



Outdoor UL Recognized Polyester Overlaminated Label Products

OFM0101 • OFM010N • OFM0102 • OFM0103
OFM0109 • OFM0202 • OFM0202N-60

Technical Data

January, 2008

Product Description 3M™ Outdoor UL Recognized Polyester Overlaminated Label Products are durable high performance clear materials that offer excellent thermal stability, abrasion and moisture resistance. These polyester labels utilize 3M™ Adhesive P1400 which is a high performance tackified acrylic designed for use in demanding environments.

Construction	Product Number	Facestock	Adhesive	Liner
	3M™ Outdoor UL Recognized Polyester Overlaminated Label Product OFM0101	.001 in. Clear Polyester NTC	P1400 Perm. 16	40# SC 2.4 mil semi-bleached super calendered kraft sheet
	3M™ Outdoor UL Recognized Polyester Overlaminated Label Product OFM010N	.001 in. Clear Polyester NTC	P1400 Perm. 16	.001 in. Clear Polyester Liner
	3M™ Outdoor UL Recognized Polyester Overlaminated Label Product OFM0102	.001 in. Clear Polyester NTC	P1400 Perm. 16	50# SC Remoist 3.1 mil semi-bleached super calendered kraft sheet
	3M™ Outdoor UL Recognized Polyester Overlaminated Label Product OFM0103	.001 in. Clear Polyester NTC	P1400 Perm. 16	78# White CCK 4.6 mil bleached clay coated kraft sheet
	3M™ Outdoor UL Recognized Polyester Overlaminated Label Product OFM0109	.001 in. Clear Polyester NTC	P1400 Perm. 16	.0015 in. Clear Polyester Liner
	3M™ Outdoor UL Recognized Polyester Overlaminated Label Product OFM0202	.002 in. Clear Polyester NTC	P1400 Perm. 18	50# SC Remoist 3.1 mil semi-bleached super calendered kraft sheet
	3M™ Outdoor UL Recognized Polyester Overlaminated Label Product OFM0202N-60	.002 in. Clear Polyester NTC	P1400 Perm. 18	.001 Clear Polyester Liner

(Calipers are nominal values)

Note: For all clear film face and clear film liner material combinations, a slight appearance variation may be observed along the roll edge. This effect is due to the facestock's haze tolerance and is further magnified by the clear film liner and multiple wraps of clear films. This variation is not associated with a color shift of the facestock and does **NOT** negatively affect the labelstock's clarity in the final overlamination application.

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Features

- Adhesive dry ingredients are listed by FDA as indirect food contact additives when used in food packaging with minimum opportunity for exposure. See 21 CFR 175.105.
- UL recognized for indoor/outdoor use UL files MH11410 and MH16411.
- Adhesive offers good UV resistance and excellent adhesion to a wide variety of substrates, including polyolefins.
- Liner for 3M™ Outdoor UL Recognized Polyester Overlamine Label Product OFM0101 is designed for high-speed die cutting and matrix stripping. Not recommended for sheet on press applications.
- Liner for 3M™ Outdoor UL Recognized Polyester Overlamine Label Products OFM0101N, OFM0109 and OFM0202N-60 offers exceptional adhesive smoothness and clarity for superior adhesive "wet out".
- Liner for 3M™ Outdoor UL Recognized Polyester Overlamine Label Products OFM0102 and OFM0202 is designed for high-speed die cutting and matrix stripping. This liner has been remoisturized after silicone coating to restabilize the sheet and reduce side curl, an excellent choice for perforation and fanfold applications.
- Liner for 3M™ Outdoor UL Recognized Polyester Overlamine Label Product OFM0103 is excellent for sheet on press applications where additional strength and stiffness is required. The backside of this sheet is printable.
- Meets EU RoHS Directive (e.g.) means that the product or part does not contain any of the following substances in excess of the following maximum concentration values in any homogeneous material, unless the substance is in an application that is exempt under RoHS: (a) 0.1% (by weight) for lead, mercury, hexavalent chromium polybrominated biphenyls or polybrominated diphenyl ethers; or (b) 0.01% (by weight) for cadmium. Unless otherwise stated by 3M in writing, this information represents 3M's knowledge and belief based on information provided by third party suppliers to 3M.

