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3M™ Thermal Transfer Polyester Label Material 7350 / 7861

Product Description

3M™ Thermal Transfer Polyester Label Materials 7350 / 7861 are durable polyester stocks that offer high abrasion and chemical resistance. These materials utilize 3M™ Adhesive 300, which has excellent quick tack and also bonds well to a variety of surfaces including LSE plastics.

Product Features

- 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.
- 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 files MH11410 and MH16411, CSA Group Certified 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

Property	Values	
Facestock	Clear Polyester Gloss TC	
Facestock Thickness	0.051 mm	2 mil
Adhesive	#300 Acrylic	
Adhesive Thickness	0.02 mm	0.8 mil
Liner	55# Densified kraft	
Liner Thickness	0.081 mm	3.2 mil
Adhesive Coat Weight	1.21 to 1.49 g/100 in²	

Convertability

3M™ High Strength Acrylic Adhesive 300 is designed to be compatible with a variety of print methods and end use applications. Due to the quick flowing aggressive nature of this adhesive, care should be taken when converting labels for thermal transfer applications. 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.

Note

Calipers are nominal values

Typical Performance Characteristics

90° Peel Adhesion		Dwell/Cure Time	Dwell Time Units	Temp C	Temp F	Environmental Condition	Substrate	Backing
4.2 N/cm	38 oz/in	72	hr	22C	72F	52%RH	Polypropylene (PP)	2 mil PET
46 oz/in	5 N/cm	72	hr	22C	72F	52%RH	Stainless Steel	2 mil PET
3.1 N/cm	28 oz/in	72	hr	22C	72F	52%RH	High Density Polyethylene (HDPE)	2 mil PET
34 oz/in	3.7 N/cm	72	hr	22C	72F	52%RH	Low Density Polyethylene (LDPE)	2 mil PET
5.5 N/cm	50 oz/in	72	hr	49C	120F	52%RH	Stainless Steel	
1.9 N/cm	17 oz/in	72	hr	49C	120F	52%RH	Polycarbonate (PC)	
4.6 N/cm	42 oz/in	72	hr	49C	120F	52%RH	Polypropylene (PP)	
5.5 N/cm	50 oz/in	72	hr	49C	120F	52%RH	Glass	

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Typical Performance Characteristics (continued)

90° Peel Adhesion		Dwell/Cure Time	Dwell Time Units	Temp C	Temp F	Environmental Condition	Substrate	Backing
3.2 N/cm	29 oz/in	72	hr	49C	120F	52%RH	High Density Polyethylene (HDPE)	
1.1 N/cm	10 oz/in	72	hr	49C	120F	52%RH	Low Density Polyethylene (LDPE)	
5.2 N/cm	48 oz/in	72	hr	22C	72F	52%RH	Glass	2 mil PET
5 N/cm	46 oz/in	72	hr	22C	72F	52%RH	Polycarbonate (PC)	2 mil PET
5.8 N/cm	53 oz/in	24	hr	32C	90F	90%RH	Stainless Steel	
3.9 N/cm	36 oz/in	24	hr	32C	90F	90%RH	Polycarbonate (PC)	
4.8 N/cm	44 oz/in	24	hr	32C	90F	90%RH	Polypropylene (PP)	
4.8 N/cm	44 oz/in	24	hr	32C	90F	90%RH	Glass	
3.5 N/cm	32 oz/in	24	hr	32C	90F	90%RH	High Density Polyethylene (HDPE)	
3.3 N/cm	30 oz/in	24	hr	32C	90F	90%RH	Low Density Polyethylene (LDPE)	
4.6 N/cm	42 oz/in	10	min	22C	72F	52%RH	Stainless Steel	
4.8 N/cm	44 oz/in	10	min	22C	72F	52%RH	Polycarbonate (PC)	
4.2 N/cm	38 oz/in	10	min	22C	72F	52%RH	Polypropylene (PP)	
4.6 oz/in	42 oz/in	10	min	22C	72F	52%RH	Glass	
3.1 N/cm	28 oz/in	10	min	22C	72F	52%RH	High Density Polyethylene (HDPE)	
2.7 N/cm	25 oz/in	10	min	22C	72F	52%RH	Low Density Polyethylene (LDPE)	

Property: 90° Peel Adhesion
Method: ASTM D3330
notes: 12 in/min (300 mm/min)

180° Peel Adhesion		Dwell/Cure Time	Dwell Time Units	Temp C	Temp F	Environmental Condition	Substrate
6.1 N/cm	56 oz/in	10	min	22C	72F	52%RH	Stainless Steel
6.7 N/cm	59 oz/in	10	min	22C	72F	52%RH	Polycarbonate (PC)

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Typical Performance Characteristics (continued)

