



*Technical Data Sheet*

**BRADYBONDZ(TM) B-423 THERMAL TRANSFER PRINTABLE GLOSSY WHITE  
POLYESTER LABEL STOCK**

TDS No. B-423

Effective Date: 07-Jul-2010

**Description:**

**GENERAL**

**Print Technology:** Thermal transfer

**Materials Type:** White polyester

**Finish:** Glossy white

**Adhesive:** Permanent acrylic

**APPLICATIONS**

Electronic PCB and component identification, bar code label a n label a n 7(n ( )5.- 3 4( )-2.15944(b)-4.32214(a)-4.32214(r)-0

**Details:**

PHYSICAL PROPERTIES	TEST METHODS	AVERAGE RESULTS
Thickness	ASTM D 1000 -Substrate -Adhesive -Total	0.002 inch (0.0508 mm) 0.001 inch (0.0254 mm) 0.003 inch (0.0762 mm)
Adhesion to: -Stainless Steel	ASTM D 1000 20 minute dwell 24 hour dwell	51 oz/inch (56 N/100 mm) 57 oz/inch (62 N/100 mm)
- Painted Enamel	20 minutes dwell 24 hour dwell	51 oz/inch (56 N/100 mm) 54 oz/inch (59 N/100 mm)
- Textured ABS	20 minutes dwell 24 hour dwell	10 oz/inch (10 N/100 mm) 10 oz/inch (10 N/100mm)
- Polypropylene	20 minutes dwell 24 hour dwell	36 oz/inch (40 N/100 mm) 39 oz/inch (42 N/100 mm)
- Polyester Powder Coated Paint	20 minutes dwell 24 hour dwell	32 oz/in (35 N/100 mm) 43 oz/in (47 N/100 mm)
Tack	ASTM D 2979 Polyken™ Probe Tack 1 second dwell	26 oz (800 g)
Dielectric Strength	ASTM D 1000	8400 volts

B-423 is not recommended for low surface energy surfaces such as polyethylene and polypropylene.

Performance properties tested on B-423 printed with Series R6000, R6000HF and R6200 ribbons. Printed samples were laminated to aluminum and allowed to dwell 24 hours before exposure to the indicated environments. Unless noted, results are the same for both ribbons.

PERFORMANCE PROPERTIES	TEST METHOD	TYPICAL RESULTS
High Service Temperature	30 days at various temperatures	No visible effect to label at 110°C. Slight discoloration at 120°C; moderate discoloration at 145°C but label is still functional.
Low Service Temperature	30 days at -70 °C	No visible effect
Short Term High Service Temperature	5 minutes at various temperatures	No visible effect to label at 180°C. Slight discoloration and label shrinkage at 200 °C; label is functional. Label becomes nonfunctional at 210°C due to label shrinkage.
Humidity Resistance	30 days at 100°F (37°C) and 95% relative humidity.	No visible effect
UV Light Resistance	30 days in UV Sunlighter™ 100	Slight discoloration
Weatherability	ASTM G155, Cycle 1 30 days in Xenon Arc Weatherometer	No visible effect
Salt Fog Resistance	ASTM B 117 30 days in 5% salt fog solution chamber	No visible effect

PERFORMANCE PROPERTY	CHEMICAL RESISTANCE
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Samples were printed with Series R6000, R6000HF and R6200 ribbons. Samples were laminated to aluminum panels and allowed to dwell 24 hours prior to testing. Testing was conducted at room temperature and consisted of 30 minute immersions in the specified test fluid. After immersion, the samples were removed from the test fluid and the printed image 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	EFFECT TO LABEL STOCK	SUBJECTIVE OBSERVATION OF VISUAL CHANGE					
		EFFECTS TO PRINTED IMAGE					
		R6000		R6000HF		R6200	
		WITHOUT RUB	WITH RUB	WITHOUT RUB	WITH RUB	WITHOUT RUB	WITH RUB
Acetone	Slight adhesive ooze	1	5	1	5	1	5
Toluene	Slight adhesive ooze	1	5	1	5	1	5
Isopropyl Alcohol	No visible effect	1	1	1	1	1	1
Mineral Spirits	No visible effect	1	1	1	1	1	1
Gasoline	Slight adhesive ooze	1	1	1	1	1	1
JP-8 Jet Fuel	Slight adhesive ooze	1	1	1	1	1	1
Brake Fluid - DOT 3	No visible effect	1	1-2	1	1	1	5
Skydrol® 500B-4	Slight adhesive ooze	1	5	1	5	2	5
SAE 20 WT Oil at 70 °C	No visible effect	1	1	1	1	1	1
MIL 5606 Oil	No visible effect	1	1	1	1	1	1
Formula 409® Cleaner	No visible effect	1	1	1	1	1	1
Northwoods™ Buzz Saw Citrus Degreaser	No visible effect	1	1	1	1	1	1
Deionized Water	No visible effect	1	1	1	1	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

