

Product Information Sheet

B-747 Lab

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B-747 LASER PRINTABLE WHITE POLYESTER LABEL STOCK

This Product Information Sheet is focused on the suitability of B-747 for laboratory applications. For additional data regarding B-747 performance please refer to B-747 Technical Data Sheet.

Description:

GENERAL

Print Technology: Laser

Material Type: White polyester

Finish: Matte white

Adhesive: Permanent acrylic

APPLICATIONS

Laboratory identification such as plates, bottles and general laboratory identification.

AGENCY APPROVALS

UL: Recognized to UL969 Labeling and Marking Standard when printed with designated laser printers. See UL file MH17154 for specific details.

CSA: accepted when printed with designated laser printers. See CSA Acceptance Record LS41833 for specific details.

Details:

Note: All values shown are averages and should not be used for specification purposes. Test data and test results contained in this document are for general information only and shall not be relied upon by Brady customers for designs and specifications, or be relied on as meeting specified performance criteria. Customers desiring to develop specifications or performance criteria for specific product applications should contact Brady for further information.

PHYSICAL PROPERTIES	TEST METHODS	AVERAGE RESULTS
Thickness	ASTM D1000 -Substrate -Adhesive -Total (excluding liner)	0.0660 mm (0.0026 inch) 0.0279 mm (0.0011 inch) 0.0940 mm (0.0037 inch)
Adhesion to: -Stainless Steel	ASTM D1000 20 minute dwell 24 hour dwell	54 oz/inch (59 N/100 mm) 59 oz/inch (65 N/100 mm)
-Polypropylene	20 minute dwell 24 hour dwell	29 oz/inch (32 N/100 mm) 34 oz/inch (37 N/100 mm)
-Glass	20 minute dwell 24 hour dwell	54 oz/inch (59 N/100 mm) 60 oz/inch (65 N/100 mm)

PERFORMANCE PROPERTIES – LAB SIMULATED ENVIRONMENT


Performance properties were tested on B-747 samples printed on a Hewlett Packard Laserjet 6P printer. Printed samples were laminated to glass vials (2.8 cm outer diameter), polypropylene centrifuge tubes (3.5 cm outer diameter, 50 ml capacity), flat polypropylene and glass microscope slides and allowed to dwell 24 hours before exposure to the indicated environments.


ENVIRONMENT	TEST METHOD		TYPICAL RESULTS
High Service Temperature	30 days at elevated temperatures		No visible effect at 130°C
Freezer	3 cycles of 16 hours at -70°C (-94°F)/ 8 hours at room temperature	<div>✓</div> <div>✓</div> <div>✓</div> <div>✓</div>	Glass vial Polypropylene centrifuge tube Glass microscope slide Flat polypropylene
Pressure Cooker* (simulate autoclave)	3 cycles of 1 hour in 121°C (250°F) 15 psi pressure cooker/23 hours room temperature	<div>✗</div> <div>✗</div> <div>✗</div> <div>✗</div>	Glass vial Polypropylene centrifuge tube Glass microscope slide Flat polypropylene
Liquid Nitrogen	3 cycles of 4 hours at -196°C (-320°F)/20 hours at room temperature	<div>✗</div> <div>✓</div> <div>✓</div> <div>✓</div>	Glass vial Polypropylene centrifuge tube Glass microscope slide Flat polypropylene
Freezer to boiling water**	1 hour at -70°C (-94°F) then placed in boiling water 100°C (212°F)	<div>✓</div> <div>✓</div> <div>✓</div> <div>✓</div>	Glass vial Polypropylene centrifuge tube Glass microscope slide Flat polypropylene
Liquid Nitrogen to boiling water**	1 hour at -196°C (-320°F) then placed in boiling water 100°C (212°F) for 10 minutes	<div>✗</div> <div>◆</div> <div>◆</div> <div>◆</div>	Glass vial Polypropylene centrifuge tube Glass microscope slide Flat polypropylene

*Topcoat is destroyed by pressure cooker process.

**Print/topcoat is slightly damaged by exposure to boiling water.

 Label suitable for application; no visible effect, label remains adhered to test surface

 Label may work in application; test results were mixed

 Label not recommended for application; label came off either during testing or after test surface was removed from environment.

PERFORMANCE PROPERTIES - CHEMICAL

Samples of B-747 printed on a Hewlett Packard Laserjet 6P printer were laminated to glass microscope slides and allowed to dwell 24 hours prior to testing. Test conducted at room temperature. Samples were immersed in the test solvent for 15 minutes. The samples were removed from the test solvent and rubbed 10 times with a cotton swab saturated with the test fluid. The rating scale below shows the effect to the quality of the print for each sample.

CHEMICAL REAGENT	SUBJECTIVE OBSERVATION OF VISUAL CHANGE		
	EFFECTS TO LABEL STOCK	EFFECTS TO PRINTED IMAGE	
		WITHOUT RUB	WITH RUB
Ethanol	No visible effect	1	2
Toluene	No visible effect	3	5
Isopropanol	No visible effect	1	1
Xylene	No visible effect	2-3	5
Dimethylsulfoxide (DMSO)	No visible effect	5	5
Methylene Chloride	No visible effect	5	5
50% Acetic Acid	No visible effect	1	1
10% Hydrochloric Acid	Label discolors to yellow-orange around print	1	1
10% Sodium Hydroxide	No visible effect	1	1
10% Chlorox Solution	No visible effect	1	1

Rating Scale:

1=no visible effect

2=slight smear or print removal, detectable but minimal smear

3=moderate smear or print removal (print still legible)

4=severe smear or print removal (print illegible or just barely legible)

5=complete print and/or topcoat removal

NP=print removed prior to rub

Storage Stability:

Product testing, customer feedback, and history of similar products, support a customer performance expectation of at least **two years from the date of receipt** for this product as long as this product is stored in its original packaging in an environment below 80 degrees F and 60% RH. We are confident that our product will perform well beyond this time frame. However, it remains the responsibility of the user to assess the risk of using such product. We encourage customers to develop functional testing protocols that will qualify a product's fitness for use, in their actual applications.

Trademarks and References:

ASTM: American Society for Testing and Materials (U.S.A.)

CSA: Canadian Standards Association

UL: Underwriters Laboratories Inc. (U.S.A.)

All S.I. Units (metric) are mathematically derived from the U.S. Conventional Units

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WARRANTY

Brady products are sold with the understanding that the buyers will test them in actual use and determine for themselves their adaptability to their intended uses. Brady warrants to the buyers that its products are free from defects in material and workmanship, but limits its obligation under this warranty to replacement of the product shown to Brady's satisfaction to have been defective at the time Brady sold it. This warranty does not extend to any persons obtaining the product from

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