Product Information Sheet
B-498 Lab
Effective Date: 1/28/19

B-498 THERMAL TRANSFER PRINTABLE, REPOSITIONABLE COATED VINYL CLOTH LABEL STOCK

This Product Information Sheet is focused on the suitability of B-498 for laboratory applications. For additional data regarding B-498 performance please refer to B-498 Technical Data Sheet.

Description:

GENERAL

Print Technology: Thermal transfer
Material Type: Coated Vinyl cloth
Finish: Semi-Gloss White
Adhesive: Repositionable Rubber Based

APPLICATIONS

General laboratory identification such as slides, plates and bottles

RECOMMENDED RIBBONS

Brady Series R6200
Brady Series 4300
Brady Series R6000 Halogen (alternate)*
*B-498 can be printed with Brady Series R4300 or R6000 Halogen Free ribbon; please note that testing described in this product information sheet was performed on materials printed with the Brady Series R6200 ribbon.

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
In Europe: www.bradyeurope.com/rohs
In Japan: www.brady.co.jp/products/labelsuse/rohs
All other regions: www.bradyid.com/weee-rohs

SPECIAL FEATURES

B-498 has a specially formulated topcoat for very good thermal transfer print quality. The adhesive and cloth backing give excellent holding power, yet allow for clean removal and repositioning.

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 -Total (excluding liner)	 0.185 mm (0.0073 inch)
Adhesion to: -Stainless Steel -Polypropylene	ASTM D1000 20 minute dwell 24 hour dwell 20 minute dwell	 65 oz/inch (71 N/100 mm) 70 oz/inch (77 N/100 mm) 56 oz/inch (61 N/100 mm)

PHYSICAL PROPERTIES	TEST METHODS	AVERAGE RESULTS
	24 hour dwell	63 oz/inch (69 N/100 mm)
-Glass	20 minute dwell 24 hour dwell	54 oz/inch (59 N/100 mm) 67 oz/inch (74 N/100 mm)

PERFORMANCE PROPERTIES	LAB SIMULATED ENVIRONMENT

Performance properties tested on B-498 printed with Brady Series R6200 ribbon. Printed samples were laminated to glass vials (2.8 cm outer diameter), polypropylene centrifuge tubes (1.7 cm outer diameter, 15 ml capacity) 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 80°C (175°F)		Slight darkening. Topcoat appears more cloth like. No visible effect on print quality.
Freezer	3 cycles of 16 hours at –70°C (–94°F)/ 8 hours at room temperature	✓ ✓ ✓ ✓	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 housr room temperature	X ◆ X X	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	X X X X	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)	X X X X	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	X X X X	Glass vial Polypropylene centrifuge tube Glass microscope slide Flat polypropylene

** Samples for this testing were placed on glass microscope slides

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

◆ Label may work in application; test results were mixed

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

PERFORMANCE PROPERTIES	CHEMICAL RESISTANCE

Samples of B-498 were printed with Brady Series R6200 ribbon. Printed samples 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 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	1
Toluene	Adhesive ooze	4	5
Isopropanol	No visible effect	1	1
Xylene	Adhesive ooze	2	5
Dimethylsulfoxide (DMSO)	No visible effect	2	5
Methylene Chloride	Adhesive ooze	NP	NP
50% Acetic Acid	Slight edge lift off slide	1	1
10% Hydrochloric Acid	Slight edge lift off slide	1	1
10% Sodium Hydroxide	Slight edge lift off slide	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

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.

References:
ASTM: American Society for Testing and Materials (U.S.A.)
All S.I. Units (metric) are mathematically derived from the U.S. Conventional Units
Note: All values shown are averages and should not be used for specification purposes.

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 the buyers. This warranty is in lieu of any other warranty, express or implied, including, but not limited to, any implied warranty of merchantability or fitness for a particular purpose, and of any other obligations or liability on Brady's part. Under no circumstances will Brady be liable for any loss, damage, expense, or consequential damages of any kind arising in connection with the use, or inability to use, Brady's products.