

3M™ Pharmaceutical and Performance Paper Label Materials

7002 • 7004

FOD# 0933

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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, 12" /minute Dwell (ASTM D-3330, 305 mm/min), 1" wide sample, at 72°F (22°C) and 50% relative humidity. Values: oz./inch width.

<u>Surface</u>	<u>Initial 10 min dwell at room temperature</u>	<u>72 hours dwell at room temperature</u>
3M 7002 and 7004		
Stainless Steel		****Delaminated****
Glass		****Delaminated****
Polypropylene		****Delaminated****
High-Density Polyethylene		****Delaminated****

*Note: The adhesion is higher than the strength of the paper, resulting in delamination.

Liner Release: Average 180° Removal from Facestock.

<u>Product</u>	<u>90"/minute Grams/1 Inch Width</u>	<u>300"/minute Grams/1 Inch Width</u>
7002	10	12
7004	13	15

Flag Resistance: 7002 has excellent flagging resistance in applications to curved surfaces, especially glass.

Environmental Performance

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

The properties defined are based on the 180° peel, 12"/min (305 mm/min) 1" wide sample to a stainless steel substrate.

Water Immersion:	Delamination upon removal after four hours at room temp.
Isopropyl Alcohol Immersion:	Delamination upon removal after four hours at room temp.
Detergent/Water Immersion:	Delamination upon removal after four hours at room temp.
Cold Temperature:	Significant success with freezing and refrigerating containers prior to labeling.
Temperature Range:	-40°F (-40°C) to 250°F (121°C)
Sterilization Process:	7002 label stock is specifically designed for excellent flagging resistance on small diameter glass vials following autoclave, gamma or ethylene oxide sterilization.
Humidity Resistance:	No change in appearance after 24 hours at 90°F (32°F) at 90% R.H.

Shelf Life

Two years from date of manufacture of material if properly stored at 72°F (22°C) and 50% relative humidity.

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Processing	<p>Printing: Facestock on 7002 and 7004 is thermal transfer printable using many wax ribbons. REfer to the technical processing guide and other publications such as "Tips on UV INK Processing" and "Splice Construction Recommendations".</p>
Special Considerations	<p>Labels misaligned on glass containers should be removed with water at room temperature.</p> <p>Silicone overspray/contamination of the substrate can cause poor adhesion.</p> <p>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.</p>
Technical Information and Data	<p>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.</p>
Product Use	<p>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.</p>
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