



Technical Data Sheet

BRADY B-7425 THERMAL TRANSFER PRINTABLE PROPYLENE LABEL STOCK

TDS No B-7425

Effective Date: September 5, 2017

Description:

GENERAL

Print Technology: Thermal Transfer

Material Type: White polypropylene

Finish: Matte white

Adhesive: Permanent Acrylic

APPLICATIONS

Laboratory identification such as vials, centrifuge tubes and test tubes

RECOMMENDED RIBBONS

Brady Series R4300, R6200 and R6400 black

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 onetime 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)

ENVIRONMENTAL PERFORMANCE PROPERTIES – LABEL APPLIED TO ROOM TEMPEATURE SURFACE

B-7425 samples were printed with Series R4300 and 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)	<ul style="list-style-type: none"> ✓ 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)	<ul style="list-style-type: none"> ✓ 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	<ul style="list-style-type: none"> ✓ 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	<ul style="list-style-type: none"> ✓ 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 20 minutes	<p>Sterilization indicates cocoa brown**</p> <p>Before Sterilization</p>  <p>After Sterilization</p> 
Freezer	5 cycles of 16 hours of 16 hours at	<ul style="list-style-type: none"> ✓ 8.5 ml glass test tube

	-80°C (-112°F) and 8 hours at room temperature	<ul style="list-style-type: none"> ✓ 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	<ul style="list-style-type: none"> ✓ 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	<ul style="list-style-type: none"> ✓ 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	<ul style="list-style-type: none"> ◆ 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.

PERFORMANCE PROPERTY	CHEMICAL RESISTANCE
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The chemical resistance of B-7425 printed with Series R4300, R6200 and 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
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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
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 – Two year when stored in its original packaging in an environment below 80°F (27°C) and 60%RH.

B-7425-AC – One year when stored in its original packaging in an environment below 80°F (27°C) and 60%RH.

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.

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