April, 1999

3M™ Computer-Imprintable Polyester Label Material 7881

Product Features

• Topcoated polyester is compatible with dot matrix printing and is 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.
• #300 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.
• 78# densified kraft liner die cuts, perforates, and fanfolds easily.
• 3M™ Label Material 7880HL is UL recognized (File MH11410) and CSA accepted (File 99316). See the UL and CSA listings for details.

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	
Adhesive Thickness	0.02 mm	0.8 mil
Facestock	Matte silver polyester	
Facestock Thickness	0.084 mm	3.3 mil
Adhesive	#300 Acrylic	
Liner	78# Densified kraft	
Liner Thickness	0.117 mm	4.6 mil

Note

Calipers are nominal values

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 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.

Typical Performance Characteristics

180° Peel Adhesion		Dwell/Cure Time	Substrate
6.1 N/cm	56 oz/in	10 min @ Room Temperature	Stainless Steel
6.7 N/cm	59 oz/in	10 min @ Room Temperature	Polycarbonate (PC)
5.8 N/cm	53 oz/in	10 min @ Room Temperature	Polypropylene (PP)
6.6 N/cm	60 oz/in	10 min @ Room Temperature	Glass
3.8 N/cm	35 oz/in	10 min @ Room Temperature	High Density Polyethylene (HDPE)

180° Peel Adhesion		Dwell/Cure Time	Substrate
3.5 N/cm	32 oz/in	10 min @ Room Temperature	Low Density Polyethylene (HDPE)
7.3 N/cm	67 oz/in	72 hr @ Room Temperature	Stainless Steel
6.7 N/cm	61 oz/in	72 hr @ Room Temperature	Polycarbonate (PC)
6.1 N/cm	56 oz/in	72 hr @ Room Temperature	Polypropylene (PP)
7.8 N/cm	71 oz/in	72 hr @ Room Temperature	Glass
4.4 N/cm	40 oz/in	72 hr @ Room Temperature	High Density Polyethylene (HDPE)
4.6 N/cm	42 oz/in	72 hr @ Room Temperature	Low Density Polyethylene (LDPE)
7.7 N/cm	70 oz/in	72 hr @ 120°F(49°C)	Stainless Steel
3.3 N/cm	30 oz/in	72 hr @ 120°F(49°C)	Polycarbonate (PC)
5.9 N/cm	54 oz/in	72 hr @ 120°F(49°C)	Polypropylene (PP)
7.7 N/cm	70 oz/in	72 hr @ 120°F(49°C)	Glass
4.4 N/cm	40 oz/in	72 hr @ 120°F(49°C)	High Density Polyethylene (HDPE)
1.0 N/cm	9 oz/in	72 hr @ 120°F(49°C)	Low Density Polyethylene (LDPE)
7.4 N/cm	68 oz/in	24 hr @ 90°F(32°C) at 90% Relative Humidity	Stainless Steel
6.0 N/cm	55 oz/in	24 hr @ 90°F(32°C) at 90% Relative Humidity	Polycarbonate (PC)
7.2 N/cm	66 oz/in	24 hr @ 90°F(32°C) at 90% Relative Humidity	Polypropylene (PP)
7.3 N/cm	67 oz/in	24 hr @ 90°F(32°C) at 90% Relative Humidity	Glass
4.9 N/cm	45 oz/in	24 hr @ 90°F(32°C) at 90% Relative Humidity	High Density Polyethylene (HDPE)
3.9 N/cm	36 oz/in	24 hr @ 90°F(32°C) at 90% Relative Humidity	Low Density Polyethylene (LDPE)

Property: 180° Peel Adhesion
Method: ASTM D3330

90° Peel Adhesion		Dwell/Cure Time	Substrate
4.6 N/cm	42 oz/in	10 min @ Room Temperature	Stainless Steel
4.8 N/cm	44 oz/in	10 min @ Room Temperature	Polycarbonate (PC)
4.2 N/cm	38 oz/in	10 min @ Room Temperature	Polypropylene (PP)
4.6 N/cm	42 oz/in	10 min @ Room Temperature	Glass
3.1 N/cm	28 oz/in	10 min @ Room Temperature	High Density Polyethylene (HDPE)
2.7 N/cm	25 oz/in	10 min @ Room Temperature	Low Density Polyethylene (HDPE)
5.0 N/cm	46 oz/in	72 hr @ Room Temperature	Stainless Steel
5.0 N/cm	46 oz/in	72 hr @ Room Temperature	Polycarbonate (PC)
4.2 N/cm	38 oz/in	72 hr @ Room Temperature	Polypropylene (PP)
5.2 N/cm	48 oz/in	72 hr @ Room Temperature	Glass
3.1 N/cm	28 oz/in	72 hr @ Room Temperature	High Density Polyethylene (HDPE)
3.7 N/cm	34 oz/in	72 hr @ Room Temperature	Low Density Polyethylene (HDPE)

