English-US

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Technical Data Sheet

3M™ Thermal Transfer Polyester Label Material 7815

Product Details

Regulatory Info/SDS

Product Description

3M™ Thermal Transfer Polyester Label Material 7815 is a matte white polyester label materials that offer excellent moisture resistance and thermal stability. This label product utilizes 3M™ Acrylic Adhesive 310 which is a firm adhesive which resists oozing and provides high strength on a variety of surfaces including high surface energy (HSE) plastics and metals.

Product Features

• Topcoated to provide 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™ Label Material 7815 55# densified kraft liner assures consistent die cutting.
• UL recognized (File MH16411) and CSA accepted (File 99316). See the UL and CSA listings for details.

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	310 Acrylic
Facestock	White Polyester Matte TT TC
Adhesive Coat Weight	1.00 — 1.25 g/100 in²

Attribute Name	Value
Adhesive Thickness	0.02 mm (0.8 mil)
Facestock Thickness	0.058 mm (2.3 mil)
Liner	55# Densified kraft
Liner Thickness	0.081 mm (3.2 mil)

Attribute Name	Value
Convertability	The firmness of 3M™ Acrylic Adhesive 310 is specifically designed to be compatible with thermal transfer and laser technologies. Adhesive processing issues are not anticipated when proper roll tensions, handling and storage conditions are used. 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)	5.7 N/cm (52 oz/in) [1]
Polypropylene (PP)	2 N/cm (18 oz/in) [1]
Stainless Steel	5.6 N/cm (51 oz/in) [1]

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

Temperature: 22 °C (72 °F)

Attribute Name	Test Method	Value
Liner Release	TLMI	5 — 50 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, 0.7% MD shrinkage, 0.8% CD shrinkage
-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.

Thermal Transfer Printing
Printer:UL no longer requires evaluation and listing of specific printers.

Ink Ribbon/UL Recognized Components
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; GPR
ICS:ICS-CC-2000; ICS-CC-4099.1
Iimak:SH-36; SP-330; PrimeMark
Intermec:051864-3; 053258-2; 054048-4; 054195-2
Japan Pulp and Paper:JP Resin 1; JP Resin 2 Blue; JP Resin 2 Red; JP Resin 2 Green
Kurz:K501
Markem:716 (suitable for indoor use only)
Mid City Columbia:CGL-80; CGL-80HE
NCR: Matrix Resin; Matrix (suitable for indoor use only; PaceSetter; Promark II; Ultra V
Pelikan:T016

Ricoh:B110A; B110C; B110CS
Sato: Premier 1
Sony:4050; 4051; 4070; 4072; 4075; 4085; 5070; Signature Series Resin; Signature Series Wax
UBI:HR03; HR04
Zebra:5095; 5097; 5099; 5100; 5175; 5555

Laser Toner Printing
UL recognized with the following printers and toners.

Toner and Printer/UL Recognized Components
Hitachi HMT 446 toner kit for producing finished printed labels with UL listed Synergystex CT-1000 laser printer

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 MH16411)
CSA Accepted (File 99316)

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

business opportunity), regardless of the legal or equitable theory asserted, including, but not limited to, warranty, contract, negligence, or strict liability.

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ISO Statement

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

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