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WHEN PERFORMANCE MATTERS MOST™

Technical Data Sheet

BRADY B-494 THERMAL TRANSFER PRINTABLE COLOR POLYESTER LABEL STOCK

TDS No B-494
Effective Date: 01/18/19

Description:

GENERAL

Print Technology: Thermal Transfer
Material Type: Polyester
Finish: Gloss white
Adhesive: Permanent Acrylic

APPLICATIONS

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

RECOMMENDED RIBBONS

Brady Series R6400 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
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

Brady B-494 is has a colored border printed on the label which allows for differentiation of test specimens within users processes. Vial top label is solid color. Superior chemical resistance when printed with the Brady Series R6400 black thermal transfer ribbon.

Details:

PHYSICAL PROPERTIES	TEST METHODS	TYPICAL RESULTS
Thickness	ASTM D1000 -Total (excluding liner)	 0.00300 inches (0.0762 mm)
Adhesion to: -Stainless Steel	ASTM D1000 20 minute dwell 24 hour dwell	 23 oz/in (25 N/100 mm) 35 oz/in (38 N/100 mm)
-Glass	20 minute dwell 24 hour dwell	17 oz/in (18 N/100 mm) 19 oz/in (21 N/100 mm)
-Polypropylene	20 minute dwell 24 hour dwell	31 oz/in (34 N/100 mm) 37 oz/in (41 N/100 mm)
Tack	ASTM D 2979 Polyken™ Probe Tack (1 second dwell, 1 cm/sec separation)	28 oz (790 g)

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ENVIRONMENTAL PERFORMANCE PROPERTIES – LABEL APPLIED TO ROOM TEMPERATURE SURFACE

B-494 samples were printed with the Brady Series R6400 ribbon. B-494 samples were adhered at room temperature to the surfaces listed below.

ENVIRONMENT	TEST METHOD	TYPICAL RESULTS
High Service Temperature	5 days at 70°C (158°F)	✔ 8.5 ml glass test tube ✔ 1.5 ml polypropylene cryovial ✔ 5 ml polypropylene cryovial ✔ glass microscope slide ✔ Polyethylene bag
Low Service Temperature	5 days at -80°C (-112°F)	✔ 8.5 ml glass test tube ✔ 1.5 ml polypropylene cryovial ✔ 5 ml polypropylene cryovial ✔ glass microscope slide ◆ Polyethylene bag
Simulated Incubator	3 cycles of 1 hour at 70°C (158°F) and 3 hours at room temperature	✔ 8.5 ml glass test tube ✔ 1.5 ml polypropylene cryovial ✔ 5 ml polypropylene cryovial ✔ glass microscope slide ✔ Polyethylene bag
Freezer	5 cycles of 16 hours at -80°C (-112°F) and 8 hours at room temperature	✔ 8.5 ml glass test tube ✔ 1.5 ml polypropylene cryovial ✔ 5 ml polypropylene cryovial ✔ 15 ml polypropylene tube ✔ 50 ml polypropylene tube ✔ Glass microscope slide ◆ Polyethylene bag ✔ Vial top
Liquid Nitrogen	5 cycles of 16 hours at -196°C (-320°F) and 8 hours at room temperature	✔ 8.5 ml glass test tube ✔ 1.5 ml polypropylene cryovial ✔ 5 ml polypropylene cryovial ✔ 15 ml polypropylene tube ✔ 50 ml polypropylene tube ✔ Glass microscope slide ✔ Vial top
Freezer to 50°C Water	1 hour at -80°C (-112°F) then placed in 50°C water for 10 minutes	✔ 8.5 ml glass test tube ◆ 1.5 ml polypropylene cryovial ✔ 5 ml polypropylene cryovial ✔ 15 ml polypropylene tube

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		✓ 50 ml polypropylene tube ◆ glass microscope slide ◆ vial top
Liquid Nitrogen to 50°C Water	1 hour at -196°C (-320°F) then placed in 50°C water for 10 minutes	◆ 8.5 ml glass test tube ◆ 1.5 ml polypropylene cryovial ✓ 5 ml polypropylene cryovial ✓ 15 ml polypropylene tube ✓ 50 ml polypropylene tube ◆ glass microscope slide ◆ vial top

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

◆ =Label may work in application; test results were mixed

B-494 is not suitable for autoclave applications.

PERFORMANCE PROPERTY	CHEMICAL RESISTANCE

The chemical resistance of B-494 printed with the Brady Series R6400 ribbon was tested at room temperature. The 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 samples were rated for the amount of print removal using the rating scale below.

CHEMICAL REAGENT	SUBJECTIVE OBSERVATION OF VISUAL CHANGE	
	EFFECT TO LABEL STOCK/ADHESIVE	EFFECT TO PRINTED IMAGE
Ethanol	No visible effect	1
Methanol	No visible effect	1
Toluene	Slight edge penetration	1
Acetone	Slight edge penetration	1
Isopropyl Alcohol	No visible effect	1
Xylene	Slight edge penetration	1
10% Formalin	No visible effect	1
Dimethylsulfoxide (DMSO)	No visible effect	1
50% Acetic Acid	No visible effect	1
10% Sodium Hydroxide	No visible effect	1
10% Chlorox® bleach solution	No visible effect	1

Rating Scale:
1=no visible effect
2=slight print smear or removal
3=moderate smear or print removal (print is still legible)
4=severe smear or print removal (print illegible or just barely legible)
5=complete print and/or topcoat removal

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.

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Trademarks:
ANSI: American National Standards Institute (U.S.A.)
ASTM: American Society for Testing and Materials (U.S.A.)
PSTC: Pressure Sensitive Tape Council (U.S.A.)
Polyken™ is a trademark of Testing Machines Inc.
Chlorox® is a registered trademark of The Chlorox Company
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.
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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