



Screen Printable Sheet Vinyl Label Material

7200 • 7902 • 7906

Technical Data

February, 2008

Product Description

3M™ Screen Printable Sheet Vinyl Label Materials 7200, 7902 and 7906 are durable, high performance materials that offer excellent conformability, good durability and moisture resistance. These materials utilize 3M™ Adhesive 300, which has excellent quick tack and also bonds well to a variety of surfaces including LSE plastics.

Construction

(Calipers are nominal values.)

Product	Facestock	Adhesive	Liner
3M Label Material 7200	.0032 in. Soft White Vinyl NTC (86 microns)	300 Acrylic 1.0 mil (25 microns)	90# Polycyd. 6.7 mil bleached kraft sheet polyethylene coated on two sides. (170 microns)
3M Label Material 7902	.0034 in. Soft White Vinyl NTC (86 microns)	300 Acrylic 1.0 mil (25 microns)	90# Polycyd. 6.7 mil bleached kraft sheet polyethylene coated on two sides. (170 microns)
3M Label Material 7906	.004 in. Soft Clear Vinyl NTC (86 microns)	300 Acrylic 1.0 mil (25 microns)	90# Polycyd. 6.7 mil bleached kraft sheet polyethylene coated on two sides. (170 microns)

Features

- Liner provides easy sheet processing and is designed for layflat. The backside of the liner is not printable.
- UL recognized (File MH11410). See the UL listing for details.

Application Ideas

- Labeling of small or irregular shape containers.
- Labels requiring resistance to flagging and edge lifting.
- Barcode labels and rating plates.
- Property identification and asset labeling.
- Warning, instruction, and service labels for durable goods.
- Nameplates for durable goods.

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7200 • 7902 • 7906

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.

Adhesive Coat Weight	1.40 to 1.83 g/100 in. ²	TM-2279
Release Range	4 to 60 g/2 in.	TLMI Method, 180° removal, 300 in./min.
Service Temperature	-40°F to 140°F (-40°C to 60°C) See Environmental Section	
Minimum Application Temperature	50°F (10°C)	
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 the die cutting/converting section of this data page or the "Guide to Converting and Handling Label Products" technical bulletin for additional information.	

Typical Peel Adhesion Properties

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	58	63	37	40	74	80	43	47
Polycarbonate	60	65	40	43	67	73	43	47
Polypropylene	55	60	32	35	60	65	33	36
Glass	60	65	37	40	75	81	46	50
HD Polyethylene	34	37	26	28	42	46	27	29
LD Polyethylene	36	39	26	28	43	47	29	31

	Conditioned for 3 Days at 158°F (70°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	68	74	36	39	66	72	55	60
Polycarbonate	13	14	14	15	64	69	39	42
Polypropylene	37	40	29	31	67	73	38	41
Glass	60	65	37	40	68	74	48	52
HD Polyethylene	27	29	18	20	42	46	30	33
LD Polyethylene	4	4	7	8	40	43	25	27

3M™ Screen Printable Sheet Vinyl Label Material

7200 • 7902 • 7906

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:

Chemical	Adhesion to Stainless Steel		Appearance	Edge Penetration
	Oz./in.	N/100 mm	Visual	Millimeters
Isopropyl Alcohol	52	56	Edge adhesive ooze.	1.0
Detergent 1% Alconox® Cleaner	63	68	No change	0.0
Engine Oil (10W30) @ 250°F (121°C)	0	0	Label melted off.	N/A
Water for 48 hours	5	5	No change	0.0
pH 4	70	76	No change	0.0
pH 10	70	76	No change	0.0
409® Formula	65	70	No change	0.0
Toluene	0	0	Label came off.	N/A
Acetone	0	0	Label came off.	N/A
Brake Fluid	42	46	No change	0.0
Gasoline	0	0	Label came off.	N/A
Diesel Fuel	69	75	Edge adhesive ooze.	2.0
Mineral Spirits	58	63	Edge adhesive ooze.	4.0
Hydraulic Fluid	75	81	No change	0.0

Temperature Resistance:

300°F (149°C) for 24 hours:	Melted.
250°F (121°C) for 24 hours:	Very slight yellowing.
175°F (79°C) for 24 hours:	No significant visual change.
-40°F (-40°C) for 10 days:	No significant visual change.

Humidity Resistance:

24 hours at 90°F (32°C) and 90% relative humidity:	No significant change in appearance or adhesion.
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Accelerated Aging:

ASTM D 3611:	96 hours at 150°F (65°C) and 80% relative humidity.
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7200 • 7902 • 7906

Application Techniques	<p>For maximum bond strength, the surface should be clean and dry. Typical cleaning solvents are heptane and isopropyl alcohol.*</p> <p>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.</p> <p>*When using solvents, read and follow the manufacturer's precautions and directions for use.</p>
Printing	<p>Label material is designed for screen printing. The converter should verify that their ink systems are compatible with the vinyl film by testing beforehand.</p>
Die Cutting / Converting	<p>Die cut with steel rule or flatbed dies. The 90# lay-flat liner also allows kiss cutting and back splitting. The converter can cut through the vinyl facestock without cutting through the liner. Sheet label materials are not recommended for rotary die cutting and stripping operations.</p>
Packaging	<p>Finished labels should be stored in plastic bags.</p>
Storage	<p>Store at room temperature conditions of 72°F (22°C) and 50% relative humidity.</p>
Shelf Life	<p>If stored under proper conditions, product retains its performance and properties for two years from date of manufacture.</p>

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7200 • 7902 • 7906

Product Use

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ISO 9001:2000

This Industrial Adhesives and Tapes Division product was manufactured under a 3M quality system registered to ISO 9001:2000 standards.



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