180° Peel Adhesion		Dwell/Cure Time	Dwell Time Units	Temp C	Temp F	Environmental Condition	Substrate
5.8 N/cm	53 oz/in	10	min	22C	72F	52%RH	Polypropylene (PP)
6.6 N/cm	60 oz/in	10	min	22C	72F	52%RH	Glass
6.7 N/cm	61 oz/in	72	hr	22C	72F	52%RH	Polycarbonate (PC)
6.1 N/cm	56 oz/in	72	hr	22C	72F	52%RH	Polypropylene (PP)
7.8 N/cm	71 oz/in	72	hr	22C	72F	52%RH	Glass
4.4 N/cm	40 oz/in	72	hr	22C	72F	52%RH	High Density Polyethylene (HDPE)
4.6 N/cm	42 oz/in	72	hr	22C	72F	52%RH	Low Density Polyethylene (LDPE)
7.7 N/cm	70 oz/in	72	hr	49C	120F	52%RH	Stainless Steel
3.3 N/cm	30 oz/in	72	hr	49C	120F	52%RH	Polycarbonate (PC)
5.9 N/cm	54 oz/in	72	hr	49C	120F	52%RH	Polypropylene (PP)
4.4 N/cm	40 oz/in	72	hr	49C	120F	52%RH	High Density Polyethylene (HDPE)
1 N/cm	9 oz/in	72	hr	49C	120F	52%RH	Low Density Polyethylene (LDPE)
7.3 N/cm	67 oz/in	72	hr	22C	72F	52%RH	Stainless Steel
7.7 N/cm	70 oz/in	72	hr	49C	120F	52%RH	Glass
7.4 N/cm	68 oz/in	24	hr	32C	90F	90%RH	Stainless Steel
6 N/cm	55 oz/in	24	hr	32C	90F	90%RH	Polycarbonate (PC)
7.2 N/cm	66 oz/in	24	hr	32C	90F	90%RH	Polypropylene (PP)
7.3 N/cm	67 oz/in	24	hr	32C	90F	90%RH	Glass
4.9 N/cm	45 oz/in	24	hr	32C	90F	90%RH	High Density Polyethylene (HDPE)
3.9 N/cm	36 oz/in	24	hr	32C	90F	90%RH	Low Density Polyethylene (LDPE)
3.8 N/cm	35 oz/in	10	min	22C	72F	52%RH	High Density Polyethylene (HDPE)

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Typical Performance Characteristics (continued)

180° Peel Adhesion		Dwell/Cure Time	Dwell Time Units	Temp C	Temp F	Environmental Condition	Substrate
3.5 N/cm	32 oz/in	10	min	22C	72F	52%RH	Low Density Polyethylene (LDPE)

Property: 180° Peel Adhesion
Method: ASTM D3330
notes: 12 in/min (300 mm/min)

Property	Values		Method	Notes
Service Temperature Range	-40 to 125 °C	-40 to 257 °F		
Minimum Application Temperature	10 °C	50 °F		
Liner Release	10 to 60 g/2 in		TLMI	180° removal, 300 in/min

Available Sizes

Packaging

Finished labels should be stored in plastic bags.

Typical Environmental Performance

Chemical and Environmental Exposure

The properties defined are based on four hour immersions at room temperature (72°F/22°C) unless otherwise noted. Samples were applied to stainless steel panels 24 hours prior to immersion and were evaluated one hour after removal from the solution for peel adhesion. Adhesion measured at 180° peel angle (ASTM D 3330) at 12 inches/minute.

	Adhesion to Stainless Steel		Appearance	Edge Penetration
Chemical	Oz./in.	N/100 mm	Visual	Millimeters
Isopropyl Alcohol	60	66	No change	0.8
Detergent 1% Alconox® Cleaner	64	70	No change	0
Engine Oil (10W30) @ 250°F (121°C)	64	70	No change	1
Water for 48 hours	66	72	No change	0
pH 4	65	71	No change	0
pH 10	64	70	No change	0
Formula 409® Cleaner	64	70	No change	0
Toluene	33	36	No change	6.5
Acetone	47	51	No change	4.3
Brake Fluid	74	81	No change	0
Gasoline	36	39	No change	5.8
Diesel Fuel	62	68	No change	1
Mineral Spirits	54	59	No change	2.4
Hydraulic Fluid	66	72	No change	0

Humidity Resistance

24 hours at 100°F (38°C) and 100% relative humidity: no significant changes in appearance or adhesion

Typical Environmental Performance (continued)

Temperature Resistance

300°F (149°C) for 24 hours: no significant visual change
-40°F (-40°C) for 10 days: no significant visual change

Accelerated Aging		Notes
0.062 N/cm	16 g/in	180° Removal of Liner from Facestock at 90 in/min
5.9 N/cm	54 oz/in	180° Peel Adhesion from Stainless Steel at 12 in/min

Property: Accelerated Aging
Method: ASTM D3611
Test Condition : 96 hr @ 150°F (65°C) and 80% relative humidity

Handling/Application Information

Application Ideas

- 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.

Printing

Facestock is topcoated for improved ink receptivity and is designed for thermal transfer printing. It is also printable by all standard roll processing methods including flexography, hot stamp, letterpress, and screen printing.
UL Recognized thermal transfer ink ribbons
Advent: 301 Black; 303 Black; 501 Black; 501 Red; 501 Blue; 501 Green
Armor: AXR-7; AXR-7+; AXR-600
Astromed: R5, RRT, RV, RAF Blue
CP: 5440 Red; 5640 Blue; 5940 Black
Dasco: DR-74; DR-84
Great Ribbon: SDR
ICS: ICS-CC-4099.1
Iimak: 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; K815
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; TR6070; TR6075; 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.

Storage and Shelf Life

Store at room temperature conditions of 72°F (22°C) and 50% relative humidity.
If stored under proper conditions, product retains its performance and properties for 24 months from date of manufacture.

Industry Specifications

UL Recognized, File PGGU2.MH11410, Marking & Labeling System Materials - Component, ANSI/UL 969
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 No. 0.15-15 Update No. 1
CSA Group Certified, File 99316, Class 7924, Adhesive-Type Labels - Electronic Printing Technologies, CSA-C22.2 No. 0.15-15 Update No. 1

Trademarks

References

Safety Data Sheet (SDS)

https://www.3m.com/3M/en_US/company-us/SDS-search/results/?gsaAction=msdsSRA&msdsLocale=en_US&co=ptn&q=7350/7861

ISO Statement

This Industrial Adhesives and Tapes Division product was manufactured under a 3M quality system registered to ISO 9001 standards.

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