



3M™ Scotchcal™ Overlaminates 4156 and 4157

1. Product Description	<ul style="list-style-type: none">• Clear PVC film with transparent adhesive suitable for graphic protection against ultraviolet rays.• Stain resistant for easy maintenance.• Suitable for use on flat or simple curve surfaces.• 4156 Gloss Overlaminates• 4157 Matte Overlaminates• Expected performance life of 3 years
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2. Recommended Types of Graphics and End Uses	<ul style="list-style-type: none">• Overlaminates for intermediate graphics• Transit• Labels• Smooth Walls• Windows and Glass
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3. Characteristics
These are typical values for unprocessed product; processing may change the values. Contact your 3M representative for a custom specification.

A. Physical Characteristics	Graphic Film	Film Color	Finish
	4156	Clear	Gloss
	4157	Clear	Matte

Characteristic	Value
Material	Vinyl
Dimensions	1.27m x 50m 1.37m x 50m 1.52m x 50m
Film Thickness	110µm
Weight (typical value)	126 g/m ²
Adhesive type	Pressure sensitive Acrylic solvent-based,
Liner	Silicone coated paper liner
Application Temperature	>15°C
Chemical Resistance	Resists mild alkalis, mild acids and salts Excellent resistance to water (does not include immersion) Resists occasional fuel spills

4. Warranted Information
A. 3M Basic Product
Warranty

All 3M graphic protection products are covered by the 3M Basic Product Warranty.

A warranty period may be offered based on the graphic construction and application details. Always refer to the 3M Product Bulletin for the 3M base film or flexible substrate you are using to determine if the graphic protection product you want to use is recommended and what, if any warranty period is offered. Warranty information including limitations and exceptions and warranty periods for this product can be found at 3MGraphics.com/warranties.

Warranty Coverage Overview

The warranty coverage for eligible graphics is based on the user both reading and following all applicable and current 3M Graphics Product and Instruction Bulletins. The warranty period for eligible graphics is as stated in the 3M Graphics Warranties Matrices at the time that the film was purchased. Information found at 3MGraphics.com/warranties includes:

- [3M Graphics Warranties Bulletin](#)

This bulletin contains information on limitations and exceptions, and warranty period reductions for 3M Graphics Warranties. The warranty period may be reduced and stipulations may apply for certain constructions, applications, and graphic exposures as covered in this Bulletin.

- [3M Graphics Warranties Selector](#)

- Use this selector to search for your vertical warranty period by product type, ink type, film name, and/or ink/printer platform.

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](#).

Limited Remedy

The limited remedy applicable to each warranty is addressed in the 3M Graphics Warranties Bulletin found at 3MGraphics.com/warranties.

Limitation of Liability

Except to the extent prohibited by law, 3M SHALL NOT UNDER ANY CIRCUMSTANCES BE LIABLE TO PURCHASER OR USER FOR ANY DIRECT (EXCEPT FOR THE LIMITED REMEDY PROVIDED HEREIN), INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, LABOR, NON-3M MATERIAL CHARGES, LOSS OF PROFITS, REVENUE, BUSINESS, OPPORTUNITY, OR GOODWILL) RESULTING FROM OR IN ANY WAY RELATED TO 3M'S GRAPHICS PRODUCTS, SERVICES, OR THIS BULLETIN.



This limitation of liability applies regardless of the legal or equitable theory under which such losses or damages are sought.


Warranty Period Matrices

See the 3M Graphics Warranties Matrices at 3MGraphics.com/warranties, for vertical warranty period information specific to your film.

Additional Limitations

See the 3M Graphics Warranties Bulletin at 3MGraphics.com/warranties, for terms, additional limitations of your warranty, if any, information on reduced warranties for different exposures, and limitations of liability.

