



Pharmaceutical and Performance Paper Label Materials

7002 • 7004

FOD# 0933

page 1 of 3

Technical Data

November 11, 1998

Supersedes May 30, 1996

Construction	Facestock	Adhesive	Liner
	7002	0.9 mil (0.02 mm)	2.5 mil (0.06 mm)
	2.8 mil (0.07 mm)	#320 High-Tenacity	43# Semi-bleached kraft
	60# Bright white coated paper	acrylic	
	7004	0.9 mil (0.02 mm)	2.5 mil (0.06 mm)
	2.8 mil (0.07 mm)	#300 High-Strength	43# Semi-bleached kraft
	60# Bright white coated paper	acrylic	

Features

- #300 High-Strength adhesive on 7004 offers outstanding adhesion — quick stick and permanent bond — to low surface energy plastics.
- #320 High-Tenacity adhesive on 7002 provides superior flag on many small radius bottles, ampoules, and vials and offers short-term repositionability from selected surfaces.
- Designed for narrow web presses using flexographic, UV letterpress, screen or gravure printing processes.
- Recommended for automatic application rates from 0-250 cpm.
- Autoclavable on most surfaces.
- Improved application accuracy due to superior liner release consistency.

Application Ideas

- Meets a number of specifications for pharmaceutical packaging including newer ethical packages using low surface energy plastics.
- Meets specifications for health care disposables, cosmetic and consumer products industries.

3M™ Pharmaceutical and Performance Paper Label Materials

7002 • 7004

FOD# 0933

page 2 of 3

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.

Surface	Initial 10 min dwell at room temperature	72 hours dwell at room temperature
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.

Product	90"/minute Grams/1 Inch Width	300"/minute Grams/1 Inch Width
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.

3M™ Pharmaceutical and Performance Paper Label Materials

7002 • 7004

FOD# 0933

page 3 of 3

Processing	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".
Special Considerations	Labels misaligned on glass containers should be removed with water at room temperature. 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.
Technical Information and Data	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.
Product Use	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.
Warranty and Limited Remedy	The 3M product will be free from defects in material and manufacture for a period of one (1) year from the date of manufacture. 3M MAKES NO OTHER WARRANTIES OR CONDITIONS, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY IMPLIED WARRANTY ARISING OUT OF A COURSE OF DEALING, CUSTOM, OR USAGE OF TRADE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's method of application. If the 3M product is defective within the warranty period stated above, your exclusive remedy and 3M's sole obligation shall be, at 3M's option, to replace or repair the 3M product or refund the purchase price of the 3M product.
Limitation of Liability	Except where prohibited by law, 3M will not be liable for any loss or damage arising from the 3M product, whether direct, indirect, special, incidental, or consequential, regardless of the legal theory asserted, including contract, warranty, negligence, or strict liability.



Industrial Tape and Specialties Division

3M Center, Building 220-7W-03
St. Paul, MN 55144-1000
USA
1 800 362 3550
1 800 223 7427 Fax On Demand
www.3M.com

©3M 1998 70-0709-4407-2