3M

White Vinyl Label Material

7902

Technical Data **January 1, 2000**

Supercedes November 1, 1999

Construction

(Calipers are nominal values.)

Facestock	Adhesive	Liner
3.4 mil (86 micron) Flexible white non-topcoated vinyl	1.0 mil (25 micron) #300 Acrylic	6.7 mil (170 micron) 90# Polycoated kraft

Features

- Conformable to contoured surfaces
- Resists wrinkling and delamination
- #300 adhesive bonds well to wide variety of substrates including metals, high surface energy (HSE) plastics, and low surface (LSE) plastics. It is ideal for applications requiring high initial adhesion especially to LSE surfaces.
- 90 # lay-flat polycoated kraft liner provides easy sheet processing.

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

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.

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 Day 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

Liner Release: 180° Removal of Liner from Facestock

Rate of Removal	Grams/Inch Width	N/100 mm
90 inches/minute	12	0.46
300 inches/minute	23	0.89

Environmental Performance

Note: The following tests are intended to be a guide to product performance. Application testing is recommended using actual substrates, expected dwell times, and actual conditioning for determination of product suitability.

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.

Chemical Resistance:

	Adhesion to Stainless Steel		Appearance	Edge Penetration
Chemical	**Oz./in.**	**N/100 mm**	**Visual**	**Millimeters**
Isopropyl Alcohol	52	56	Edge adhesive ooze.	1.0
Detergent (1% Alconox®*)	63	68	No change	0
Engine Oil (10W30) @ 250°F (121°C)	0	0	Label melted off.	NA
Water for 48 hours	5	5	No change	0
pH 4	70	76	No change	0
pH 10	70	76	No change	0
409®* Cleaning Solution	65	70	No change	0
Toluene	0	0	Label came off.	NA
Acetone	0	0	Label came off.	NA
Brake Fluid	42	46	No change	0
Gasoline	0	0	Label came off.	NA
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

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/In. Width**	**N/100 mm**
180° Removal of Liner from Facestock	90 inches/minute	26	1.00
	Rate of Removal	**Oz./In. Width**	**N/100 mm**
180° Peel Adhesion from Stainless Steel	12 inches/minute	17	0.25

Shelf Life	One year from date of manufacture of product when properly stored at 72°F (22°C) and 50% relative humidity.
Processing	**Printing:** • Label material is designed for screen printing. The converter should verify that their ink systems are compatible with the vinyl film by testing beforehand. **Die Cutting:** • Die cut with steel rule or flatbed dies. The 90# 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. **Packaging:** • Finished labels should be stored in plastic bags.
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. Use maximum laminating pressure for best results.

Technical Information and Data

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 and Limited Remedy

The 3M product will be free from defects in material and manufacture for a period of one (1) year from the date of manufacture. 3M MAKES NO OTHER WARRANTIES OR CONDITIONS, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY IMPLIED WARRANTY ARISING OUT OF A COURSE OF DEALING, CUSTOM, OR USAGE OF TRADE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's method of application. If the 3M product is proved to be defective within the warranty period stated above, your exclusive remedy and 3M's sole obligation shall be, at 3M's option, to replace or repair the 3M product or refund the purchase price of the 3M product.

Limitation of Liability

Except where prohibited by law, 3M will not be liable for any loss or damage arising from the 3M product, whether direct, indirect, special, incidental, or consequential, regardless of the legal theory asserted, including, but not limited to, contract, warranty, negligence, or strict liability.

* Alconox is a trademark of Alconox, Inc. and 409 is a trademark of The Chlorox Company.

ISO 9002

This Industrial Tape and Specialties Division product was manufactured under a quality system registered to ISO 9002 standards.

3M

Industrial Tape and Specialties Division

3M Center, Building 220-7W-03
St. Paul, MN 55144-1000
USA
1 800 223 7427 Product Information/Fax on Demand
www.3M.com/labeldiecut

Printed in U.S.A
Copyright 1999, 3M IPC all rights reserved

70-0709-4856-0