Label Material 7875

Thermal Transfer Polyester Label Material

Product Data Sheet

Updated : May 2000
Supersedes : June 1999

Physical Properties
Not for specification purposes
(Calipers are nominal values)

Facestock	51 micron (2.0 thou) Matte Platinum Polyester
Adhesive	20 micron (0.8 thou) #310 Acrylic
Liner	81 micron (3.2 thou), 90 g/m² (#55) Densified kraft
Shelf Life	24 months from date of manufacture of product when properly stored between 22°C and 50% relative humidity.

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.
- #310 adhesive is a firm adhesive which resists oozing and provides high strength on a variety of surfaces including high surface energy (HSE) plastics and metals.
- 90 g/m^2 densified kraft liner assures consistent die cutting.
- 3M™ Label Material 7875 is UL recognised (File MH16411) and CSA accepted (File 99316). See the UL and CSA listings for details.

Application Ideas:

- Barcode labels and rating plates.
- Property identification and asset labelling.
- Warning, instruction, and service labels for durable goods.
- Nameplates for durable goods.

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Performance Characteristics
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Adhesion	180° peel test procedure is ASTM D 3330 90° peel test procedure is ASTM D 3330 modified for the angle change			
Surface	**Initial (10 Minute Dwell/RT)**			
	180º Peel		**90º Peel**	
	N/10mm	**Oz/In**	**N/10mm**	**Oz/In**
Stainless Steel	4.7	43	3.8	35
Polycarbonate	5.1	47	4.0	37
Polypropylene	2.0	18	1.8	16
Glass	5.7	52	3.7	34
HD Polyethylene	2.6	24	1.8	16
LD Polyethylene	2.2	20	1.3	12

Surface	**Conditioned for 3 Days at Room Temperature 22ºC**			
	180º Peel		**90º Peel**	
	N/10mm	**Oz/In**	**N/10mm**	**Oz/In**
Stainless Steel	5.6	51	4.5	41
Polycarbonate	5.7	52	4.7	43
Polypropylene	2.0	18	2.6	24
Glass	7.4	68	5.1	47
HD Polyethylene	3.6	33	2.2	20
LD Polyethylene	3.5	32	2.4	22

Surface	**Conditioned for 3 Days at 49ºC**			
	180º Peel		**90º Peel**	
	N/10mm	**Oz/In**	**N/10mm**	**Oz/In**
Stainless Steel	6.6	60	5.0	46
Polycarbonate	4.5	41	3.5	32
Polypropylene	3.8	35	3.3	30
Glass	7.4	68	4.6	42
HD Polyethylene	3.3	30	202	20
LD Polyethylene	4	5	9	8

Surface	**Conditioned for 24 hours at 32ºC At 90% Relative Humidity**			
	180º Peel		**90º Peel**	
	N/10mm	**Oz/In**	**N/10mm**	**Oz/In**
Stainless Steel	8.1	74	5.0	46
Polycarbonate	6.8	62	4.4	40
Polypropylene	4.2	38	3.0	27
Glass	7.2	66	3.5	32
HD Polyethylene	3.8	35	3.0	27
LD Polyethylene	2.2	20	2.6	24

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Performance Characteristics Contd…
Not for specification purposes

Liner Release	180º Removal of Liner from Facestock		
	Rate of Removal	N/10mm	Gms/25mm Width
	2.3 m / min	0.042	11
	7.6 m / min	0.042	11

Environmental Performance	The properties defined are based on four hour immersions at room temperature 22ºC 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 180º peel angle (ASTM D3330) at 305 mm/min.			
Chemical Resistance	**Adhesion to Stainless Steel**		**Appearance**	**Edge Penetration**
Chemical	**N/10mm**	**Oz/In**	**Visual**	**Millimetres**
Isopropyl Alcohol	5.9	54	No change	1
Detergent (1% Alconox®*)	7.2	66	No change	0
Engine Oil (10W30) @ 250ºF (121ºC)	7.7	70	No change	1.5
Water for 48 hours	7.9	72	No change	0
pH 4	7.7	70	No change	0
PH10	7.2	66	No change	0
409 ®* Cleaning solution	7.1	65	No change	0
Toluene	3.2	29	No change	6.3
Acetone	4.2	38	No change	4.5
Brake Fluid	8.4	77	No change	0
Gasoline	3.5	32	No change	5.5
Diesel Fuel	6.0	55	No change	1
Mineral Spirits	5.2	48	No change	2.3
Hydraulic Fluid	6.3	58	No change	0

Temperature Resistance	149°C for 24 hours:	no significant visual change
	-40°C for 3 days:	no significant visual change
Humidity Resistance	24 hours at 38°C and 100% relative humidity	No significant changes in appearance or adhesion

Accelerated Ageing
ASTM D3611 : 96 hours at 65ºC & 80% relative humidity

	Rate of Removal	N/10mm	Grams / Inch Width
180º Peel Adhesion from Stainless Steel	305 mm / min	5.4	49
180º Removal of Liner from Facestock	2.3 m / min	0.042	11

Processing

Printing:
Facestock is topcoated for improved ink receptivity and is designed for thermal transfer printing. Resin ribbons are recommended for optimum durability. It is printable by all standard roll processing methods including flexography, hot stamp, letterpress, and screen printing. Refer to the Graphic Ink Selection Guide for call
3M Customer Service for additional information.

Die Cutting:
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.

Packaging:
Finished labels should be stored in plastic bags.

Agency Listing Information

Thermal Transfer Printing:
Printer: UL no longer requires evaluation and listing of specific printers.
*Ink Ribbon/UL Recognised 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; GRP
ICS: ICS-4099.1
Iimak™: SH-36; 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
Markem™: 716 (suitable for indoor use only)
Mid City Columbia™: CGL-80; CGL-80HE
NCR™: Matrix Resin; Matrix ; Pace Setter; Promark II; Ultra V
Pelikan™: T016
Ricoh™: B110A, B110C, B110CX
Sato™: Premier 1
Sony™: 4070; 4072; 4075; 4085; 5070; Signature™ Series Resin; Signature™ Series Wax
UBI™: HR03; HR04
Zebra™: 5095, 5099, 5100, 5175

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Special Considerations

For maximum bond strength, the surface should be clean and dry. Typical cleaning solvents are heptane and isopropyl alcohol**.

NOTE: When using solvents, read and follow the manufacturer's precautions and directions for use.

For best bonding conditions, application surface should be at room temperature or higher. Low temperature surfaces, below 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.

3M

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