

BRADYBONDZ(TM) B-423Y THERMAL TRANSFER PRINTABLE GLOSSY YELLOW POLYESTER LABEL STOCK

TDS No. B-423Y
Effective Date: 01/23/2014

Description:

GENERAL

Print Technology: Thermal transfer

Materials Type: Polyester

Finish: Glossy yellow

Adhesive: Permanent acrylic

APPLICATIONS

Electronic PCB and component identification, bar code label and rating plates.

RECOMMENDED RIBBONS

Brady series R6000 Halogen Free (previously known as R6000HF)
R6200

REGULATORY/AGENCY APPROVALS

UL: B-423Y is a UL Recognized Component to UL969 Labeling and Marking Standard when printed with Brady Series R6000 Halogen Free and R6200 ribbons. See UL file MH17154 for specific details. UL information can be accessed on line at UL.com. Search in *Certifications* area.

Brady B-423Y is RoHS compliant to RoHS Directive 2011/65/EC

Details:

PHYSICAL PROPERTIES	TEST METHODS	AVERAGE RESULTS
Thickness	ASTM D 1000 -Substrate -Adhesive -Total	0.0024 inch (0.06096 mm) 0.0010 inch (0.02540 mm) 0.0034 inch (0.08636 mm)
Adhesion to:	ASTM D 1000	
-Stainless Steel	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-423Y is not recommended for low surface energy surfaces such as polyethylene and polypropylene.

Performance properties tested on B-423Y printed with Series R6000 Halogen Free. Printed samples were laminated to aluminum and allowed to dwell 24 hours before exposure to the indicated environments.

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	No visible effect
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
Abrasion Resistance	Taber Abraser, CS-10 grinding wheels, 250 g/arm (Fed. Std. 191A, Method 5306)	Print legible after 100 cycles

PERFORMANCE PROPERTY	CHEMICAL RESISTANCE
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Samples were printed with Series R6000 Halogen Free 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 Halogen Free		R6200	
		WITHOUT RUB	WITH RUB	WITHOUT RUB	WITH RUB
Acetone	Slight adhesive ooze	1	5	1	5
Toluene	Slight adhesive ooze	1	5	1	5
Isopropyl Alcohol	No visible effect	1	1	1	1
Mineral Spirits	No visible effect	1	1	1	1
Gasoline	Slight adhesive ooze	1	1	1	5
JP-8 Jet Fuel	Slight adhesive ooze	1	1	1	1
Brake Fluid - DOT 3	No visible effect	1	2	1	5
Skydrol® 500B-4	Slight adhesive ooze	1	3	1	5
SAE 20 WT Oil at 70°C	No visible effect	1	1	1	1
MIL 5606 Oil	No visible effect	1	1	1	1
Formula 409® Cleaner	No visible effect	1	1	1	1
Northwoods™ Buzz Saw Citrus Degreaser	No visible effect	1	1	1	1
Deionized Water	No visible effect	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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Polyken™ is a trademark of Testing Machines Inc.
Skydrol® is a registered trademark of the Monsanto Company
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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

Note: All values shown are averages and should not be used for specification purposes.

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