



Screen Printable Polyester Performance Label Products with Structured Adhesive

7214SA • 7220SA

Technical Data

August, 2008

Product Description

3M™ Screen Printable Polyester Performance Label Products with Structured Adhesive are durable, high performance materials that offer excellent thermal stability and moisture resistance. These topcoated polyester label stocks utilize 3M™ Adhesive 350, which is designed to permanently bond to high and low surface energy plastics, textured and contoured surfaces, powder coatings, and slightly oily metals.

With unique microchannels throughout the structured adhesive, air flows freely from between the adhesive and substrate. Hand applied labels go on smoothly and stay that way. Even when labels are used on injection-molded plastic parts, bubbles that form from plastic outgassing can be smoothed to regain a neat appearance for the graphic.

Construction

Product Number	Facestock	Adhesive	Liner
3M™ Screen Printable Polyester Performance Label Product 7214SA	.002 in. Brushed Silver Polyester TC	350 1.1 mils	90# Embossed Polycoated 7.8 mil bleached kraft sheet polyethylene coated on two sides
3M™ Screen Printable Polyester Performance Label Product 7220SA	.002 in. White Polyester TC	350 1.1 mils	90# Embossed Polycoated 7.8 mil bleached kraft sheet polyethylene coated on two sides

(Calipers are nominal values)

Features

- Most universal adhesive for label materials.
- Adhesive offers excellent chemical resistance and holding strength, even at high temperatures.
- Liner provides easy sheet processing and is designed for the ultimate in layflat. The backside of this liner is not printable.
- Structured adhesive designed to allow air to flow from between adhesive and substrates so that hand applied labels go on smoothly and stay that way.
- UL Pending.

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Application Ideas

- Nameplates and product ID labels.
- Rating plates.
- Property identification and asset labeling.
- Warning, instruction, and service labels for durable goods, equipment/machinery and outdoor power equipment for lawn and garden.

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.

Adhesion properties determined per TLMI Method using 2.0 mil polyester with 1.1 mil of adhesive on a polished stainless steel panel on the substrates listed in the table below.

Peel Adhesion to		
Stainless Steel	3.8 lbs./in. (665 N/m)	TLMI Method, 180° Peel, 12"/min., 1" wide sample
HDPE	2.4 lbs./in. (420 N/m)	TLMI Method, 180° Peel, 12"/min., 1" wide sample
Polypropylene	3.1 lbs./in. (542 N/m)	TLMI Method, 180° Peel, 12"/min., 1" wide sample
Polycarbonate	3.1 lbs./in. (542 N/m)	TLMI Method, 180° Peel, 12"/min., 1" wide sample
Shear	> 100 hours	TLMI Method, 0.25 in. ² x 500g
Adhesive Coat Weight	1.70 to 2.00 g/100 in. ²	TM-2279
Release Range	10 to 110 g/2 in.	TLMI Method, 180° removal, 300 in./min.
Service Temperature 3M™ Label Products 7214SA, 7220SA	-20°F to 302°F (-29°C to 150°C)	
Minimum Application Temperature	50°F (10°C)	
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.	

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 40°F (5°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.

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Printing

- High gloss general purpose topcoating is designed for use with UV, solvent and water-based screen inks. Topcoating will also accept flexo, ion deposition, off set, letter press, hot stamp, and thermal transfer printing. The converter should verify that their ink systems are compatible with the topcoating on the polyester film by testing beforehand. Ink systems recommended for testing are listed below.

UV Screen Inks:

ANI Printing Inks (formerly
Akzo Nobel) Uvoscreen II
Environmental UV III Screen Pro
Nazdar 1600
Sericol's Uviflex, 021 UV, UV and PEL

Solvent Screen Inks:

Nazdar's 7700 and System 2
Sericol's Polyplast PY, GVYL,
VYL, TMI and Techmark

Water-based Screen Inks:

Nazdar 2700

Water-based Flexo Inks:

ANI Printing Inks Hydro Film 4000 Series
Arcar Ultra Film Series 5 Inks

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. Care should be taken to process this liner through rotary die cutting and stripping operations. If finished labels are applied to substrate by use of application machinery, thorough testing should be completed for compatibility with equipment.

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 one year from date of manufacture.

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Product Use

All statements, technical information and recommendations contained in this document are based upon tests or experience that 3M believes are reliable. However, many factors beyond 3M's control can affect the use and performance of a 3M product in a particular application, including the conditions under which the product is used and the time and environmental conditions in which the product is expected to perform. Since these factors 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.

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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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