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Technical Data Sheet

3M™ Thermal Transfer Polyester Label Material 7871

English-US

Last Revision Date: June, 2024

Supersedes: April, 2024

Product Details

Regulatory Info/SDS

Product Description

3M™ Thermal Transfer Polyester Label Material 7871 is a gloss polyester label material that offers durability and moisture resistance. This label product utilizes 3M™ High Performance Acrylic Adhesive 350, it offers chemical resistance and holding strength even at high temperatures.

Product Features

• Adhesive can permanently bond to high surface energy (HSE) and low surface energy (LSE) plastics, textured and contoured surfaces, powder coatings, and slightly oily metals.
• Thick adhesive caliper provides for stronger bond on textured surfaces.
• Facestock is topcoated for thermal transfer printing. Resin ribbons are recommended for optimum durability. The topcoat also provides improved ink anchorage for traditional forms of press printing.
• 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.
• 3M™ Thermal Transfer Polyester Label Material 7871 meets British Standard BS-5609.

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	White Polyester Gloss TC
Adhesive Coat Weight	2.70 — 3.24 g/100 in²

Attribute Name	Value
Adhesive Thickness	0.046 mm (1.8 mil)
Facestock Thickness	0.051 mm (2 mil)
Liner	55# Densified Kraft
Liner Thickness	0.081 mm (3.2 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: 22 °C (72 °F)
Dwell Time: 72 h
Test Method: ASTM D3330

Substrate	Value
Polycarbonate (PC)	9.2 N/cm (83 oz/in) [1]
Polypropylene (PP)	8 N/cm (73 oz/in) [1]
Stainless Steel	9.6 N/cm (87 oz/in) [1]

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

Temperature: 22 °C (72 °F)

Attribute Name	Test Method	Value
Liner Release	TLMI	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

When applied to stainless steel. Other substrates should be tested per application.
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. Refer to UL Listing for specific ribbons.

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

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 PGJI2.MH16411, Printing Materials - Component, ANSI/UL 969
CSA Group Certified, File 99316, Class 7922, Adhesive-Type Labels - Label Stock, CSA-C22.2 N0. 0.15-15 Update No. 1;
CSA Group Certified, File 99316, Class 7924, Adhesive-Type Labels - Label Stock, CSA-C22.2 N0. 0.15-15 Update No. 1
BS-5609

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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