Technical Data Sheet

3M™ Polyester Overlaminating Film 7745FL

Additional Info

Regulatory Info/SDS

Product Description

3M™ Polyester Overlaminating Film 7745FL utilizes a matte clear polyester that is recommended for optimum durability and appearance in dot matrix and hand writable applications. The matte coating resists degradation from scuffing, chemicals, moisture, and wide temperature fluctuations. 3M™ Adhesive 400 offers excellent low temperature performance and long term aging for resistance to yellowing in outdoor applications.

Product Features

• Polyester liner contributes to improved die-cutting by allowing for deeper diecuts than paper without the added concern of exposing paper fibers. A backside release coating helps minimize label blocking. The film liner resists breakage during high speed dispensing. The polyester liner is recommended for clean room applications.
• High-bond strength resists edge lifting.
• Superior abrasion, humidity and solvent resistance.
• UL Recognized file MH11410

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	Matte Clear Polyester DMI TC
Adhesive Coat Weight	0.97 — 1.19 g/100 in²

Attribute Name	Value
Adhesive Thickness	0.02 mm (0.8 mil)
Facestock Thickness	0.033 mm (1.3 mil)
Liner	Clear Polyester
Liner Thickness	0.038 mm (1.5 mil)

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 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 Performance Characteristics

180° Peel Adhesion

Temperature: 23 °C (73 °F)
Test Method: ASTM D3330

Dwell Time	Substrate	Value
10 min	Stainless Steel	3.2 N/cm (29 oz/in) [1]
72 h	Polycarbonate (PC)	4.3 N/cm (39 oz/in) [1]
72 h	Polypropylene (PP)	3.2 N/cm (29 oz/in) [1]
72 h	Stainless Steel	4.5 N/cm (41 oz/in) [1]

[1] 300 mm/min (12 in/min)

Temperature: 23 °C (73 °F)

Attribute Name	Test Method	Value
Liner Release	TLMI	1 — 10.8 g/cm (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

Humidity Resistance

24 hours at 100°F (38°C) and 100% relative humidity: No significant changes in appearance or adhesion.

Temperature Resistance

300°F (149°C) for 24 hours: No significant visual change.
-60°F (-51°C) for 10 days: No significant visual change.

Printing

Facestock is topcoated for improved ink receptivity and is designed for dot matrix printing. It is printable by all standard roll processing methods including flexography, hot stamp, letterpress, and screen printing. Material can also be handwritten using ball point pen, marker or pencil medium. To ensure printability success, be sure to properly test for adhesion of all print methods before processing material.

Converting

Rotary die-cutting is recommended. Fanfolding of labels is not recommended. Small labels should be evaluated carefully. Winding tensions should be kept at a minimum to help prevent adhesive from oozing.

Handling/Application Information

Application Examples

• Protection overlaminate that can have variable, handwritten or electronically generated information added at a later date.
• Property identification and asset labeling.
• Warning, instruction, and service labels for durable goods.
• Nameplates for durable goods.
• Protective overlaminate for label and nameplate graphics can be used on

Application Techniques

For maximum bond strength, the surface should be clean and dry. A typical cleaning solvent is heptane or isopropyl alcohol.*

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

Silicone overspray/contamination of the substrate can cause poor adhesion.

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

Industry Specifications

UL Recognized, File PGGU2.MH11410, Marking & Labeling System Materials - Component, ANSI/UL 969

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.

Available Sizes

Attribute Name	Value
Packaging	Finished labels should be stored in plastic bags.

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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