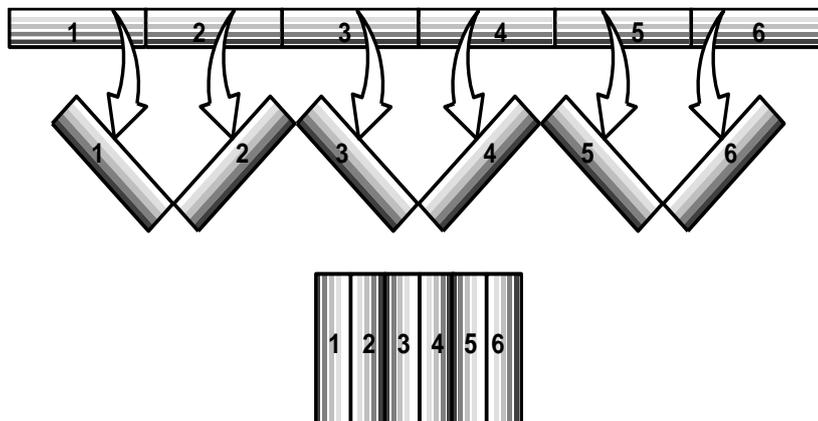
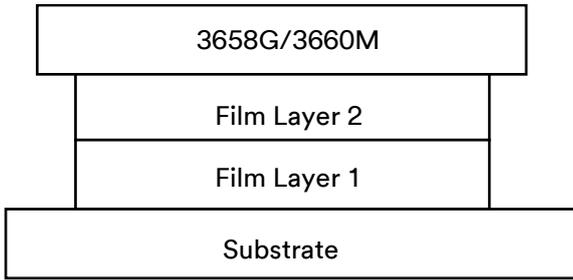
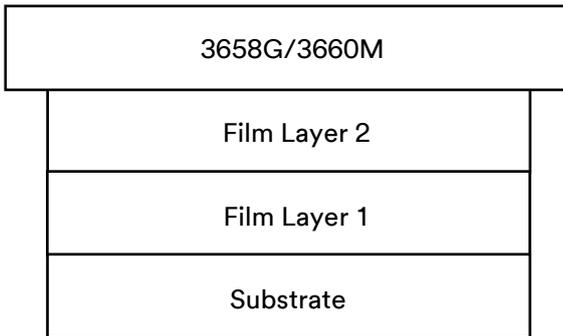


FIGURE 1

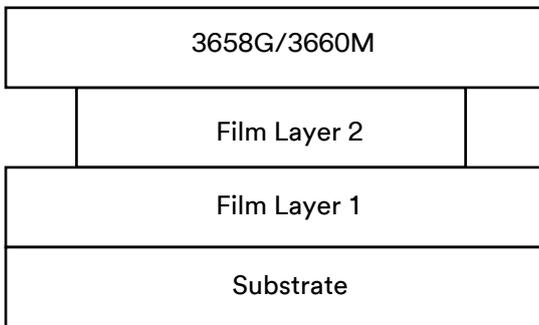
Note: A third layer of film is warranted only if the top layer is 3M™ Scotchcal™ Gloss Overlaminate 3658G/3660M. In addition, just two of the three layers should be aligned to the edge of the substrate (FIGURE 2).



Extend protective laminate minimum 25 mm beyond edges of film layers.



Extend protective laminate minimum 25mm beyond edges of film layers and wrap it around the back of substrate.



Align protective layer to the edge of the substrate and cut one of the two film layers minimum 25 mm smaller.

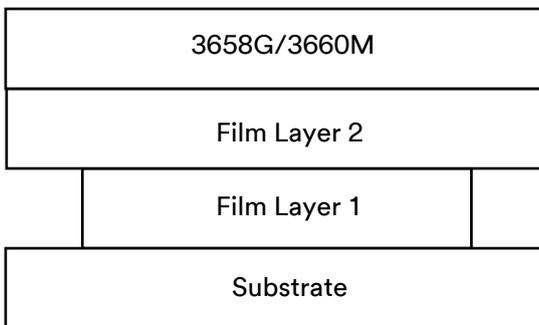


FIGURE 2

Inkjet printing

A too high total physical ink amount on the film results in media characteristic changes, inadequate drying, overlamine lifting, and/or poor graphic performance. The maximum recommended total ink coverage for this film is 270%.

See the individual ink bulletins for details, please.

IMPORTANT NOTE: Incomplete drying or curing can result in graphic failure including curling, increased shrinkage and adhesion failure, which are not covered under any 3M Graphic Warranty.

[Special Instructions for HP Latex 831/891.](#)

Screen printing

Formulations and processing conditions can affect ink durability. Refer to the 3M Product and Instruction Bulletins for your ink for limitations and proper usage. Graphic protection can improve the appearance, performance and durability of your graphic.

Whether you apply screen print clears with traditional screening methods or roller coating, use equipment designed to handle high viscosity materials and make sure the coating is evenly applied to the specifications in the clear's 3M Instruction Bulletin.

See the individual ink bulletins for details, please.

Thermoforming

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

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

[See 3M Instruction Bulletin 5.16 for general information about Thermoforming.](#)

Sheeting, Scoring and Film Cutting

[See 3M Instruction Bulletin 4.1 for Sheeting, Scoring and Film Cutting details.](#)

Application and Installation

In addition to other 3M Bulletins specified in this document, the following Bulletins provide details that you may need to successfully apply a graphic.

[See 3M Instruction Bulletin 4.22 to obtain general information about ink drying and lamination of printed graphics.](#)

[See 3M Instruction Bulletin 5.5 for general procedures for interior and exterior dry application.](#)

Maintenance, Cleaning and Removal

Use a cleaner designed for high-quality painted surfaces. The cleaner must be wet, non-abrasive, without solvents, and have a pH value between 3 and 11 (neither strongly acidic nor strongly alkaline).

These films can be removed with the aid of heat and/or chemicals.

[See 3M Instruction Bulletin 6.5 for information about storage, handling, maintenance and removal of films and sheetings.](#)

Graphic Repair

Once the graphic has been exposed to outdoor weathering, it is not possible to repair the graphic to the original state. Repair is possible if color and/or gloss is not relevant. Sometimes graphic damage can be repaired, but visible differences will most likely occur. However, repaired graphics are not warranted. These procedures are for information only.

Shelf Life, Storage and Shipping

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

The shelf life is never more than 3 years from the date of manufacture on the original box. If you process the film, the shelf life is changed to 1 year from the processing date, but not later than the 3-year maximum from the manufacturing date.

Storage conditions: +4°C to +40°C, out of sunlight, original container in clean and dry area.

Shipping finished graphics: Flat or rolled printed side out on 6 inch (15 cm) or larger core.

Health and Safety

When handling any chemical products, read the manufacturer's container labels and the Safety Data Sheets (SDS) for important health, safety and environmental information.

[Follow the link to obtain SDS sheets for 3M products on 3M.com/SDS.](https://www.3m.com/SDS)

[Follow the link to obtain information about substances of very high concern \(SVHC\).](#)

IMPORTANT! When using any equipment, always follow the manufacturer's instructions for safe operation.

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