



The FCC ID is affixed to the rear of the transmitter with BRADY XB-423 thermal transfer printable glossy white polyester label stock. The specifications of the label material follow.



W.H. BRADY CO.

727 W. Glendale Ave. • P.O. Box 571  
Milwaukee, Wisconsin 53201 U.S.A. • Phone (414) 332-8100  
Telex 240029 • FAX (414) 332-2887 • Cable Bradyco

# Technical Data Sheet

TDS No. 423

September 2, 1992

Page 1 of 3

QUALITY, INNOVATION, PERFORMANCE

## PRELIMINARY TECHNICAL DATA FROM THE INDUSTRIAL PRODUCTS DIVISION

### BRADY XB-423 THERMAL TRANSFER PRINTABLE GLOSSY WHITE POLYESTER LABEL STOCK

- Description:** Brady XB-423 is a glossy white polyester film with a permanent acrylic pressure sensitive adhesive and a topcoat specifically formulated for Thermal Transfer Printing.
- Use:** XB-423 is designed for applications, like topside of printed circuit boards and rating plates, that utilize high quality/density alphanumerics, barcodes and graphics.
- Recognition:** Brady XB-423 is a UL-recognized component label when printed with specific printers and the Brady Series R4200 ribbon. See UL file no. 17154 for specific details
- Special Properties:** XB-423 is designed to withstand numerous solvents while maintaining outstanding image quality.
- Ribbon:** Recommended ribbons are the Brady Series R4200 black and R4400<sup>1</sup> colored (red, blue and green) for optimal print performance.

PHYSICAL PROPERTIES	TEST METHODS	AVERAGE RESULTS	
		CONVENTIONAL UNITS (USA)	S.I.* UNITS
Thickness	ASTM D1000 -Substrate -Adhesive -Total	0.0020 inch 0.0010 inch 0.0030 inch	0.0508 mm 0.0254 mm 0.0762 mm
Adhesion to:	ASTM D1000		
-Stainless Steel	20 minute dwell 24 hour dwell	35 oz/in 55 oz/in	38 N/100 mm 60 N/100 mm
Tack	ASTM D2979 Polyken™ Probe Tack (1 second dwell, 1 cm/sec separation)	12 oz	350 g
Dielectric Strength	ASTM D1000	6000 Volts Total	6000 Volts Total

<sup>1</sup> For performance testing results of the Series R4400 ribbons on XB-423, see the IPD 1016 Technical Data Sheet.

<sup>2</sup> All S.I. units are mathematically derived from the U.S. conventional units

L1341; L1388; L1427; L1485

© 1992, W. H. Brady Co., All Rights Reserved

#### WARRANTY

"Brady products are sold with the understanding that the buyer will test them in actual use and determine for himself their adaptability to his intended uses. Brady warrants to the buyer 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 buyer. 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."

Note: All values shown are averages and should not be used for specification purposes. ©1984 W. H. BRADY CO. ALL RIGHTS RESERVED FORM 308 9-88-90 VEM Printed in U.S.A.

PHYSICAL PROPERTIES	TEST METHODS	AVERAGE RESULTS	
		CONVENTIONAL UNITS (USA)	S.I. <sup>1</sup> UNITS
Drop Shear	PSTC-7 (except use 1/2" x 1" sample)	50 hrs.	50 hrs.
Tensile Strength	ASTM D1000 -Machine	30 lbs/in	525 N/ 100mm
Elongation	ASTM D1000 -Machine	55 %	55 %

<sup>1</sup> All S.I. units are mathematically derived from the U.S. conventional units  
Physical Properties tested on unprinted XB-423.

PERFORMANCE PROPERTIES	TEST METHODS	TYPICAL RESULTS			
		Topcoat	Printing	Substrate	Adhesive
Service Temperatures	30 days at -40°F (-40°C) 30 days at 248°F (120°C)	N.V.E. <sup>2</sup>	Text and barcodes readable after exposure to all of the listed conditions.	N.V.E.	N.V.E.
Weatherability	ASTM G26 (Xenon Arc 30 days)	N.V.E.		N.V.E.	N.V.E.
Humidity Resistance	30 days at 100°F, 95% R.H.	N.V.E.		N.V.E.	N.V.E.
U.V. Light Resistance	30 days in Sunlighter™ 100	N.V.E.		N.V.E.	N.V.E.

Performance Properties tested on XB-423. Samples thermal transfer printed with alphanumerics and 5 mil and 10 mil minimum X dimension barcodes using a Series R4200 ribbon and a BradyPrinter THT Model 203 Thermal Transfer Printer.

<sup>2</sup> N.V.E. = No Visible Effect

PERFORMANCE PROPERTY	TEST METHOD
Chemical Resistance	ASTM D896

Samples printed with a Series R4200 ribbon using a BradyPrinter™ THT Model 203 Thermal Transfer Printer. Test was conducted at room temperature after 24 hour dwell. Testing consisted of five cycles of 10 minute immersions in the specified chemical reagent followed by 30 minute recovery periods. Cotton swab rub after final immersion.

Chemical Reagent	Subjective Observation of Visual Change		
	Label Stock Substrate/Adhesive	Printing Immersion Only	Printing Effect of cotton swab rubs
1,1,1-Trichloroethane	No Visible Effect	No Visible Effect	Print Removed
10% Sodium Hydroxide Soln.	No Visible Effect	No Visible Effect	No Visible Effect
10% Sulfuric Acid Solution	No Visible Effect	No Visible Effect	No Visible Effect
3% Alconox® Detergent	No Visible Effect	No Visible Effect	No Visible Effect
ASTM #3 Oil	No Visible Effect	No Visible Effect	No Visible Effect
Bioact® EC-7™	Slight Adhesive Ooze	No Visible Effect	No Visible Effect
Deionized Water	No Visible Effect	No Visible Effect	No Visible Effect
Freon® TMS	No Visible Effect	No Visible Effect	No Visible Effect
Isopropyl Alcohol	No Visible Effect	No Visible Effect	Print Removed
JP-4	No Visible Effect	No Visible Effect	Slight Print Removal
Methyl Ethyl Ketone	No Visible Effect	No Visible Effect	No Visible Effect
Mineral Spirits	No Visible Effect	Moderate Print Removal	Print Removed
Mil 5606 Oil	No Visible Effect	No Visible Effect	No Visible Effect
Skydrol® 500B-4	No Visible Effect	No Visible Effect	No Visible Effect
Super Agitene®	No Visible Effect	No Visible Effect	Print Removed
Toluene	No Visible Effect	No Visible Effect	No Visible Effect
			Print Removed

Shelf Life: 2 years if stored in its closed package below 80°F and 60% RH.

Alconox® is a registered trademark of Alconox Co.  
Bioact® is a registered trademark of Petroferm Inc.  
BradyPrinter™ is a trademark of Brady USA, Inc.  
EC-7™ is a trademark of Petroferm Inc.  
Freon® is a registered trademark of Du Pont de Nemours, E.I. and Company.  
Polyken™ is a trademark of the Kendell Corporation.  
Skydrol® is a registered trademark of the Monsanto Company.  
Sunlighter™ is a trademark of the Test Lab Apparatus Company.  
Super Agitene® is a registered trademark of Graymills Corporation.

#### References:

ASTM: American Society for Testing and Materials (U.S.A.)  
PSTC: Pressure Sensitive Tape Council (U.S.A.)

#### Preliminary Technical Data

The information in this Technical Data Sheet is based on the evaluation of limited production quantities of the product and may be modified by Brady USA, Inc. following additional production experience and testing. This product is not yet standard and, therefore, may be subject to modification, product limitations or cancellation.

