



Technical Data Sheet

3M™ UV Resistant Polyester Overlaminating Film 7733FL



[Product Details](#)



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Product Description

3M™ UV Resistant Polyester Overlaminating Film 7733FL utilizes a clear polyester film that is recommended for optimum durability and outdoor UV exposure and print fade protection. 3M™ Adhesive 400 offers low temperature performance and long term aging for resistance to yellowing in outdoor applications.

Product Features

- Provides abrasion, humidity and solvent resistance materials that offer high-bond strength to resist edge lifting and UV exposure resistant for extended periods of time.
- Film liner offers graphic appearance for metallized or darker colors. The polyester liner is recommended for clean room applications.
- UL recognized (File MH11410) for overlamination of both polyester and vinyl labelstocks.

Technical Information Note

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

Typical Physical Properties

Attribute Name	Value
Adhesive Type	#400 Acrylic
Facestock	Clear UV Polyester
Adhesive Coat Weight	1.05 — 1.65 g/100 in ²

Attribute Name	Value
Adhesive Thickness	0.02 mm (0.8 mil)
Facestock Thickness	0.025 mm (1 mil)
Liner	Clear Polyester
Liner Thickness	0.038 mm (1.5 mil)

Attribute Name	Value
*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.

Attribute Name	Value
Convertability	Low temperature, high clarity 3M™ Acrylic Adhesive 400 is specifically designed to be compatible with a variety of print methods and overlamine 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 Performance Characteristics

180° Peel Adhesion

Temperature: 22 °C (72 °F)

Test Method: ASTM D3330

Dwell Time	Substrate	Value
10 min	Polyester (PET)	2.6 N/cm (24 oz/in) ¹
10 min	Stainless Steel	2.6 N/cm (24 oz/in) ¹
72 h	Polyester (PET)	3.7 N/cm (34 oz/in) ¹
72 h	Stainless Steel	4.4 N/cm (40 oz/in) ¹

¹ 12 in/min (300 mm/min)

Temperature: 22 °C (72 °F)

Attribute Name	Test Method	Value
Liner Release	TLMI	5 – 55 g/2 in ¹

¹ 180° removal, 300 in/min

Attribute Name	Value
Minimum Application Temperature	-12 °C (10 °F)
Long Term Temperature Resistance	121 °C (250 °F) ¹
Minimum Long Term Temperature Resistance	-40 °C (-40 °F) ¹

¹ Long Term (day, weeks)

Attribute Name	Value
Note	Calipers are nominal values

Typical Environmental Characteristics

Chemical and Environmental Exposure

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 Appearance
Isopropyl Alcohol No Change
Detergent No Change
Engine Oil at 250°F (121°C) No Change
Water for 48 hours Slight Fogging

Humidity Resistance

24 hours at 100°F (38°C) at 100% relative humidity: No Change

Temperature Resistance

300°F (149°C) for 24 hours: Slight Yellowing
-40°F (-40°C) for 24 hours: No Change

Outdoor Weatherability

Minimum outdoor life is 3 years when used with 3M polyester label stocks. Performance may vary depending on the ink or other wear from the environment such as chemicals or contaminants, abrasion or other factors. It is strongly suggested that the label be tested in the application to ensure best performance. No claim can be made regarding outdoor life of inks used in the manufacture of the label and it's strongly recommended that the ink supplier be contacted for suggestions.

Printing

Facestocks are not print treated.

Converting

Rotary or flat-bed after lamination.

Handling/Application Information

Application Examples

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

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.

Industry Specifications

UL Recognized (File MH11410)

Storage and Shelf Life

Store under normal conditions of 16° to 27°C (60° to 80°F) and 40 to 60% relative humidity in the original packaging, out of direct sunlight. For best performance, use this product within 12 months from date of manufacture.

Information

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ISO Statement

This product was manufactured under a 3M quality system registered to ISO 9001 standards.

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