5. Factors that Affect Graphic Performance Life	
A. Factors	<p>The actual performance life of a graphic is affected by:</p> <ul style="list-style-type: none"> • the combinations of graphics materials used. • complete ink drying or curing. • selection, condition and preparation of the substrate. • surface texture. • application methods. • angle and direction of sun exposure. • environmental conditions. • cleaning or maintenance methods.
6. Fabrication	
<p>Caution</p> 	<p>Before using any equipment, always read the manufacturer's instructions for safe operation.</p> <p>Completely Dry Graphics</p> <p> IMPORTANT NOTE</p> <p>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. See the ink's 3M Product and Instruction Bulletin for more details.</p> <p>Graphic Protection</p> <p>Graphic protection may improve the appearance, performance and durability of the graphic. See the 3M Graphics Market Product Catalog, for more information.</p> <p>Application Tapes</p> <p>There are two types of application tapes. See 3M Instruction Bulletin AT-1 to determine what application tape is recommended for your film or finished graphic.</p> <p>Premasking Tape</p> <p>Increases stiffness during application while preventing stretching and damage. Use when little or no liner is exposed. See 3M Instruction Bulletin 4.3 for complete details.</p> <p>Prespacing Tape</p> <p>Holds cut and weeded letters or graphics in place during application and after removing the film liner, while preventing stretching and damage. Use when large amounts of liner are exposed. See 3M Instruction Bulletin 4.3 for complete details.</p> <p>Application and Installation</p> <p>In addition to other 3M Bulletins specified in this document, the following Bulletins provide details that you may need to successfully apply a graphic.</p> <ul style="list-style-type: none"> • 3M Instruction Bulletin 4.22 Lamination Basics for Inkjet Printed Graphics <p>Maintenance and Cleaning</p> <p>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). See 3M Instruction Bulletin 6.5 for details.</p>

7. Shelf Life, Storage and Shipping	Activity	Recommendations													
	Shelf life	Total shelf life: Apply within 6 months of processing, not to exceed 1 year total shelf life processed and unprocessed.													
	Storage conditions	Storage Conditions <ul style="list-style-type: none"> • 4 to 30 °C (40 - 86 °F) • Out of sunlight • Clean, dry area • Original container • Bring the film to room temperature before use 													
Shipping finished graphics	Flat, or rolled printed side out on 6 inch (15 cm) or larger core. This helps prevent the application tape, if used, from popping off.														
8. Health and Safety  CAUTION	When handling any chemical products, read the manufacturers' container labels and the Material Safety Data Sheets (MSDS) for important health, safety and environmental information. To obtain MSDS sheets for 3M products go to 3M.com/MSDS , or by mail or in case of an emergency, call 1-800-364-3577 or 1-651-737-6501. When using any equipment, always follow the manufacturers' instructions for safe operation.														
9. 3M Related Literature	<p>Before starting any job, be sure you have the most current Product and Instruction Bulletins.</p> <p>The information in 3M Product and Instruction Bulletins is subject to change. Current Bulletins are available at 3Mgraphics.com/apac. The following applicable Bulletins provide information and processes you need to properly make the graphics described in this Bulletin. Additional Bulletins may be needed as indicated in the 3M Related Literature section of other 3M components you use.</p> <table border="1"> <thead> <tr> <th>Subject</th> <th>Type</th> <th>Bulletin No.</th> </tr> </thead> <tbody> <tr> <td colspan="3">Bulletin types: PB = Product Bulletin; IB = Instruction Bulletin</td> </tr> <tr> <td>Application, substrate selection, preparation and substrate-specific application techniques</td> <td>IB</td> <td>5.1</td> </tr> <tr> <td>Storage, handling, maintenance, removal</td> <td>IB</td> <td>6.5</td> </tr> </tbody> </table> <p>3M Commercial Graphics Warranty Brochure go to www.3Mgraphics.com/apac <i>3M and Scotchcal are trademarks of 3M.</i></p>			Subject	Type	Bulletin No.	Bulletin types: PB = Product Bulletin; IB = Instruction Bulletin			Application, substrate selection, preparation and substrate-specific application techniques	IB	5.1	Storage, handling, maintenance, removal	IB	6.5
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10. Bulletin Change Summary	New dimensions														

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