



**BRADY B-489A THERMAL TRANSFER PRINTABLE LABEL STOCK**

TDS No. B-489A  
 Effective Date: 05/17/2019

**Description:**

**GENERAL**

**Print Technology:** Thermal Transfer

**Material Type:** Polyester

**Finish:** Matte

**Adhesive:** Permanent rubber based

**APPLICATIONS**

B-489A is designed for high adhesion to textured metals and low surface energy plastics

**RECOMMENDED RIBBONS**

Brady Series R4300

Brady Series R6200 (alternate)

**REGULATORY/AGENCY APPROVALS**

**UL:** B-489A is a UL Recognized Component to UL 969 Labeling and Marking Standard when printed with the Brady Series R4300 and the Brady Series R6200 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-489 is CSA Accepted when printed with the Brady Series R4300 and the Brady Series R6200 ribbons. See CSA file 041833 for specific details. CSA information can be accessed online at [directories.csa-international.org](http://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](http://www.bradycanada.ca/weee-rohs)

In Europe: [www.bradyeurope.com/rohs](http://www.bradyeurope.com/rohs)

In Japan: [www.brady.co.jp/products/labelsuse/rohs](http://www.brady.co.jp/products/labelsuse/rohs)

All other regions: [www.bradyid.com/weee-rohs](http://www.bradyid.com/weee-rohs)

**SPECIAL FEATURES**

B-489A is specifically designed to adhere to powder coated surfaces.

**Details:**

| PHYSICAL PROPERTIES              | TEST METHODS   | AVERAGE RESULTS   |
|----------------------------------|--|---|
| Thickness                        | ASTM D 1000<br>-Substrate<br>-Adhesive<br>-Total (excluding liner) | 0.0027 inch (0.0686 mm)<br>0.0024 inch (0.0609 mm)<br>0.0051 inch (0.1295 mm) |
| Adhesion to:<br>-Stainless Steel | ASTM D 1000<br>20 minute dwell<br>24 hour dwell                    | 145 oz/in (159 N/100 mm)<br>146 oz/in (160 N/100 mm)                          |
| -Textured ABS                    | 20 minute dwell<br>24 hour dwell                                   | 45 oz/in (49 N/100 mm)<br>43 oz/in (47 N/100 mm)                              |
| -Polypropylene                   | 20 minute dwell<br>24 hour dwell                                   | 80 oz/in (88 N/100 mm)<br>108 oz/in (119 N/100 mm)                            |
| -Painted Enamel                  | 20 minute dwell<br>24 hour dwell                                   | 133 oz/in (146 N/100 mm)<br>142 oz/in (156 N/100 mm)                          |
| -Powder Coated Metal             | 20 minute dwell<br>24 hour dwell                                   | 78 oz/in (86 N/100 mm)<br>78 oz/in (86 N/100 mm)                              |

|      |  |  |
|------|--|--|
| Tack | ASTM D 2979<br>Polyken™ Probe Tack<br>0.5 second dwell | Greater than 35 oz (1000 g) <sup>1</sup> |
|------|--|--|

<sup>1</sup> Tacks exceeded the equipment testing range of 1000 grams.

Performance properties were tested on B-489A printed using the Brady Series R4300 and the Brady Series R6200 ribbons. Printed samples of B-489A were laminated to aluminum before exposure to the indicated environmental condition. Results the same for both ribbons unless noted otherwise.

| PERFORMANCE PROPERTIES             | TEST METHODS   | TYPICAL RESULTS                      |
|------------------------------------|--|--------------------------------------|
| Long Term High Service Temperature | 30 days at 248°F (120°C)   | No visible effect                    |
| Long Term High Service Temperature | 30 days at -40°F (-40°C)   | No visible effect                    |
| Humidity Resistance                | 30 days at 100°F (37°C), 95% R.H.  | No visible effect                    |
| UV Light Resistance                | 30 days in UV Sunlighter™ 100  | No visible effect                    |
| Weatherability                     | ASTM G155, Cycle 1<br>30 days in Xenon Arc Weatherometer                                       | No visible effect                    |
| Salt Fog Resistance                | ASTM B 177<br>30 days in 5% salt fog solution chamber  | No visible effect                    |
| Abrasion Resistance                | Tabler Abraser, CS-10 grinding wheels,<br>(Fed.Std. 191A, Method 5306) 500g/arm,<br>100 cycles | Print still legible after 100 cycles |

| PERFORMANCE PROPERTY | CHEMICAL RESISTANCE |
|----------------------|---------------------|
|----------------------|---------------------|

Samples were printed with the Brady Series R4300 and the Brady Series R6200 ribbons, laminated to flat aluminum panels and allowed to dwell 24 hours prior to test. Testing consisted of 5 cycles of 10 minute immersions in the specified chemical followed by 30 minute recovery periods. After the final immersion the flat samples were rubbed 10 times with cotton swabs. Testing was conducted at room temperature.

| CHEMICAL REAGENT      | SUBJECTIVE OBSERVATION OF VISUAL CHANGE |                            |                            |
|-----------------------|---|----------------------------|----------------------------|
|                       | EFFECT TO LABEL STOCK                   | R4300                      | R6200                      |
| Methyl Ethyl Ketone   | Slight adhesive ooze                    | Slight smear when rubbed   | Severe smear when rubbed   |
| 1,1,1-Trichloroethane | No visible effect                       | Moderate smear when rubbed | Slight smear when rubbed   |
| Toluene               | No visible effect                       | Moderate smear when rubbed | Moderate smear when rubbed |
| Freon® TMS            | No visible effect                       | Slight smear when rubbed   | Moderate smear when rubbed |
| Isopropyl Alcohol     | No visible effect                       | No visible effect          | No visible effect          |
| Mineral Spirits       | Slight adhesive ooze                    | Slight smear when rubbed   | No visible effect          |
| JP-8 Jet Fuel         | No visible effect                       | Moderate smear when rubbed | No visible effect          |
| ASTM Reference Fuel B | No visible effect                       | No visible effect          | No visible effect          |
| ASTM #3 Oil           | Slight adhesive ooze                    | No visible effect          | No visible effect          |
| Mil 5606 Oil          | No visible effect                       | Slight smear when rubbed   | No visible effect          |
| Skydrol® 500B-4       | Slight adhesive ooze                    | No visible effect          | Severe smear when rubbed   |
| Super Agitene®        | No visible effect                       | No visible effect          | No visible effect          |

|                               |                   |                   |                   |
|-------------------------------|-------------------|-------------------|-------------------|
| Deionized Water               | No visible effect | No visible effect | No visible effect |
| 3% Alconox® Detergent         | No visible effect | No visible effect | No visible effect |
| 10% Sodium Hydroxide Solution | No visible effect | No visible effect | No visible effect |
| 10% Sulfuric Acid Solution    | No visible effect | No visible effect | No visible effect |

**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:**

Alconox® is a registered trademark of Alconox Co.  
 Freon® is a registered trademark of Du Pont de Nemours, E.I. and Company  
 Polyken™ is trademark of Testing Machines Inc.  
 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  
 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 are mathematically derived from U.S. conventional units

**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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