



Dot Matrix Printable Polyester Label Material

7853HL

Technical Data

October, 2008

Product Description

3M™ Label Material 7853HL matte silver polyester with 3M™ Adhesive 200 meets the requirements of permanent marking applications on metals, high surface energy plastics and a variety of paints.

Features

- Higher caliper adhesive coating helps form a strong bond to textured surfaces.
- Matte surface increases ink adhesion and print durability.
- Accepts imprinting of variable information using dot matrix impact printers, typewriters, ballpoint pens, pencils and grease pens.

Construction

Facestock	Adhesive	Liner
3.3 mil (84 microns) matte silver polyester	3.5 mil (89 microns) 200 high performance acrylic	4.6 mil (117 microns) 78# clay coated kraft

Typical Physical Properties and Performance Characteristics

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

Conformability	Exhibited no lifting after 7 days at room temperature on stainless steel down to 1 inch diameter.
Printing	Flexographic, letterpress, offset, screen, dot matrix impact, ballpoint pens, pencils and grease pens.
Temperature Range	-40°F (-40°C) to 300°F (149°C)
Minimum Application Temperature	50°F (10°C)
Die-Cutting	Rotary
Fanfolding	The maximum recommended folding height is 500 folds (sheets) per box.

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Adhesion

Note: Peel test procedure is ASTM D-3330

Surface	Initial (10 Minute Dwell/RT)		Conditioned for 3 Days at Room Temperature 72°F (22°C)	
	180° Peel		180° Peel	
	oz/in	N/100 mm	oz/in	N/100 mm
Stainless Steel	50	54	114	123
Polycarbonate	78	84	69	75
Polypropylene	Not recommended for low surface energy substrates.			

Liner Release

Note: 180° peel of liner from facestock

90"/minute grams/1" width	300"/minute grams/1" width
69	133

Environmental Performance

Samples were applied to stainless steel panels and allowed to dwell for 24 hours prior to exposures.

Liquid	Dwell Time/Exposure Condition	Results
Isopropyl Alcohol @ Room Temperature	4 hours	No change
Detergent @ Room Temperature	4 hours	No change
Engine Oil @ 250°F (121°C)	4 hours	No loss of adhesion. Slight discoloration from oil in facestock.
Water @ Room Temperature	48 hours	No change

Temperature Resistance:

300°F (149°C) for 1 day:

Slight yellowing

-40°F (-40°C) for 1 day:

No change

Weatherability:

Outdoor life appears to be 1½ years based on 3M testing. Outdoor aging is dependent on climate, direction the labels face, whether the surface is horizontal or vertical and the amount of airborne pollutants to which the label is exposed. Outdoor life is defined as the length of time the dot matrix printing remains legible.

Humidity Resistance:

1 day at 100°F (38°C) and 100% relative humidity:

No change

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Application Ideas

- Rating plates on durable goods
- Fixed asset identification labels
- Decorative name plates and faceplates
- Bar code labels
- Cost effective substitute for metal stamped, riveted plates

Application Techniques

For maximum bond strength, surface should be clean and dry. A typical cleaning solvent is heptane or isopropyl alcohol.* For best conditions, application surface should be at room temperature or higher. Low temperature surfaces (below 10°F [-12°C]) can cause the adhesive to become so firm that it will not develop maximum contact with the substrate. Higher initial bonds are achieved through increased rub down pressure.

*Consult the manufacturer's MSDS for proper handling and storage of solvents.

Shelf Life

Two years from date of manufacture of product when properly stored at 72°F (22°C) and 50% relative humidity.

Agency Approvals

UL Recognized, File MH11410 (www.ul.com under certifications). Dot matrix ribbons: Mid City Columbia CGL-79 (800-462-2336 or www.midcitycolumbia.com), Tower Print Solutions 079 (937-667- 8817 or www.towerprintsolutions.com).

CSA: Accepted, File 099316 (<http://directories.csa-international.org>)

Technical Information

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Industrial Adhesives and Tapes Division Converter Markets

1030 Lake Road
Medina, OH 44256-0428
800-422-8116 • 877-722-5072 (fax)
www.3M.com/converter



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