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Technical Data Sheet

3M™ Performance Paper Label Material 7011

Additional Info

Regulatory Info/SDS

Product Description

3M™ Performance Paper Label Material provides resistance to flagging on small diameter vials. These label materials utilize 3M™ High Precision Acrylic Adhesive 320, which provides firmness and strength on a variety of surfaces including high surface energy (HSE) and low surface energy (LSE) plastics, as well as, metals.

Product Features

• Facestock is designed for traditional forms of press printing and write-on variable information.
• Designed to survive autoclaving, ETO and gamma sterilization while adhered to most surfaces.
• Meets many pharmaceutical industry or manufacturer specifications.
• 3M™ Performance Paper Label Material 7011 utilizes a 43# Densified Kraft liner that help improve application accuracy due to liner release consistency.
• Application rates up to 250 containers per minute.

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

Attribute Name	Value
Adhesive Type	320 Acrylic
Adhesive Coat Weight	1.24 — 1.65 g/in²
Facestock	35# Coated White Litho Tamper Indicating Paper

Attribute Name	Value
Adhesive Thickness	0.023 mm (0.9 mil)
Facestock Thickness	0.064 mm (2.5 mil)
Liner	43# Densified Kraft
Liner Thickness	0.064 mm (2.5 mil)

Attribute Name	Value
Convertability	The high tenacity of 3M™ Specialty Acrylic Adhesive 320 is specifically designed to be compatible with flexographic and thermal transfer technologies. Its aggressive tack properties, while desirable for the end use application, 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 Performance Characteristics

Temperature: 23 °C (73 °F)

Attribute Name	Test Method	Value
Liner Release	TLMI	1 — 10.8 g/cm (5 — 55 g/2 in) [1]

[1] 180° removal, 300 in/min

Attribute Name	Value
Minimum Application Temperature	10 °C (50 °F)
Long Term Temperature Resistance	121 °C (250 °F) [1]
Minimum Long Term Temperature Resistance	-40 °C (-40 °F) [1]

[1] Long Term (day, weeks)

180° Peel Adhesion

Temperature: 23 °C (73 °F)
Dwell Time: 72 h
Test Method: ASTM D3330

Substrate	Value
Polypropylene (PP)	*Delaminated N/cm [1]
Stainless Steel	*Delaminated N/cm [1]

[1] 300 mm/min (12 in/min)

Attribute Name	Value
Note	*The adhesion to the substrate is higher than the internal strength of the paper resulting in delamination or paper tear upon removal. (Calipers are nominal values)

Typical Environmental Characteristics

Temperature Resistance

250°F (121°C) for 24 hours: slight yellowing
-40°F (-40°C) for 24 hours: no significant visual change

Sterilization Process

Specifically designed for excellent flagging resistance on small diameter glass vials following steam autoclave, gamma or ethylene oxide sterilization.

Printing

Facestock is press printable with traditional flexographic process and thermal transfer printable with high-quality thermal transfer ribbons. Whenever printing for the first time, with a different ink system or on a new machine, we strongly recommend carrying out proofing trials to validate ink adhesion and durability prior to a full production run.

Converting

Rotary die cutting is recommended. Fanfolding labels is not recommended. Small labels should be evaluated carefully. Winding tensions should be kept at a minimum to prevent the adhesive from oozing.

Handling/Application Information

Application Examples

• Pharmaceutical labeling.
• Barcode labels and rating plates.
• Property identification and asset labeling.

Application Techniques

• For maximum bond strength, surface should be thoroughly cleaned and dried. A typical cleaning solvent is heptane or isopropyl alcohol. Note: Follow the manufacturer's precautions and directions for use when using solvents.
• For best bonding conditions, application surface should be at room temperature or higher. Low temperature surfaces, below 40°F (5°C), cause the adhesive to become firm and will not allow the adhesive to flow and develop intimate contact
with the substrate.
• Higher initial bonds can be achieved through increased rubdown pressure. Use a rubber roller with maximum hand pressure for best results.
*Note: When using solvents, read and follow the manufacturer's precautions and directions for use.

Storage and Shelf Life

Store under normal conditions of 16° to 27°C (60° to 80°F) and 40 to 60% relative humidity in the original packaging, out of direct sunlight. For best performance, use this product within 24 months from date of manufacture.

Available Sizes

Attribute Name	Value
Packaging	To minimize the effects of humidity, the product should be stored in plastic bags. Low density polyethylene (2 - 4 mils) can help prevent humidity penetration and stabilize the moisture content.

Information

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ISO Statement

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