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WHEN PERFORMANCE MATTERS MOST™

Technical Data Sheet

BRADY B-7425 THERMAL TRANSFER PRINTABLE PROPYLENE LABEL STOCK

TDS No B-7425
Effective Date: 03/07/2019

Description:

GENERAL

Print Technology: Thermal Transfer
Material Type: Polypropylene
Finish: Matte
Adhesive: Permanent Acrylic

APPLICATIONS

Laboratory identification such as vials, centrifuge tubes and test tubes

RECOMMENDED RIBBONS

Brady Series R4300
Brady Series R6200
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-7425-AC is a steam sterilization indication option for B-7425. B-7425-AC is printed with a special header which will change from white to brown when the label is exposed to steam sterilization processes. Note that this is a one time use process.

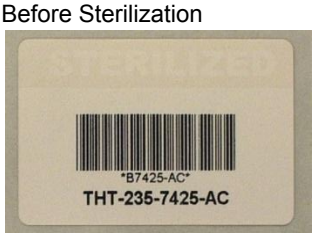
Details:

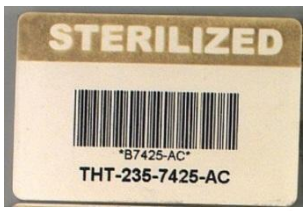
PHYSICAL PROPERTIES	TEST METHODS	TYPICAL RESULTS
Thickness	ASTM D1000 -Total (excluding liner)	 0.004 inches (0.1016 mm)
Adhesion to: -Stainless Steel	ASTM D1000 20 minute dwell 24 hour dwell	 50 oz/in (55 N/100 mm) 61 oz/in (66 N/100 mm)
-Glass	20 minute dwell 24 hour dwell	47 oz/in (52 N/100 mm) 51 oz/in (56 N/100 mm)
-Polypropylene	20 minute dwell 24 hour dwell	54 oz/in (59 N/100 mm) 57 oz/in (62 N/100 mm)
Tack	ASTM D 2979 Polyken™ Probe Tack (1 second dwell, 1 cm/sec separation)	33 oz (922 g)

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ENVIRONMENTAL PERFORMANCE PROPERTIES – LABEL APPLIED TO ROOM TEMPERATURE SURFACE

B-7425 samples were printed with the Brady Series R4300 and the Brady Series R6400 thermal transfer ribbons. B-7425 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 cyrovial ✔ 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 cyrovial ✔ 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 cyrovial ✔ glass microscope slide ✔ Polyethylene bag
Autoclave	5 cycles at 120°C (248°F) for 20 minutes	✔ 8.5 ml glass test tube ✔ 1.5 ml polypropylene cryovial ✔ 5 ml polypropylene cyrovial ✔ 15 ml polypropylene tube ✔ 50 ml polypropylene tube ✔ Glass microscope slide ✔ Vial top
Autoclave – B-7425-AC	1 cycle at 121°C (250°F) for 10 minutes	Sterilization indicates cocoa brown** Before Sterilization  After Sterilization

		
Freezer	5 cycles of 16 hours 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 cyrovial ✔ 15 ml polypropylene tube ✔ 50 ml polypropylene tube ✔ Well plate ✔ Glass microscope slide ✔ Polyethylene bag ✔ Vial top
Liquid Nitrogen	5 cycles of 4 hours at -196°C (-320°F) and 20 hours at room temperature	✔ 8.5 ml glass test tube ✔ 1.5 ml polypropylene cryovial ✔ 5 ml polypropylene cyrovial ✔ 15 ml polypropylene tube ✔ 50 ml polypropylene tube ✔ Glass microscope slide ✔ Vial top
Freezer to Boiling Water	1 hour at -80°C (-112°F) then placed in boiling water (100°C/212°F) for 10 minutes	✔ 8.5 ml glass test tube ◆ 1.5 ml polypropylene cryovial ✔ 5 ml polypropylene cyrovial ✔ 15 ml polypropylene tube ✔ 50 ml polypropylene tube ✔ glass microscope slide ◆ vial top
Liquid Nitrogen to Boiling Water	1 hour at -196°C (-320°F) then placed in boiling water (100°C/212°F) for 10 minutes	◆ 8.5 ml glass test tube ◆ 1.5 ml polypropylene cryovial ◆ 5 ml polypropylene cyrovial ◆ 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

** Variability in darkness of indication color may be observed depending on autoclave, sterilization temperature and duration.

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PERFORMANCE PROPERTY	CHEMICAL RESISTANCE

The chemical resistance of B-7425 printed with the Brady Series R4300, the Brady Series R6200 and the Brady Series R6400 black ribbons 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	EFFECTS TO PRINTED IMAGE		
		R4300	R6200	R6400
Ethanol	No visible effect	1	1	1
Methanol	No visible effect	1	1	1
Toluene	Slight adhesive ooze	2	4	1
Acetone	No visible effect	1	4	1
Isopropyl Alcohol	No visible effect	1	1	1
Xylene	Slight adhesive ooze	1-2	4-5	1
10% Formalin	No visible effect	1	1	1
Dimethylsulfoxide (DMSO)	No visible effect	1	2	1
50% Acetic Acid	No visible effect	1	2	1
10% Sodium Hydroxide	No visible effect	5, topcoat removal	5, topcoat removal	5, topcoat removal
10% Chlorox® bleach solution	No visible effect	1	1	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

PERFORMANCE PROPERTY	CHEMICAL RESISTANCE – B-7425-AC

The chemical resistance of the steam sterilization indicating ink printed on the B-7425-AC label was tested on non-sterilized and sterilized labels. Testing was conducted at room temperature. The area where the ink is printed was rubbed 10 times with a cotton swab saturated with the test fluid. The samples were rated for the amount of ink removal using the rating scale below.

CHEMICAL REAGENT	SUBJECTIVE OBSERVATION OF VISUAL CHANGE	
	EFFECT TO STEAM STERILIZATION INK	
	UNSTERILIZED	STERILIZED
Ethanol	5	2
Methanol	5	2-3
Toluene	5	3-4
Acetone	5	4-5

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Isopropyl Alcohol	5	2
Xylene	5	3
10% Formalin	5	1
Dimethylsulfoxide (DMSO)	5	1-2
50% Acetic Acid	5	3-4
10% Sodium Hydroxide	5, area where rubbed turns slightly yellow	3-4
10% Chlorox® bleach solution	5, area when rubbed turns slightly brown	3-4

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

Shelf Life:
B-7425 – 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.

B-7425-AC – Shelf life is one year 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:
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.

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.

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