Technical Data Sheet

3M™ Polypropylene Label Material 7776

Additional Info

Regulatory Info/SDS

Product Description

3M™ Polypropylene Label Material 7776 is a durable polypropylene label stock that offers excellent performance in applications requiring surface conformability. This label product utilizes 3M™ 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

• Corona-treated facestock for improved ink receptivity.
• Bright white and high opacity facestock with good film stiffness that allows easy die cutting and dispensing for automatic applications.
• Liner is designed for high-speed diecutting and matrix stripping. Not recommended for sheet on press applications. The liner backside is flexographically printable.
• UL Recognized file MH16411

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 Polypropylene T2S
Adhesive Coat Weight	1.00 — 1.25 g/100 in²

Attribute Name	Value
Adhesive Thickness	0.02 mm (0.8 mil)
Facestock Thickness	0.066 mm (2.6 mil)
Liner	55# Densified kraft
Liner Thickness	0.081 mm (3.2 mil)

Attribute Name	Value
Convertability	The firmness of 3M™ High Precision 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: 23 °C (73 °F)
Dwell Time: 72 h
Test Method: ASTM D3330

Substrate	Value
Polycarbonate (PC)	5.2 N/cm (48 oz/in) [1]
Polypropylene (PP)	2.7 N/cm (25 oz/in) [1]
Stainless Steel	5.4 N/cm (49 oz/in) [1]

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

Temperature: 23 °C (73 °F)

Attribute Name	Test Method	Value
Liner Release	TLMI	1 — 6.9 g/cm (5 — 35 g/2 in) [1]

[1] 180° removal, 300 in/min

Attribute Name	Value
Minimum Application Temperature	10 °C (50 °F)
Long Term Temperature Resistance	79 °C (175 °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 90°F (32°C) and 90% relative humidity: No significant change in appearance or adhesion

Temperature Resistance

300°F (149°C) for 24 hours: Slight discoloration; 8% shrinkage MD; 14% shrinkage CD
250°F (121°C) for 24 hours: 4% shrinkage MD; 4% shrinkage CD
175°F (79°C) for 24 hours: No significant visual change
-40°F (-40°C) for 10 days: No significant visual change

Printing

Facestock is corona treated for ink receptivity. While not specifically designed for thermal transfer printing, acceptable performance is found for a number of applications. As always, the customer should test to confirm acceptability for their application. Facestock is printable by all standard roll processing methods including flexography, hot stamp, letterpress, and screen printing.

The following thermal transfer ink ribbons are suggested:
Armor:AXR-7+; AXR-600
Dai Nippon:R-300; R-316; M-230
ICS:4099-1
Iimak:SP-330; PrimeMark
Intermec: Premium
Mid City Columbia:GGL-80; GGL-80HE
Ricoh:B110A, B110C
Sony:TR4070, TR5070, TR6075
Zebra:4065; 5095

Note: Whenever printing for the first time, with a different ink system or on a new machine, we strongly recommend carrying out proofing trials to validate ink adhesion and durability prior to a full production run.

Converting

Die cutting:
Rotary die cutting is recommended. This label material should be tested prior to use in applications utilizing fan-folding to validate suitability. Small labels should be evaluated carefully. While this adhesive is very firm, winding tensions should be kept at a minimum to help prevent any unintentional adhesive ooze as a result of poor handling.

Dispensing:
Capable of being both manual and automatically dispensed. Be sure to test in every unique dispensing application to determine suitability.

Handling/Application Information

Application Examples

• Light duty durable applications.
• 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, surface should be thoroughly cleaned and dried. A typical cleaning solvent is heptane or isopropyl alcohol. Note: Follow the manufacturer's precautions and directions for use when using solvents.
• For best bonding conditions, application surface should be at room temperature or 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.
• Higher initial bonds can be achieved through increased rubdown pressure. Use a rubber roller with maximum hand pressure for best results.

Industry Specifications

UL Recognized, File PGJI2.MH16411, Printing 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 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.

3M™ Industrial Adhesives and Tapes Division
3M Center, St. Paul, MN 55144-1000
3M.com/iatd