



Polyester Overlaminating Film

7730FL • 7731FL • 7732FL • 7743FL

7741 • 7742

FOD# 0097

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Technical Data

January 1, 1999

Supersedes April 16, 1992

Features

- Premium overlaminate performance for extreme environmental conditions.
- Superior abrasion, humidity and solvent resistance.
- U.V. exposure resistant for extended periods of time.
- Premium clarity films will not impart haze on underlying graphics.
- #400 High-tack Acrylic Adhesive offers premium adhesive performance to a wide variety of surfaces.
- Specifically designed for high-speed, continuous-web rotary press lamination.
- High-bond strength resists edge lifting.
- Film liner offers superior graphic appearance for metalized or darker colors.
- Overlaminating Films are Underwriters' Laboratories Recognized (File MH11410).

Typical Applications

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

Construction

Note: The following technical information should not be used for specification purposes. These are typical values not minimum values. Contact your 3M representative for specification advice.

Facestock:	7730FL	1.0 mil	(25 microns)	Clear Polyester
	7731FL	2.0 mil	(51 microns)	Clear Polyester
	7732FL	1.0 mil	(25 microns)	Matte Clear Polyester
	7733FL	1.0 mil	(25 microns)	Brushed Clear Polyester
	7743FL	4.0 mil	(102 microns)	Clear Polyester
	7741	1.0 mil	(25 microns)	Clear Polyester
	7742	1.0 mil	(25 microns)	Matte Clear Polyester
Adhesive:		0.8 mil	(20 microns)	#400 High-tack Acrylic
Liner:	"FL"	1.5 mil	(38 microns)	Clear Polyester
	7741/7742	2.5 mil	(63 microns)	43 lb. Densified Kraft Paper

Performance Characteristics

Note: The following technical information should not be used for specification purposes. These are typical values not minimum values. Contact your 3M representative for specification advice.

Dynamic Peel Adhesion: ASTM 3330, 180° Peel

<u>Surface</u>	<u>Product</u>	Initial (10 Minutes dwell)	
		<u>oz./in.</u>	<u>N/100 mm</u>
Stainless Steel	7730FL/32FL/41/42	24	26
	7731FL	45	49
	7743FL	31	34
Polyester	7730FL/32FL/41/42	24	26
	7731FL	48	52
	7743FL	50	54

<u>Surface</u>	<u>Product</u>	Conditioned for 3 days at room temperature	
		<u>oz./in.</u>	<u>N/100 mm</u>
Stainless Steel	7730FL/32FL/41/42	40	44
	7731FL	60	65
	7743FL	50	55
Polyester	7730FL/32FL/41/42	34	37
	7731FL	51	55
	7743FL	56	61

Liner Release: 180° Liner Removal

<u>Rate of Removal</u>	<u>Product</u>	<u>Gram/Inch Width</u>
90 inches/minute	“FL”	11
	7741/42	14
300 inches/minute	“FL”	12
	7741/42	16

Environmental Performance

The properties defined are based on four-hour immersions at room temperature, unless otherwise noted. Samples were applied to stainless steel 24 hours prior to immersions and were evaluated one hour after removal.

Environmental Performance (continued)	Chemical	Product	Appearance
	Isopropyl Alcohol	7730FL/31FL/43FL/41 7732FL/33FL/42	No Change No Change
	Detergent	7730FL/31FL/43FL/41 7732FL/33FL/42`	No Change No Change
	Engine Oil at 250°F (121°C)	7730FL/31FL/43FL/41 7732FL/33FL/42	No Change No Change
	Water for 48 hours	7730FL/31FL/43FL/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 noted.	
	Humidity Resistance:	24 hours at 100°F (38°C) at 100% relative humidity: 7732FL – Slight change, cloudy. 7730FL/31FL/33FL/41/42 – No change	

Shelf Life Product retains its performance and properties for two years from date of manufacture if properly stored at room temperature conditions of 72°F (23°C) and 50% relative humidity.

- Processing**
- **Printing –**
 Facestocks are not print treated. Liner backside has anti-block coating which makes it difficult to achieve good ink anchorage when printing on back of the liner. Call Customer Service at 1-800-328-1681 for recommendations.
 - **Die-Cutting –**
 Rotary or flat-bed after lamination.

Special Considerations For maximum bond strength, surface should be clean and dry. A typical cleaning solvent is heptane or isopropyl alcohol. Consult the manufacturer's Material Safety Data Sheet for proper handling and storage of solvents.

For best bonding conditions, application surface should be at room temperature or slightly higher. Low temperature surfaces, below 50 degrees F (10 degrees C), 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.

**Technical Information
and Data**

The technical information and data, recommendations, and other statements provided are based on tests or experience which 3M believes to be reliable, but the accuracy or completeness of such information is not guaranteed.

Product Use

Please remember that many factors can affect the use and performance of a 3M product in a particular application. The materials to be bonded with the product, the surface preparation of those materials, the product selected for use, the conditions in which the product is used, and the time and environmental conditions in which the product is expected to perform are among the many factors that can affect the use and performance of a 3M product. Given the variety of factors that can affect the use and performance of a 3M product, some of which 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**

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and Liability**

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This Industrial Tape and Specialties Division product was manufactured under a 3M quality system registered to ISO 9002 standards.



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