Application Ideas

- Overlamine for durable goods, power tools, equipment and machinery, lawn and garden.

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Typical Physical Properties

Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

Adhesion properties determined per TLMI Method using 1.0 mil polyester with 1.0 mil of adhesive on a polished stainless steel panel.

Peel Adhesion	2.2 lbs./in. (528 N/m)	TLMI Method, 180° Peel, 12"/min., 1" wide sample
Loop Tack	1.8 lbs./in. (316 N/m)	TLMI Method, 12"/min., 1" wide sample
Adhesive Coat Weight 3M™ Outdoor UL Recognized Polyester Overlamine Label Products OFM0101, OFM010N, OFM0102, OFM0103, OFM0109	1.40 to 1.71 g/100 in. ²	TM-2279
	3M™ Outdoor UL Recognized Polyester Overlamine Label Products OFM0202, OFM0202N-60	1.67 to 1.89 g/100 in. ²
Shear	4 hours	TLMI Method, 0.25 in. ² x 500g
Release Range 3M label products OFM010N, OFM0109, OFM0202N-60 3M label products OFM0101, OFM0102 3M label product OFM0103 3M label product OFM0202	10 to 30 g/2 in.	TLMI Method, 180° removal, 300 in./min.
	5 to 25 g/2 in.	TLMI Method, 180° removal, 300 in./min.
	30 to 100 g/2 in.	TLMI Method, 180° removal, 300 in./min.
	5 to 25 g/2 in.	TLMI Method, 180° removal, 300 in./min.
Service Temperature	-20°F to 257°F (-29°C to 125°C)	
Application Temperature	40°F to 120°F (5°C to 49°C)	
Convertability	3M™ Outdoor Acrylic Adhesive P1400 is specifically designed to be compatible with a variety of print methods and end use applications. Adhesive processing issues are not anticipated when proper roll tensions, handling and storage conditions are used. Please refer to the die cutting/converting section of this data page or the "Guide to Converting and Handling Label Products" technical bulletin for additional information.	

Application Techniques

For maximum bond strength, surface should be clean and dry. A typical cleaning solvent is heptane or isopropyl alcohol. **Note:** Consult the manufacturer's MSDS for proper handling and storage of solvents. For best conditions, application surface should be at room temperature or higher. Low temperature surfaces (below 10°F [-12°C]) can cause the adhesive to become so firm that it will not develop contact with the substrate. Higher initial bonds are achieved through increased rub down pressure.

Printing

This film is not treated for printability.

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Storage Store at room temperature conditions of 72°F (22°C) and 50% relative humidity. All unconverted and converted label materials should be stored in polyethylene protections to minimize the effects of humidity penetration.

Shelf Life If stored under proper conditions, product retains its performance and properties for two years from date of manufacture.

Product Use All statements, technical information and recommendations contained in this document are based upon tests or experience that 3M believes are reliable. However, many factors beyond 3M's control can affect the use and performance of a 3M product in a particular application, including the conditions under which the product is used and the time and environmental conditions in which the product is expected to perform. Since these factors are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for the user's method of application.

Warranty and Limited Remedy Unless stated otherwise in 3M's product literature, packaging inserts or product packaging for individual products, 3M warrants that each 3M product meets the applicable specifications at the time 3M ships the product. Individual products may have additional or different warranties as stated on product literature, package inserts or product packages. 3M MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY IMPLIED WARRANTY ARISING OUT OF A COURSE OF DEALING, CUSTOM OR USAGE OF TRADE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's application. If the 3M product is defective within the warranty period, your exclusive remedy and 3M's and seller's sole obligation will be, at 3M's option, to replace the product or refund the purchase price.

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