Laser Toner Printable Polyester Label Material

7840 • 7840TL

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Product Description

3M™ Laser Toner Printable Polyester Label Materials 7840 and 7840TL are matte radiant white polyester label stocks that offer. These label products utilize 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.

Construction

(Calipers are nominal values.)

Product	Facestock	Adhesive	Liner
3M label material 7840	2.3 mil (58 micron) Matte radiant white polyester	0.8 mil (20 micron) #310 Acrylic	3.2 mil (81 micron) 55# Densified kraft
3M label material 7840TL	2.3 mil (58 micron) Matte radiant white polyester	0.8 mil (20 micron) #310 Acrylic	3.7 mil (94 micron) 55# Clay coated kraft

Features

- Topcoated polyester to provide excellent toner anchorage. They are also receptive to dot matrix printing and are hand writeable. 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 7840 55# densified kraft liner assures consistent die cutting.
- 3M label material 7840TL 55# TL liner is designed for sheet fed laser toner printers.
- UL recognized (File MH16411) and CSA accepted (File 99316). See the UL and CSA listings for details.
- Ambient temperatures and humidity levels will impact lay flat properties of label material. Store unconverted label stock in controlled environment of 70°F (21°C) and 50% relative humidity.
- To test lay flat properties of converted material, place in controlled environment described above. Converted laser sheet will acclimate and return to lay flat state.
- Slight curl may not affect processing in many laser printers.

**Refer to Technical Bulletin for tips on proper Storing, Converting, and Processing

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Typical Physical Properties

Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

Adhesion: 180° peel test procedure is ASTM D 3330.
90° peel test procedure is ASTM D 3330 modified for the angle change.

	Initial (10 Minute Dwell/RT)				Conditioned for 3 Days at Room Temperature 72°F (22°C)			
	180° Peel		90° Peel		180° Peel		90° Peel	
Surface	Oz./In.	N/100 mm	Oz./In.	N/100 mm	Oz./In.	N/100 mm	Oz./In.	N/100 mm
Stainless Steel	43	47	35	38	51	56	41	45
Polycarbonate	47	51	37	40	52	57	43	47
Polypropylene	18	20	16	18	18	20	24	26
Glass	33	36	34	37	68	74	47	51
HD Polyethylene	24	26	16	18	33	36	20	22
LD Polyethylene	20	22	12	13	32	35	22	24

	Conditioned for 3 Days at 120°F (49°C)				Conditioned for 24 hours at 90°F (32°C) at 90% Relative Humidity			
	180° Peel		90° Peel		180° Peel		90° Peel	
Surface	Oz./In.	N/100 mm	Oz./In.	N/100 mm	Oz./In.	N/100 mm	Oz./In.	N/100 mm
Stainless Steel	60	66	46	50	74	81	46	50
Polycarbonate	41	45	32	35	62	68	40	44
Polypropylene	35	38	30	33	38	42	27	30
Glass	68	74	42	46	66	72	32	35
HD Polyethylene	30	33	20	22	35	38	27	30
LD Polyethylene	5	4	8	9	20	22	24	26

Liner Release: 180° Removal of Liner from Facestock

Product	Rate of Removal	Gram/Inch Width	N/100 mm
3M™ Laser Toner Printable Polyester Label Material 7840	90 inches/minute 300 inches/minute	11 11	0.42 0.42
3M™ Laser Toner Printable Polyester Label Material 7840TL	90 inches/minute 300 inches/minute	34 32	1.31 1.24

Environmental Performance

Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

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.

Chemical Resistance:

	Adhesion to Stainless Steel		Appearance	Edge Penetration
Chemical	Oz./in.	N/100 mm	Visual	Millimeters
Isopropyl Alcohol	54	59	No change	1
Detergent 1% Alconox® Cleaner	66	72	No change	0
Engine Oil (10W30) @ 250°F (121°C)	70	77	No change	1.5
Water for 48 hours	72	79	No change	0
pH 4	70	77	No change	0
pH 10	66	72	No change	0
Clorox 409® Formula	65	71	No change	0
Toluene	29	32	No change	6.3
Acetone	38	42	No change	4.5
Brake Fluid	77	84	No change	0
Gasoline	32	35	No change	5.5
Diesel Fuel	55	60	No change	1
Mineral Spirits	48	52	No change	2.3
Hydraulic Fluid	58	63	No change	0

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
0.9% CD shrinkage

-40°F (-40°C) for 10 days: no significant visual change

Humidity Resistance:

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

Accelerated Aging:

ASTM D 3611: 96 hours at 150°F (65°C) and 80% relative humidity

Product		Rate of Removal	Gram/Inch Width	N/100 mm
3M™ Laser Toner Printable Polyester Label Material 7840	180° Removal of Liner from Facestock	90 inches/minute	10	0.39
3M label material 7840	180° Peel Adhesion from Stainless Steel	12 inches/minute	49	1.89
3M™ Laser Toner Printable Polyester Label Material 7840TL	180° Peel Adhesion from Stainless Steel	12 inches/minute	49	1.89

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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.
Application Ideas	• Barcode labels and rating plates. • Property identification and asset labeling. • Warning, instruction, and service labels for durable goods. • Nameplates and durable goods.
Agency Listing Information	Laser Toner Printing Laser Toner/UL Recognized Hitachi HMT 446 toner kit for producing finished printed labels with UL listed Synergystex CF1000 laser printer, Analog Technology Corporation (ATC) 8030, Facit D7160, IBJ 1600C, Diagraph Predator, OTC Laser Matrix 1000, CAB CF1000 or QMS Magnum CF2215 laser printer.
Processing	General: Use label material in environment of 70°F (21°C) and 50% relative humidity. 1/16" periphery removal of the label matrix is recommended to minimize adhesive ooze. If foam is used to pack the die when rotary sheeting, the foam should be kept at least 3/4" away from knife edges. Poly-bag sheets after converting the label material. Keep the laser label material in polyethylene (LDPE) bags until printing. No more than 250 sheets per box. Fan all edges of sheets prior to laser printing. Use the straightest printing path when printing laser label materials. The extreme heat and pressure used in the toner fusing section of some laser printers may cause curl in the printed label material. Printing: Facestock is topcoated for improved ink receptivity and is designed for laser toner and dot matrix printing. It is printable by all standard roll processing methods including flexography, hot stamp, letterpress, and screen printing. Refer to Graphic Ink Selection Guide or call 3M Customer Service at 1-800-223-7427 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.

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

Technical Information:

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