



**BRADY B-2492 FREEZERBONDZ™ WHITE POLYESTER AQUEOUS INKJET PRINTABLE LABEL STOCK**

TDS No. B-2492  
Effective Date: 5/9/2024

**Description:**

Brady B-2492 label stock is an aqueous inkjet printable, flexible, matte finish, pressure sensitive adhesive product for use in low temperature labeling laboratory applications. B-2492 is designed to be used with the BradyJet J7300 Color Label Printer.

**General:**

**Print Technology:** Inkjet  
**Material Type:** Polyester  
**Finish:** Matte  
**Adhesive:** Permanent Acrylic

**Applications:**

Laboratory identification such as vials, centrifuge tubes, test tubes, and slides.

**Recommended Inks:**

J7300: BradyJet™ P-Series Ink Cartridges: cyan/magenta/yellow and black

**Regulatory Approvals:**

For information on the Weee-RoHS compliance status for a Brady Product go to one of the following websites:

In Canada: [www.bradycanada.ca/weee-rohs](http://www.bradycanada.ca/weee-rohs)

In Europe: [www.bradyeurope.com/rohs](http://www.bradyeurope.com/rohs)

In Japan: [www.brady.co.jp/products/labelsuse/rohs](http://www.brady.co.jp/products/labelsuse/rohs)

All other regions: [www.bradyid.com/weee-rohs](http://www.bradyid.com/weee-rohs)

**Special Features:**

B-2492 Freezerbondz™ can be applied to frozen surfaces including glass and polypropylene stored in liquid nitrogen. B-2492 offers excellent print smudge resistance, solvent resistance when using the BradyJet™ P-Series Inks, and excellent low temperature performance. B-2492 performs well in common laboratory environments such as liquid nitrogen and freezer applications.

**Details:**

PHYSICAL PROPERTIES	TEST METHODS	AVERAGE RESULTS
Thickness	ASTM D 1000 -Total (excluding liner)	0.0043 inch (0.11 mm)
Adhesion to:	ASTM D 1000	
-Glass	20 minute dwell 24 hour dwell	12 oz/in (13 N/100 mm) 18 oz/in (20 N/100 mm)
-Polypropylene	20 minute dwell 24 hour dwell	13 oz/in (14 N/100 mm) 15 oz/in (16 N/100 mm)
-Stainless steel	20 minute dwell 24 hour dwell	14 oz/inch (15 N/100 mm) 15 oz/inch (16 N/100 mm)

**ENVIRONMENTAL PERFORMANCE PROPERTIES**
**LABEL APPLIED TO ROOM TEMPERATURE SURFACE**

B-2492 samples were laminated at room temperature to surfaces listed below and allowed to dwell 24 hours at room temperature prior to exposure to the indicated environments. Labels applied with either-gapped or longitudinal to 1.5 mL Eppendorf tubes, 1.5 mL Cryogenic (polypropylene) vials, 5 mL, 15 mL and 50 mL Polypropylene tubes, 8.5 mL Glass tubes, flat on plastic Whirl-pak bags, Aluminum, Stainless Steel, and Polypropylene panels, Glass microscope slides, Cardboard and Aluminum foil.

NOTE for Surfaces: Testing was completed on the following surfaces; Cardboard, Aluminum and Stainless steel; Eppendorf 1.5mL conical tube<sup>1</sup>, 1.5 mL Cryogenic (Polypropylene) vials and caps<sup>5</sup>, 50mL Polypropylene tubes<sup>1</sup>, 15mL Polypropylene tubes<sup>2</sup>, 5 mL polypropylene tubes 8.5mL Glass tubes<sup>1</sup>, Glass microscope slides<sup>3</sup>, Aluminum foil, Polypropylene panels, and Plastic bags (Whirl-Pak)<sup>4</sup>

Manufacturer:

<sup>1</sup> = VWR International

<sup>2</sup> = Nalgene®

<sup>3</sup> = Globe Scientific Inc.

<sup>4</sup> = Nasco

<sup>5</sup> = Sigma Aldrich

ENVIRONMENT	TEST METHOD	TYPICAL RESULTS
High Service Temperature	30 days at various temperatures	Moderate discoloration at 212°F (100°C), minimal effect to print. Severe yellowing at 266°F (130°C), label still functional
Liquid Nitrogen	3 cycles of 4 hours at -320°F (-196°C) and 20 hours at room temperature	<ul style="list-style-type: none"> <li>✓ Glass test tube gapped, longitudinal</li> <li>✓ Polypropylene tube/vial gapped, longitudinal</li> <li>✓ Glass microscope slide</li> <li>✓ Plastic Whirl-Pak bags</li> <li>✓ Flat polypropylene</li> <li>✓ Aluminum foil</li> <li>✓ Stainless steel, aluminum and cardboard</li> </ul>
Freezer	3 cycles of 16 hours at -112°F (-80°C) and 8 hours at room temperature	<ul style="list-style-type: none"> <li>✓ Glass test tube gapped, longitudinal</li> <li>✓ Polypropylene tube/vial gapped, longitudinal</li> <li>✓ Glass microscope slide</li> <li>✓ Plastic Whirl-Pak bags</li> <li>✓ Flat polypropylene</li> <li>✓ Aluminum foil</li> <li>✓ Stainless steel, aluminum and cardboard</li> </ul>
Liquid Nitrogen to 122°F (50°C) water	1 hour at -320°F (-190°C) then placed in warm water 122°F (50°C) for 10 minutes	<ul style="list-style-type: none"> <li>✓ Glass test tube gapped, longitudinal</li> <li>✓ Polypropylene tube/vial gapped, longitudinal</li> <li>✓ Glass microscope slide</li> <li>✓ Plastic Whirl-Pak bags</li> <li>✓ Flat polypropylene</li> <li>✓ Aluminum foil</li> <li>✓ Stainless steel and aluminum</li> <li>✗ Cardboard</li> </ul>
Freezer to 122°F (50°C) water	1 hour at -112°F (-80°C) then placed in warm water 122°F (50°C) for 10 minutes	<ul style="list-style-type: none"> <li>✓ Glass test tube gapped, longitudinal</li> <li>✓ Polypropylene tube/vial gapped, longitudinal</li> <li>✓ Glass microscope slide</li> <li>✓ Plastic Whirl-Pak bags</li> <li>✓ Flat polypropylene</li> <li>✓ Aluminum foil</li> <li>✓ Stainless steel and aluminum</li> <li>✗ Cardboard</li> </ul>

✓ = 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.