Product testing, customer feedback, and history of similar products, support a customer performance expectation of at least **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 degrees F (27°C) and 60% RH*. We are confident that our product will perform well beyond this time frame. However, it remains the responsibility of the user to assess the risk of using such product. We encourage customers to develop functional testing protocols that will qualify a product's fitness for use, in their actual applications.

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Northwoods™ is a trademark of the Superior Chemical Corporation

Polyken™ is a trademark of Testing Machines Inc.

Skydrol® is a registered trademark of the Monsanto Company

Sunlighter™ is a trademark of the Test Lab Apparatus Company

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

CSA: Canadian Standards Association

SAE: Society of Automotive Engineers (U.S.A.)

UL: Underwriters Laboratories Inc. (U.S.A.)

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

Units

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PphUp'UbInPgMhUxLLUInPgMhUxLLUIeP(hUxLLICpgAhAxUUMItPx'h'bU)x'TiPphUp'UbIoPgghxpM

## Specification Of Thermal Transfer Printable Labels

<b>Application(s):</b>	Circuit Board & Component ID, Through Hole - Top
<b>Agency</b>	AGA Approved, CSA Approved, Halogen-Free (DIN VDE 0472/parts 815), UL
<b>Approval(s)/Compliance:</b>	Recognized
<b>Size:</b>	1.250" W x 0.250" H (31.750 mm W x 6.350 mm H)
<b>Printable Area:</b>	1.250" W x 0.250" H (31.750 mm W x 6.350 mm H)
<b>Web Width:</b>	1.450" (36.83 mm)
<b>Label Type/Style:</b>	Label
<b>Vertical Repeat:</b>	0.350" (8.89 mm)
<b>Color:</b>	White
<b>Finish:</b>	Gloss
<b>Qty Per Row:</b>	1
<b>Material Type:</b>	Polyester
<b>Material Description:</b>	Permanent Polyester
<b>Brady Material #:</b>	<a href="#">B-423</a>
<b>General ID Catalog:</b>	<a href="#">pg. 27</a>
<b>Recommended Ribbon Series:</b>	6000
<b>Suggested Ribbon Part#:</b>	R6006
<b>Acceptable Ribbon Series:</b>	4900, 6200
<b>After Process:</b>	Yes, this material will work with this application
<b>Printer Compatibility:</b>	BBP81, Brady 1244, Brady 1344, Brady 200MVP Plus, Brady 2461, Brady 300MVP Plus, Brady 300X-Plus II, Brady 3481, Brady 360X-Plus II, Brady 600X-Plus II, Brady 6441, Brady IP, Tagus T200, Tagus T300, Thermal Transfer Printers
<b>Surface:</b>	Smooth
<b>Surface Mount Technology:</b>	No, this material does not work with this application
<b>Through Hole Technology:</b>	Top: Yes. In extreme high temperatures, testing of this material is recommended, Bottom: No
<b>RoHS Compatibility:</b>	Compliant with RoHS Directive. NOTE: All statements concerning RoHS Directive compliance refer to 2005/618/EC MCV amendment to RoHS Directive 2002/95/EC. Product compliance is based upon information provided by suppliers of the raw materials used by Brady to manufacture these products, or by independent laboratory testing of these products. As such, Brady makes no independent representations or warranties, express or implied, and assumes no liability in connection with the use of this information.
<b>QTY/UOM:</b>	10,000/Roll