English-US

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Technical Data Sheet

3M™ Thermal Transfer Polyester Label Material 7810

Product Details

Regulatory Info/SDS

Product Description

3M™ Thermal Transfer Polyester Label Material 7810 is a durable matte polyester material that offers high abrasion and chemical resistance. This material utilizes 3M™ Acrylic Adhesive 300, which has excellent quick tack and also bonds well to a variety of surfaces including LSE plastics.

Product Features

• Matte 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.
• Adhesive bonds well to a wide variety of substrates including metals, high surface energy (HSE) plastics and low surface energy (LSE) plastics. It is ideal for applications requiring high initial adhesion especially to LSE plastic surfaces.
• 55# densified kraft liner assures consistent die cutting.
• UL recognized (File MH16411) and CSA accepted (File 99316).

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	300 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	Due to the quick flowing aggressive nature of 3M™ Acrylic Adhesive 300, care should be taken during processing. Refer to die cutting/converting section of data page for additional information 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)	6.7 N/cm (61 oz/in) [1]
Polypropylene (PP)	6.1 N/cm (56 oz/in) [1]
Stainless Steel	7.3 N/cm (67 oz/in) [1]

[1] 304 mm/min (12 in/min)

Temperature: 23 °C (73 °F)

Attribute Name	Test Method	Value
Liner Release	TLMI	10 — 60 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.

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; ICS-CC-2000
Iimak:SP-330; PrimeMark; SH-36
Intermec:051864-3; 053258-2; 054048-4; 054195-2
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: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; TR6070; TR6075; Signature

Series Resin; Signature Series Wax UBI: HR03; HR04
Zebra:5095; 5097; 5099; 5100; 5175; 5555

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

ISO Statement

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

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