



Polyester Overlaminating Films

7730FL • 7731FL • 7732FL • 7743FL • 7741 • 7742

Technical Data

August, 2013

Product Description

3M™ Polyester Overlaminating Films utilize a clear or matte polyester film that is recommended for optimum durability and outdoor UV exposure. 3M™ Adhesive 400 offers excellent low temperature performance and long term aging for resistance to yellowing in outdoor applications.

Construction

Product Number	Facestock	Adhesive	Liner
3M™ Polyester Overlaminating Film 7730FL	.001 in. Clear Polyester (25 micron)	#400 Acrylic 0.8 mil (20 micron)	.0015 in. Clear Polyester Liner (38 micron)
3M™ Polyester Overlaminating Film 7731FL	.002 in. Clear Polyester (50 micron)	#400 Acrylic 0.8 mil (20 micron)	.0015 in. Clear Polyester Liner (38 micron)
3M™ Polyester Overlaminating Film 7732FL	.001 in. Matte Clear Polyester (25 micron)	#400 Acrylic 0.8 mil (20 micron)	.0015 in. Clear Polyester Liner (38 micron)
3M™ Polyester Overlaminating Film 7743FL	.004 in. Clear Polyester (102 micron)	#400 Acrylic 0.8 mil (20 micron)	.0015 in. Clear Polyester Liner (38 micron)
3M™ Polyester Overlaminating Film 7741	.001 in. Clear Polyester (25 micron)	#400 Acrylic 0.8 mil (20 micron)	43# Densified Kraft 2.5 mil (64 micron)
3M™ Polyester Overlaminating Film 7742	.001 in. Matte Clear Polyester (25 micron)	#400 Acrylic 0.8 mil (20 micron)	43# Densified Kraft 2.5 mil (64 micron)

(Calipers are nominal values.)

Features

- These polyester overlaminates are superior abrasion, humidity and solvent resistance materials that offer high-bond strength to resist edge lifting UV exposure resistant for extended periods of time.
- 3M polyester overlaminating films 7730FL, 7731FL, 7732FL and 7743FL film liner versions offer superior graphic appearance for metallized or darker colors. The polyester liner is recommended for clean room applications.
- 3M polyester overlaminating films 7741 and 7742 paper liner versions can be used as a cost savings over the film liner versions where the adhesive wet-out on the liner is not as critical to the finished label appearance.
- UL recognized (File MH11410) for overlamination polyester labelstocks.
- CSA Accepted (File 99316) for overlamination of both polyester and vinyl labelstocks.

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Application Ideas

- Protective overlaminates for label and nameplate graphics can be used on appliances, industrial equipment, tools etc.
- Graphics requiring a high-gloss or matte appearance.

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.

Adhesive Coat Weight	1.05 to 1.65 g/100 in. ²	TM-2279
Release Range 3M™ Films 7741, 7742 3M™ Films 7730FL, 7731FL, 7732FL, 7743FL	8 to 55 g/2 in.	TLMI Method, 180° removal, 300 in./min.
	5 to 55 g/2 in.	TLMI Method, 180° removal, 300 in./min.
Service Temperature	-40°F to 250°F (-40°C to 121°C)	
Minimum Application Temperature	10°F (-12°C)	
Convertability	Low temperature, high clarity 3M™ Acrylic Adhesive 400 is specifically designed to be compatible with a variety of print methods and overlaminate applications. When converting labels for thermal transfer applications, care should be taken with regard to proper roll tensions, handling and storage conditions. 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.	

Typical Peel Adhesion Properties

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Dynamic Peel Adhesion: ASTM D3330, 180° Peel.

Surface	3M™ Polyester Overlaminating Film	Initial (10 Minute Dwell/RT)		Conditioned for 3 Days at Room Temperature 72°F (22°C)	
		oz./in.	N/100 mm	oz./in.	N/100 mm
Stainless Steel	7730FL/32FL/41/42	24	26	40	44
	7731FL	45	49	60	65
	7743FL	31	34	50	55
Polyester	7730FL/32FL/41/42	24	26	34	37
	7731FL	48	52	51	55
	7743FL	50	54	56	61

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Environmental Performance

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

The properties defined are based on four-hour immersions at room temperature (72°F/22°C) unless otherwise noted. Samples were applied to stainless steel 24 hours prior to immersions and were evaluated one hour after removal.

Chemical	3M™ Polyester Overlaminating Film	Appearance
Isopropyl Alcohol	7730FL/31FL/43F/41 7732FL/33FL/42	No Change No Change
Detergent	7730FL/31FL/43F/41 7732FL/33FL/42	No Change No Change
Engine Oil at 250°F (121°C)	7730FL/31FL/43F/41 7732FL/33FL/42	No Change No Change
Water for 48 hours	7730FL/31FL/43F/41 7732FL/33FL/42	Slight Fogging No Change

Temperature Resistance:

300°F (149°C) for 24 hours:

Slight Yellowing

-40°F (-40°C) for 24 hours:

No Change

Humidity Resistance:

24 hours at 100°F (38°C) at 100% relative humidity:

3M polyester overlaminating film 7732FL

Slight Change, Cloudy

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No Change

Application Techniques

For maximum bond strength, the surface should be clean and dry. Typical cleaning solvents are heptane and isopropyl alcohol.*

For best bonding conditions, application surface should be at room temperature or slightly higher. Low temperature surfaces, below 50°F (10°C) can cause the adhesive to become firm and will not allow the adhesive to flow and develop intimate contact with the substrate.

Higher initial bonds are achieved through increased rub down pressure. Use maximum laminating pressure for best results.

***Note:** When using solvents, read and follow the manufacturer's precautions and directions for use.

Printing

Facestocks are not print treated.

Die Cutting/ Converting

Rotary or flat-bed after lamination.

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Storage Store at room temperature conditions of 72°F (22°C) and 50% relative humidity.

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

Technical Information The technical information, recommendations and other statements contained in this document are based upon tests or experience that 3M believes are reliable, but the accuracy or completeness of such information is not guaranteed.

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ISO 9001

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**Industrial Adhesives and Tapes Division
Converter Markets**

1030 Lake Road
Medina, OH 44256-0428
800-422-8116 • 800-258-5711 (fax)
www.3M.com/converter



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