

**BRADYBONDZ™ B-8423 SATIN POLYESTER THERMAL PRINTABLE LABEL STOCK**

TDS No. B-8423  
 Effective Date: 07/02/2012

**Description:**

**GENERAL**

**Print Technology:** Thermal Transfer  
**Material Type:** White Polyester  
**Finish:** Satin  
**Adhesive:** Permanent Acrylic

**APPLICATIONS**

B-8423 is designed for general purpose label and rating plate applications that utilize high quality/density alphanumerics, barcodes and graphics. B-8423 can also be used for solar panel identification. B-8423 is also used as post process label on printed circuit boards.

**RECOMMENDED RIBBONS**

Brady Series R6200 and R7961 (black)  
 Brady Series R4400 (red, blue, green and white)  
 Brady Series R6000 (alternate)  
 Brady Series R6000 Halogen Free (alternate) (Previously known as R6000HF)

**REGULATORY/AGENCY APPROVALS**

**UL:** B-8423 is a UL Recognized Component to UL969 Labeling and Marking Standard when printed with Brady Series R6200, R7961, R6000 or R6000 Halogen Free ribbons. See UL file MH17154 for specific details. UL information can be accessed online at

*UL.com*. Search in *Certifications* area.

**CSA:** B-8423 is CSA Accepted to C22.2 No.0.15-95 Adhesive Labels Standards when printed with the Brady series R6000, R6200 and R7961 ribbons. B-8423 is approved to Type A. See CSA file 041833 for specific details.

CSA information can be accessed online at *directories.csa-international.org*.

Brady B-8423 is RoHS compliant to 2005/618/EC MCV amendment to RoHS Directive 2002/95/EC.

**SPECIAL FEATURES**

B-8423 is UL Recognized for Outdoor Use on glass, thermoset polyester plastic and polyvinyl fluoride plastic surfaces to support solar panel identification applications.

**Details:**

PHYSICAL PROPERTIES	TEST METHODS	AVERAGE RESULTS
Thickness	ASTM D 1000 -Substrate -Adhesive -Total	0.0020 inch (0.051 mm) 0.0008 inch (0.020 mm) 0.0028 inch (0.071 mm)
Adhesion to:	ASTM D 1000	
-Stainless Steel	20 minute dwell 24 hour dwell	45 oz/in (49 N/100 mm) 51 oz/in (56 N/100 mm)
-Smooth ABS	20 minute dwell 24 hour dwell	38 oz/in (42 N/100 mm) 42 oz/in (46 N/100 mm)
-Polypropylene	20 minute dwell 24 hour dwell	26 oz/in (28 N/100 mm) 31 oz/in (34 N/100 mm)
-Glass	20 minute dwell 24 hour dwell	42 oz/in (46 N/100 mm) 44 oz/in (48 N/100 mm)
Tensile Strength and Percent Elongation at Break	ASTM D 1000 - Machine Direction - Cross Direction	39 lbs/in (683 N/100mm), 77% 52 lbs/in (911 N/100mm), 64%
Tack	ASTM D 2979 Polyken™ Probe Tack 1 second dwell	35 oz (983 g)

Performance properties tested on B-8423 printed with alphanumerics using the following: R6000, R6000 Halogen Free, R6200 and R7961 Series ribbons. Printed samples of B-8423 were laminated to aluminum before exposure to the indicated environmental condition.

Results the same for all ribbons unless noted otherwise.

PERFORMANCE PROPERTIES	TEST METHOD	TYPICAL RESULTS
Long Term High Service Temperature	30 days at various temperatures	No visible effect at 230°F (110°C). Slight discoloration at 293°F (145°C). Moderate discoloration at 320°F (160°C); label is still functional.
Low Service Temperature	30 days at -94°F (-70°C)	No visible effect
Short Term High Service Temperature	5 minutes at various temperatures	No visible effect at 356°F (180°C). Slight discoloration and label shrinkage at 392°F (200°C); label is functional. Label becomes non-functional at 446°F (230°C) due to label shrinkage.
Humidity Resistance	30 days at 100°F (37°C) and 95% R.H.	No visible effect
Weatherability	ASTM G155, Cycle 1 30 days in Xenon Arc Weatherometer	Slight discoloration
Abrasion Resistance	Taber Abraser, CS-10 grinding wheels, 250 g/arm (Fed. Std. 191A, Method 5306)	R6000, R6000 Halogen Free, R6200 and R7961 print is still legible after 100 cycles.

PERFORMANCE PROPERTY	CHEMICAL RESISTANCE
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Samples printed with the R6000, R6000 Halogen Free, R6200 and R7961 Series ribbons. Tests were conducted after a 24 hour dwell. Testing consisted of 5 cycles of 10 minute immersions in the specified chemical reagent followed by 30 minute recovery periods. After the final immersion, the printed samples were rubbed 10 times with a cotton applicator saturated with the test fluid.

CHEMICAL REAGENT	SUBJECTIVE OBSERVATION OF VISUAL CHANGE						
	EFFECT TO LABEL STOCK	R6000/R6000 Halogen Free		R6200		R7961	
		WITHOUT RUB	WITH RUB	WITHOUT RUB	WITH RUB	WITHOUT RUB	WITH RUB
Methyl Ethyl Ketone	No visible effect	1	5	3	5	2	5
Isopropyl Alcohol	No visible effect	1	3	1	3	1	4
Mineral Spirits	No visible effect	1	1	1	1	1	1
SAE 20 Wt Oil	No visible effect	1	1	1	1	1	1
10% Sodium Hydroxide	No visible effect	1	1	1	1	1	1
10% Sulfuric Acid	No visible effect	1	1	1	1	1	1
5% Alconox® Detergent	No visible effect	1	1	1	1	1	1
Formula 409®	No visible effect	1	1	1	1	1	1

Rating Scale:

- 1 = no visible effect
- 2 = sight 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 removal

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.

**Trademarks:**

ASTM: American Society for Testing and Materials (U.S.A.)  
Alconox® is a registered trademark of Alconox Co.

All S.I. Units (metric) are mathematically derived from the U.S. Conventional  
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Formula 409® is a registered trademark of The Clorox Company  
Polyken™ is a trademark of Testing Machines Inc.  
SAE: Society of Automotive Engineers (U.S.A.)  
UL: Underwriters Laboratories, Inc.

**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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