Removable Vinyl Label Material
7600

Technical Data May 2017

Product Description

3M™ Removable Vinyl Label Material 7600 is a conformable white vinyl stock that utilizes 3M™ Acrylic Adhesive 500 which offers clean removability on most surfaces for up to one year, as well as, excellent plasticizer resistance.

Construction

Facestock	Adhesive	Liner
.0035 in. Soft White Liner Vinyl TC (86 microns)	500 Acrylic 1.0 mil (25 microns)	43# Densified Kraft 2.5 mils (62 microns)

(Calipers are nominal values.)

Features

- Conformable to contoured surfaces
- Resists wrinkling and delamination
- One-piece removal up to one year after application
- Topcoated for improved ink anchorage
- The 3M™ Acrylic Adhesive 500 provides excellent adhesion to a variety of surfaces including stainless steel, polycarbonate and polypropylene
- UL recognized (File MH11410)

Application Ideas

- Labeling of small or irregular shape containers
- Labels requiring long term bond and piece removal
- Barcode labels and rating plates
- Property identification and asset labeling
- Warning, instruction, and service labels for durable goods
- Nameplates for durable goods
- Excellent for die-cut masks needing outdoor performance and removability

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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	1.40 to 1.83 g/100 in.^{2}	TM-2279
Release Range	5 to 50 g/2 in.	TLMI Method, 180° removal, 300 in./min.
Service Temperature	-40°F to 175°F (-40°C to 79°C)	
Minimum Application Temperature	50°F (10°C)	
Convertability	3M™ High Stability Acrylic Adhesive 500 for outdoor applications which require clean removability. When converting labels for thermal transfer applications, care should be taken with regard to proper roll tensions, handling and storage conditions. 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

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	41	44	26	28	52	56	32	35
Polycarbonate	52	56	35	38	68	74	46	50
Polypropylene	27	29	15	16	26	28	14	15
Glass	41	44	24	26	47	51	31	34
HD Polyethylene	10	11	13	14	21	23	12	13
LD Polyethylene	9	10	10	11	14	15	11	11

	Conditioned for 3 Days at 158F (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	72	78	46	50	58	63	31	34
Polycarbonate	19	21	12	13	59	64	35	38
Polypropylene	38	41	23	25	39	42	24	26
Glass	74	80	43	47	60	65	37	40
HD Polyethylene	29	31	17	18	29	31	17	18
LD Polyethylene	18	20	13	14	17	18	18	20

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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	39	42	Edge adhesive ooze.	1.0
Detergent 1% Alconox® Cleaner	50	54	No change	0.0
Engine Oil (10W30) @ 250°F (121°C)	78	85	No change	0.0
Water for 48 hours	26	28	No change	0.0
pH 4	51	55	No change	0.0
pH 10	53	57	No change	0.0
Formula 409® Cleaner	48	52	No change	0.0
Toluene	0	0	Label came off.	NA
Acetone	0	0	Label came off.	NA
Brake Fluid	28	30	No change	0.0
Gasoline	0	0	Label came off.	NA
Diesel Fuel	46	50	Edge adhesive ooze.	2.0
Mineral Spirits	41	44	No change	0.0
Hydraulic Fluid	52	56	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

Accelerated Aging:

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

	Rate of Removal	Grams/Inch Width	N/100 mm
180° Removal of Liner from Facestock	90 inches/minute	8	0.31

	Rate of Removal	Oz./In. Width	N/100 mm
180° Peel Adhesion from Stainless Steel	12 inches/minute	2 8	1.08

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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. Use maximum laminating pressure for best results. * When using solvents, read and follow the manufacturer's precautions and directions for use.
Printing	Facestock is topcoated treated for improved ink receptivity. It is printable by all standard roll processing methods including flexography, hot stamp, letterpress, and screen printing. It is not designed for thermal transfer printing. As always, the customer should test to confirm acceptability for their application.
Die Cutting / Converting	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.
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ISO 9001

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

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