



Screen Printable Sheet Polyester Label Material

9017FL • 9018FL

Technical Data

October, 2009

Product Description

3M™ Screen Printable Sheet Polyester Label Materials 9017FL and 9018FL are durable, high performance materials that offer excellent thermal stability, moisture resistance and chemical resistance. These materials utilize 3M™ Adhesive 200MP, a solvent free acrylic adhesive, which is designed for exceptional environmental resistance and enhanced bond strength. The thick adhesive caliper is ideal for application to a variety of rough or textured surfaces.

Construction

(Calipers are nominal values.)

Product	Facestock	Adhesive	Liner
3M Label Material 9017FL	.002 in. Bright Silver Polyester PT (51 microns)	200MP Acrylic 5.0 mils (127 microns)	.004 in. Clear Polyester Liner (102 microns)
3M Label Material 9018FL	.002 in. Brushed Silver Polyester PT (51 microns)	200MP Acrylic 5.0 mils (127 microns)	.004 in. Clear Polyester Liner (102 microns)

Features

- Facestock is print treated for ink anchorage.
- Adhesive is designed for superior adhesive smoothness for improved clarity and high cohesive strength for resistance to edge lifting and slippage.
- Liner provides easy sheet processing and is designed for layflat applications that require domed decal molding. The backside of the liner is not printable. Polyester liner contributes to improved diecutting by allowing for deeper diecuts than paper without the added concern of exposing paper fibers. The film liner resists breakage during high speed dispensing. The polyester liner is recommended for clean room applications.

Application Ideas

- Barcode labels and rating plates.
- Property identification and asset labeling.
- Warning, instruction, and service labels for durable goods.
- Nameplates for durable goods.
- Substitutes for stamped metal riveted plates.
- Domed decals.

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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	5.0 mils	TM-2279
Release Range	30.4 grams/inch width	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 (10°C)	
Convertability	In order to capture the superior performance properties of 3M™ High Holding Acrylic Adhesive 200MP, thicker calipers are utilized 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.	

Typical Peel Adhesion Properties

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Adhesion: 90° peel test procedure is ASTM D 3330 modified for the angle change.

	90° Peel					
	Initial (20 Minute Dwell at RT)		72 Hour Dwell		Ultimate Bond	
Surface	Oz./In.	N/100 mm	Oz./In.	N/100 mm	Oz./In.	N/100 mm
Stainless Steel	59	64	109	119	178	194
High Surface Energy Plastic (ABS)	52	57	61	67	58	63
Low Surface Energy Plastic	Not recommended					

Environmental Performance

Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

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

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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.*

Silicone overspray/contamination of the substrate can cause poor adhesion.

Storage conditions recommendation – To minimize the effects of humidity on the products, package the die-cut and printed stock in polyethylene bags. Low density polyethylene (2-4 mils) can help prevent humidity penetration and stabilize the moisture content in the siliconized kraft liner.

*When using solvents, read and follow the manufacturer’s precautions and directions for use.

Printing

Print treated material is receptive to many inks including UV and conventional ink systems. The converter should verify that their ink systems are compatible with the polyester film by testing beforehand. The material is also receptive to other forms of printing including hot stamping. The converter should verify that the method of printing is compatible with the material by testing beforehand.

Die Cutting / Converting**Die Cutting:**

Die cut with steel rule, flatbed or rotary dies.

Doming:

The 4.0 mil polyester liner does not deform and provides a smooth surface during the doming process.

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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Technical Information

The technical information, recommendations and other statements contained in this document are based upon tests or experience that 3M believes are reliable, but the accuracy or completeness of such information is not guaranteed.

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ISO 9001:2000

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