

BRADYBONDZ™ B-8423 SATIN POLYESTER THERMAL PRINTABLE LABEL STOCK

TDS No. B-8423

Effective Date: 01/25/2019

Description:

GENERAL

Print Technology: Thermal Transfer

Material Type: Polyester

Finish: Satin

Adhesive: Permanent Acrylic

APPLICATIONS

B-8423 is designed for general purpose label and rating plate applications that utilize high quality/density alphanumeric, 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 Halogen Free (alternate)

REGULATORY/AGENCY APPROVALS

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

For information on the Weee-RoHS compliance status for a Brady Product go to one of the following websites:

In Canada: www.bradycanada.ca/weee-rohs

In Europe: www.bradyeurope.com/rohs

In Japan: www.brady.co.jp/products/labelsuse/rohs

All other regions: www.bradyid.com/weee-rohs

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 (excluding liner) | 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 | 26 oz/in (28 N/100 mm) |

| | | |
|--------------------------------------------------|---------------------------------------------------------|----------------------------------------------------------------------------|
| -Glass | 24 hour dwell 20 minute dwell 24 hour dwell | 31 oz/in (34 N/100 mm) 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 0.5 second dwell | 35 oz (983 g) |

Performance properties tested on B-8423 printed with alphanumerics using the following: the Brady Series R6000 Halogen Free, the Brady Series R6200 and the Brady Series R7961 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.

| PHYSICAL PROPERTIES | TEST METHODS | 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 |
|----------------------|---------------------|
|----------------------|---------------------|

Samples were printed with the Brady Series R6000 Halogen Free, the Brady Series R6200 and the Brady Series R7961 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 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

Shelf Life:

Shelf life is 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° F (27° C) and 60% RH. It remains the responsibility of the user to assess the risk of using this product. We encourage customers to develop testing protocols that will qualify a product's fitness for use in their actual application.

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
BRADYBONDZ™ is a trademark of Brady Worldwide, Inc.
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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