**ENVIRONMENTAL PERFORMANCE PROPERTIES**

**LABEL APPLIED TO COLD SURFACE**

Surfaces listed below were stored for 24 hours in liquid nitrogen vapor at -320°F (-196°C). B-2492 samples were then laminated immediately after removal of the surfaces from liquid nitrogen. Labels were applied with either gapped or longitudinal to 1.5 mL Eppendorf tubes, 1.5 mL Cryogenic (polypropylene) vials, 5 mL, 15 mL and 50 mL Polypropylene tubes, 8.5 mL Glass tubes, and flat on plastic Whirl-pak bags, Aluminum, Stainless Steel, and Polypropylene panels, Glass microscope slides, Cardboard and Aluminum foil.

ENVIRONMENT	TEST METHOD	TYPICAL RESULTS
Liquid Nitrogen	3 cycles of 4 hours at -320°F (-196°C) and 20 hours at room temperature	<ul style="list-style-type: none"> <li>✓ Glass test tube gapped, longitudinal</li> <li>✓ Polypropylene tube/vial gapped</li> <li>✓ Polypropylene tube/vial longitudinal</li> <li>✓ Glass microscope slide</li> <li>✓ Flat polypropylene</li> <li>✓ Plastic Whirl-Pak bags</li> <li>✓ Aluminum foil</li> <li>✓ Cardboard</li> </ul>
Freezer	3 cycles of 16 hours at -112°F (-80°C) and 8 hours at room temperature	<ul style="list-style-type: none"> <li>✓ Glass test tube gapped, longitudinal</li> <li>✓ Polypropylene tube/vial gapped, longitudinal</li> <li>✓ Plastic Whirl-Pak bags</li> <li>✓ Glass microscope slide</li> <li>✓ Flat polypropylene</li> <li>✓ Aluminum foil</li> <li>✓ Stainless steel, aluminum and cardboard storage boxes</li> </ul>
Liquid Nitrogen to warm water	1 hour at -320°F (-190°C) then placed in warm water 122°F (50°C) for 10 minutes	<ul style="list-style-type: none"> <li>✓ Glass test tube gapped, longitudinal</li> <li>✓ Polypropylene tube/vial gapped, longitudinal</li> <li>✓ Glass microscope slide</li> <li>✓ Flat polypropylene</li> <li>✓ Aluminum foil</li> <li>✓ Stainless steel, aluminum and cardboard</li> </ul>
Freezer to warm water	1 hour at -112°F (-80°C) then placed in warm water 122°F (50°C) for 10 minutes	<ul style="list-style-type: none"> <li>✓ Glass test tube gapped, longitudinal</li> <li>✓ Polypropylene tube/vial gapped, longitudinal</li> <li>✓ Glass microscope slide</li> <li>✓ Flat polypropylene</li> <li>✓ Aluminum foil</li> <li>✓ Stainless steel, aluminum and cardboard</li> </ul>

✓ = 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 RESISTANCE**

The chemical resistance of B-2492 samples printed with the BradyJet J7300 were tested at room temperature. Printed samples were laminated to aluminum or polypropylene (for 10% Sodium hydroxide, 50% Acetic Acid, 10% Clorox solution tested samples) panels and allowed to dwell 24 hours prior to testing. Samples were immersed in test solvents for 15 minutes, removed, and rubbed 20 times with a cotton swab saturated with the test fluid. The rating scale below shows the effect on the quality of the print for each sample.

CHEMICAL REAGENT	SUBJECTIVE OBSERVATION OF VISUAL CHANGE		
	EFFECT TO LABEL STOCK/ADHESIVE	EFFECTS TO PRINTED IMAGE	
		J7300 (Default Settings)	
		WITHOUT RUB	WITH RUB
Ethanol	No visible effect	1	2
Methanol	No visible effect	1	2
Toluene	No visible effect	2	2
Acetone	No visible effect	2	2
Isopropyl Alcohol	No visible effect	1	2
Xylene	No visible effect	2	2
10% Formalin	No visible effect	1	2
Dimethylsulfoxide (DMSO)	No visible effect	2	2
50% Acetic Acid	No visible effect	1	2
10% Sodium Hydroxide	Topcoat delaminated	3	NA
10% Clorox® bleach solution	No visible effect	1	2

**Rating Scale:**

1 = No visible effect

2 = Effect to printed image

3 = Complete ink / topcoat removal

**Shelf Life:**

Shelf life is 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° F (27° C) and 60% RH. It remains the responsibility of the user to assess the risk of using this product. We encourage customers to develop testing protocols that will qualify a product's fitness for use in their actual application.

**Trademarks:**

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

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

Clorox® is a registered trademark of Brady Worldwide, Inc.

Freezerbondz™ is a trademark of Brady Worldwide, Inc.

Nalgene® is a registered trademark of Nalge Nunc International Corporation

S.I.: International System of Units

**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.

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