



Technical Data Sheet

3M™ Thermal Transfer Polyester Label Material 7879FL



Additional Info

Product Description

3M™ Thermal Transfer Polyester Label Material 7879FL is a durable silver polyester label material that is designed for use in demanding applications. This label material utilizes 3M™ High Performance Acrylic Adhesive 350, it offers excellent chemical resistance and holding strength even at high temperatures.

Product Features

- Topcoat provides the advantages of matte coating combined with a surface that is smooth enough for thermal transfer printing. Resin ribbons are recommended for optimum durability. The matte coating resists degradation from scuffing, chemicals, moisture, and wide temperature fluctuations. The topcoat also provides improved ink anchorage for traditional forms of press printing.
- 3M™ High Performance Acrylic Adhesive 350 permanently bonds to high surface energy (HSE) and low surface energy (LSE) plastics, textured and contoured surfaces, powder coatings, and slightly oily metals. It has excellent chemical resistance and holding strength even at high temperatures. Thick adhesive caliper provides for stronger bond on textured surface.
- Polyester liner contributes to improved die cutting by allowing for deeper die cuts than paper without the added concern of exposing paper fibers. A backside release coating helps minimize label blocking. The film liner resists breaking during high speed dispensing. The polyester liner is recommended for clean room applications.
- 3M™ Label Material 7879FL is UL recognized (File MH16411) and CSA accepted (File 99316). See the UL and CSA listings for details.
- UL listing includes approval for use on powder coated surfaces.

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	350 Acrylic
Facestock	Silver Polyester Matte TT TC
Adhesive Coat Weight	2.70 — 3.24 g/100 in ²

Attribute Name	Value
Adhesive Thickness	0.046 mm (1.8 mil)
Facestock Thickness	0.084 mm (3.3 mil)
Liner	Clear Polyester Liner
Liner Thickness	0.038 mm (1.5 mil)

Attribute Name	Value
Convertability	In order to capture the superior performance properties of 3M™ High Holding Acrylic Adhesive 350, thicker calipers are utilized for LSE or textured substrates. Its higher caliper, while desirable for the end use applications, may require extra care during processing. 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)

Dwell Time: 72 h

Test Method: ASTM D3330

Substrate	Value
Polycarbonate (PC)	10.3 N/cm (94 oz/in) ¹
Polypropylene (PP)	9.1 N/cm (83 oz/in) ¹
Stainless Steel	10.5 N/cm (96 oz/in) ¹

¹ 300 mm/min (12 in/min)

Temperature: 23 °C (73 °F)

Attribute Name	Test Method	Value
Liner Release	TLMI	1 — 13.7 g/cm (5 — 70 g/2 in) ¹

¹ 180° removal, 300 in/min

Attribute Name	Value
Minimum Application Temperature	10 °C (50 °F)
Long Term Temperature Resistance	149 °C (300 °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 change in appearance or adhesion

Temperature Resistance

300°F (149°C) for 24 hours: no significant visual change

-40°F (-40°C) for 10 days: no significant visual change

Printing

Facestock is topcoated for improved ink receptivity and is designed for thermal transfer printing. It is printable by all standard roll processing methods including flexography, hot stamp, letterpress, and screen printing.

UL Recognized thermal transfer ribbons

Advent:301 Black; 303 Black; 501 Black; 501 Red; 501 Blue; 501 Green Armor: AXR-7; AXR-7+; AXR-600

Astromed:R5

CP:5440 Red; 5640 Blue; 5940 Black Dasco: DR-74; DR-84

Great Ribbon:SDR ICS: ICS-CC-4099.1

limak:SH-36; SP-330; PrimeMark Intermec: 053258-2; 054048-4

Japan Pulp and Paper:JP Resin 1; JP Resin 2 Blue; JP Resin 2 Red (suitable for indoor use only); JP Resin 2 Green (suitable for indoor use only)

Kurz:K500; K501

Markem:716 (suitable for indoor use only) Mid City Columbia: CGL-80; CGL-80HE

NCR:Matrix Resin; Matrix; PaceSetter; Promark II; Ultra V Pelikan: T016

Ricoh:B110A; B110C; B110CX

Sato:Premier 1

Sony:4070; 4072; 4075; 4085; 5070; Signature Series Resin; Signature Series Wax UBI: HR03; HR04

Zebra:5095; 5099; 5100; 5175

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 the adhesive from oozing.

Handling/Application Information

Application Examples

- Barcode labels and rating plates.
- Property identification and asset labeling.
- Warning, instruction, and service labels for durable goods.
- Nameplates and durable goods.
- Substitutes for stamped metal, riveted plates.

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 higher. Low temperature surfaces, below 50°F (10°C), can cause the adhesive to become so firm that it will not develop maximum contact with the substrate. Higher initial bonds can be achieved through increased rubdown pressure.

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

Industry Specifications

UL Recognized (File MH16411)

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 24 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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