



Screen Printable Sheet Polyester Label Material

7924 • 7925 • 7931 • 7950

Technical Data

November, 2007

Product Description

3M™ Screen Printable Sheet Polyester Label Materials are durable, high performance materials that offer excellent thermal stability, moisture resistance and chemical 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™ Screen Printable Sheet Polyester Label Material 7924	.002 in. Bright Silver Polyester Gloss TC (51 microns)	300 Acrylic 0.8 mil (20 microns)	90# Polycyd. 6.7 mil bleached kraft sheet polyethylene coated on two sides. (170 microns)
3M™ Screen Printable Sheet Polyester Label Material 7925	.002 in. Bright Gold Polyester Gloss TC (51 microns)	300 Acrylic 0.8 mil (20 microns)	90# Polycyd. 6.7 mil bleached kraft sheet polyethylene coated on two sides. (170 microns)
3M™ Screen Printable Sheet Polyester Label Material 7931	.002 in. White Polyester Gloss TC (51 microns)	300 Acrylic 0.8 mil (20 microns)	90# Polycyd. 6.7 mil bleached kraft sheet polyethylene coated on two sides. (170 microns)
3M™ Screen Printable Sheet Polyester Label Material 7950	.002 in. Clear Polyester Gloss TC (51 microns)	300 Acrylic 0.8 mil (20 microns)	90# Polycyd. 6.7 mil bleached kraft sheet polyethylene coated on two sides. (170 microns)

Features

- Facestock is topcoated for improved ink anchorage. Variable information can be added by the end-user as the material is thermal transfer printable.
- 3M adhesive 300 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.
- Liner provides easy sheet processing and is designed for layflat. The backside of the liner is not printable.
- UL recognized (File MH11410) and CSA accepted (File 99316). See the UL and CSA listings for details.

Application Ideas

- Barcode labels and rating plates.
- Property identification and asset labeling.
- Warning, instruction, and service labels for durable goods.
- Nameplates for durable goods.
- 3M screen printable sheet polyester label material 7924 is suitable as a substitute for stamped metal, riveted plates.

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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.

Adhesive Coat Weight	1.08 to 1.62 g/100 in. ²	TM-2279
Release Range	10 to 100 g/2 in.	TLMI Method, 180° removal, 300 in./min.
Service Temperature	-40°F to 302°F (-40°C to 149°C) See Environmental Section	
Minimum Application Temperature	50°F (5°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 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	56	61	42	46	67	73	46	50
Polycarbonate	59	67	44	48	61	67	46	50
Polypropylene	53	58	38	42	56	61	38	42
Glass	60	66	42	46	71	78	48	52
HD Polyethylene	35	38	28	31	40	44	28	31
LD Polyethylene	32	35	25	27	42	46	34	37

	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	70	77	50	55	68	74	53	58
Polycarbonate	30	33	17	19	55	60	36	39
Polypropylene	54	59	42	46	66	72	44	48
Glass	70	77	50	55	67	73	44	48
HD Polyethylene	40	44	29	32	45	49	32	35
LD Polyethylene	9	10	10	11	36	39	30	33

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Environmental Performance

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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	60	66	No change	0.8
Detergent 1% Alconox® Cleaner	64	70	No change	0.0
Engine Oil (10W30) @ 250°F (121°C)	64	70	No change	1.0
Water for 48 hours	66	72	No change	0.0
pH 4	65	71	No change	0.0
pH 10	64	70	No change	0.0
409® Formula	64	70	No change	0.0
Toluene	33	36	No change	6.5
Acetone	47	51	No change	4.3
Brake Fluid	74	81	No change	0.0
Gasoline	36	39	No change	5.8
Diesel Fuel	62	68	No change	1.0
Mineral Spirits	54	59	No change	2.4
Hydraulic Fluid	66	72	No change	0.0

Temperature Resistance:

300°F (149°C) for 24 hours:

no significant visual change

-40°F (-40°C) for 10 days:

no significant visual change

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

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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.
Printing	Material has a topcoating which is receptive to many inks including UV and conventional ink systems. The converter should verify that their ink systems are compatible with the topcoating on the polyester film by testing beforehand. The topcoating is also receptive to other forms of printing including hot stamping and thermal transfer printing. The converter should verify that the method of printing is compatible with the topcoating by testing beforehand.
Die Cutting / Converting	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 polyester facestock without cutting through the liner. Sheet label materials are not recommended for rotary die cutting and stripping operations.
Packaging	Finished labels should be stored in plastic bags.
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 two years from date of manufacture.

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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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