

March, 2019

3M™ Versatile Print Label Material 7868V

Product Description

3M™ Versatile Print Polyester Label Material 7868V is a gloss polyester label material that offers premium durability and moisture resistance. The topcoat is formulated to print with multiple technologies, including UV inkjet, water flexo, UV flexo, thermal transfer, and screen printing. This label product utilizes 3M™ High Performance Acrylic Adhesive 350, it offers excellent chemical resistance and holding strength even at high temperatures.

Product Features

- Adhesive can permanently bond to high surface energy (HSE) surfaces , low surface energy (LSE) plastics, and contoured surfaces
 - Facestock is topcoated for high quality and durable printing with multiple print technologies including UV inkjet, water and UV flexo, thermal transfer, and screen.
- UL recognized (File MH16411) See the UL listing 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	
Facestock	White Polyester Versatile TC	
Facestock Thickness	0.051 mm	2 mil
Adhesive	350 Acrylic	
Adhesive Thickness	0.028 mm	1.1 mil
Liner	55# Densified Kraft	
Liner Thickness	0.081 mm	3.2 mil
Adhesive Coat Weight	1.75 to 2.02 g/100 in ²	

Convertability

In order to capture the superior performance properties of 3M™ High Holding Acrylic Adhesive 350, thicker calipers are utilized for LSE or textured substrates. Its higher caliper, while desirable for the end use applications, may require extra care during processing. 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.

Note

Calipers are nominal values

Typical Performance Characteristics

Property	Values		Method	Notes
Service Temperature Range	-40 to 149 °C	-40 to 300 °F		
Minimum Application Temperature	10 °C	50 °F		
Release Range	5 to 70 g/2 in		TLMI	180° removal, 300 in/min

180° Peel Adhesion		Dwell/Cure Time	Substrate
9.1 N/cm	83 oz/in	72 hr @ Room Temperature	Stainless Steel
8.2 N/cm	75 oz/in	72 hr @ Room Temperature	Polycarbonate (PC)
5.5 N/cm	50 oz/in	72 hr @ Room Temperature	Polypropylene (PP)
8.8 N/cm	80 oz/in	72 hr @ Room Temperature	Glass

Table continued on next page

Typical Performance Characteristics (continued)

180° Peel Adhesion		Dwell/Cure Time	Substrate
4.4 N/cm	40 oz/in	72 hr @ Room Temperature	High Density Polyethylene (HDPE)
3.8 N/cm	35 oz/in	72 hr @ Room Temperature	Low Density Polyethylene (LDPE)
9.6 N/cm	88 oz/in	72 hr @ 120°F(49°C)	Stainless Steel
5.9 N/cm	54 oz/in	72 hr @ 120°F(49°C)	Polycarbonate (PC)
5.5 N/cm	50 oz/in	72 hr @ 120°F(49°C)	Polypropylene (PP)
9.2 N/cm	84 oz/in	72 hr @ 120°F(49°C)	Glass
4.3 N/cm	39 oz/in	72 hr @ 120°F(49°C)	High Density Polyethylene (HDPE)
1.2 N/cm	11 oz/in	72 hr @ 120°F(49°C)	Low Density Polyethylene (LDPE)
10.1 N/cm	92 oz/in	24 hr @ 90°F(32°C) at 90% Relative Humidity	Stainless Steel
5.8 N/cm	53 oz/in	24 hr @ 90°F(32°C) at 90% Relative Humidity	Polycarbonate (PC)
3.9 N/cm	36 oz/in	24 hr @ 90°F(32°C) at 90% Relative Humidity	Polypropylene (PP)
8.9 N/cm	81 oz/in	24 hr @ 90°F(32°C) at 90% Relative Humidity	Glass
4.3 N/cm	39 oz/in	24 hr @ 90°F(32°C) at 90% Relative Humidity	High Density Polyethylene (HDPE)
2.7 N/cm	25 oz/in	24 hr @ 90°F(32°C) at 90% Relative Humidity	Low Density Polyethylene (LDPE)

Property: 180° Peel Adhesion
 Method: ASTM D3330

Available Sizes

Packaging

Finished labels should be stored in plastic bags.