90° Peel Adhesion		Dwell/Cure Time	Substrate
5.5 N/cm	50 oz/in	72 hr @ 120°F(49°C)	Stainless Steel
1.9 N/cm	17 oz/in	72 hr @ 120°F(49°C)	Polycarbonate (PC)
4.6 N/cm	42 oz/in	72 hr @ 120°F(49°C)	Polypropylene (PP)
5.5 N/cm	50 oz/in	72 hr @ 120°F(49°C)	Glass
3.2 N/cm	29 oz/in	72 hr @ 120°F(49°C)	High Density Polyethylene (HDPE)
1.1 N/cm	10 oz/in	72 hr @ 120°F(49°C)	Low Density Polyethylene (LDPE)
5.8 N/cm	53 oz/in	24 hr @ 90°F(32°C) at 90% Relative Humidity	Stainless Steel
3.9 N/cm	36 oz/in	24 hr @ 90°F(32°C) at 90% Relative Humidity	Polycarbonate (PC)
4.8 N/cm	44 oz/in	24 hr @ 90°F(32°C) at 90% Relative Humidity	Polypropylene (PP)
4.8 N/cm	44 oz/in	24 hr @ 90°F(32°C) at 90% Relative Humidity	Glass
3.5 N/cm	32 oz/in	24 hr @ 90°F(32°C) at 90% Relative Humidity	High Density Polyethylene (HDPE)
3.3 N/cm	30 oz/in	24 hr @ 90°F(32°C) at 90% Relative Humidity	Low Density Polyethylene (LDPE)

Property: 90° Peel Adhesion
Method: ASTM D3330

180° Liner Release		Test Condition
0.096 N/cm width	25 g/in width	90 in/min
0.143 N/cm width	37 g/in width	300 in/min

Property: 180° Liner Release

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

Temperature Resistance

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

Property	Values		Method	Test Condition	Notes

Property	Values		Method	Test Condition	Notes
Humidity Resistance	24 hours at 100°F (38°C) and 100% relative humidity: no significant changes in appearance or adhesion				
Accelerated Aging	5.9 N/cm	54 oz/in	ASTM D3611	96 hr @ 150°F (65°C) and 80% relative humidity	180° Peel Adhesion from Stainless Steel at 12 in/min

Processing

Printing:
Facestock is topcoated for improved ink receptivity and is designed for dot matrix printing. It is printable by all standard roll processing methods including flexography, hot stamp, letterpress, and screen printing. Refer to the 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.

Agency Listing Information

Dot Matrix Printing:
*UL recognized and CSA accepted component for indoor and outdoor use. The following ribbons are UL recognized when used with this material.
- CGL-79™ from Mid-City Columbia, 800-462-2336 or 800-996-4656
- Ranger 288 from Herbert Dehinton & Co., 847-998-8150

3M does not recommend the Ranger 288 ribbon for bar code printing.

Storage and Shelf Life

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

Industry Specifications

UL Recognized (File MH11410)
CSA Accepted (File 99316)

References

1. Safety Data Sheet
   Url: https://www.3m.com/3M/en_US/company-us/SDS-search/results/?gsaAction=msdsSRA&msdsLocale=en_US&co=ptn&q=7883HL

ISO Statement

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

Technical Information

The technical information and data, recommendations, and other statements provided are based on tests or experience which 3M believes to be reliable, but the accuracy or completeness of such information is not guaranteed.

Product Use

Please remember that many factors can affect the use and performance of a 3M product in a particular application. The materials to be bonded with the product, the surface preparation of those materials, the product selected for use, the conditions in which the product is used, and the time and environmental conditions in which the product is expected to perform are among the many factors that can affect the use and performance of a 3M product. Given the variety of factors that can affect the use and performance of a 3M product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for the user's method of application.

Warranty, Limited Remedy, and Disclaimer

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