Typical Environmental Performance

Property	Values		Method	Test Condition	Notes
Humidity Resistance	24 hours at 100°F (38°C) and 100% relative humidity; no significant change in appearance or adhesion				

Table continued on next page

Typical Environmental Performance (continued)

Property	Values		Method	Test Condition	Notes
Accelerated Aging	8.3 N/cm	76 oz/in	ASTM D3611	96 hr @ 150°F (65°C) and 80% relative humidity	180° Peel Adhesion from Stainless Steel at 12 in/min

Temperature Resistance

When applied to stainless steel. Other substrates should be tested per application.
300°F (149°C) for 24 hours: no significant visual change

-40°F (-40°C) for 10 days: no significant visual change

Handling/Application Information**Application Ideas**

- Barcode labels and rating plates
- Property identification and asset labeling
- Warning, instruction, and service labels for durable goods
- Nameplates and durable goods

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

Facestock is topcoated for improved ink receptivity and is designed for UV Inkjet, water flexo, UV flexo, screen, and thermal transfer printing.

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.

Storage and Shelf Life

Store at room temperature conditions of 72°F (22°C) and 50% relative humidity.

If stored under proper conditions, product retains its performance and properties for 24 months from date of manufacture.

Industry Specifications

UL Recognized (File MH16411)

Trademarks

3M is a trademark of 3M Company.

Alconox is a registered trademark of Alconox, Inc.

Formula 409 Cleaner is a registered trademark of Clorox, Inc.

References

Safety Data Sheet (SDS)

https://www.3m.com/3M/en_US/company-us/SDS-search/results/?gsaAction=msdsSRA&msdsLocale=en_US&co=ptn&q=7871

Family Group

	7871V	7908V	7872V	7816V	7875V	7331V	7868V
Facestock	White Polyester Versatile TC	White Polyester Versatile TC	Platinum Polyester Versatile TC	White Polyester Versatile TC	Platinum Polyester Versatile TC	White Polyester Versatile TC	White Polyester Versatile TC
Facestock Thickness (mm)	0.051	0.051	0.051	0.051	0.051	0.051	0.051
Adhesive	350 Acrylic	350 Acrylic	350 Acrylic	310 Acrylic	310 Acrylic	300 Acrylic	350 Acrylic
Adhesive Thickness (mm)	0.046	0.046	0.046	0.02	0.02	0.02	0.028
Liner	55# Densified Kraft	88# Polycoated Kraft	55# Densified Kraft	55# Densified Kraft	55# Densified Kraft	55# Densified Kraft	55# Densified Kraft
Liner Thickness (mm)	0.081	0.17	0.081	0.081	0.081	0.081	0.081

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, guidance, and other statements contained in this document or otherwise provided by 3M are based upon records, tests, or experience that 3M believes to be reliable, but the accuracy, completeness, and representative nature of such information is not guaranteed. Such information is intended for people with knowledge and technical skills sufficient to assess and apply their own informed judgment to the information. No license under any 3M or third party intellectual property rights is granted or implied with this information.

Product Selection and Use

Many factors beyond 3M’s control and uniquely within user’s knowledge and control can affect the use and performance of a 3M product in a particular application. As a result, customer is solely responsible for evaluating the product and determining whether it is appropriate and suitable for customer’s application, including conducting a workplace hazard assessment and reviewing all applicable regulations and standards (e.g., OSHA, ANSI, etc.). Failure to properly evaluate, select, and use a 3M product and appropriate safety products, or to meet all applicable safety regulations, may result in injury, sickness, death, and/or harm to property.

Warranty, Limited Remedy, and Disclaimer

Unless a different warranty is specifically stated on the applicable 3M product packaging or product literature (in which case such warranty governs), 3M warrants that each 3M product meets the applicable 3M product specification at the time 3M ships the product. 3M MAKES NO OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ARISING OUT OF A COURSE OF DEALING, CUSTOM, OR USAGE OF TRADE. If a 3M product does not conform to this warranty, then the sole and exclusive remedy is, at 3M’s option, replacement of the 3M product or refund of the purchase price. This is a preliminary data sheet and subject to change.

Limitation of Liability

Except for the limited remedy stated above, and except to the extent prohibited by law, 3M will not be liable for any loss or damage arising from or related to the 3M product, whether direct, indirect, special, incidental, or consequential (including, but not limited to, lost profits or business opportunity), regardless of the legal or equitable theory asserted, including, but not limited to, warranty, contract, negligence, or strict liability.

