



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

TDS No. B-489A  
 Effective Date: 12/15/2020

**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

**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. See UL file MH17154 for specific details. UL information can be accessed online at UL.com in the UL Product iQ area.

**CSA:** B-489A is CSA Accepted to C22.2 No. 0.15-15 Adhesive Labels Standard when printed with the Brady Series R4300. See CSA file 041833 for specific details. CSA Information accessed on line at <https://www.csagroup.org/testing-certification/product-listing/>

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.bradycanada.ca/weee-rohs](http://www.bradycanada.ca/weee-rohs)

All other regions: [www.bradycanada.ca/weee-rohs](http://www.bradycanada.ca/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 -Substrate -Adhesive -Total (excluding liner)	0.0027 inch (0.0686 mm) 0.0024 inch (0.0609 mm) 0.0051 inch (0.1295 mm)
Adhesion to: -Stainless Steel	ASTM D 1000 20 minute dwell 24 hour dwell	145 oz/in (159 N/100 mm) 146 oz/in (160 N/100 mm)
-Textured ABS	20 minute dwell 24 hour dwell	45 oz/in (49 N/100 mm) 43 oz/in (47 N/100 mm)
-Polypropylene	20 minute dwell 24 hour dwell	80 oz/in (88 N/100 mm) 108 oz/in (119 N/100 mm)
-Painted Enamel	20 minute dwell 24 hour dwell	133 oz/in (146 N/100 mm) 142 oz/in (156 N/100 mm)
-Powder Coated Metal	20 minute dwell 24 hour dwell	78 oz/in (86 N/100 mm) 78 oz/in (86 N/100 mm)

Performance properties were tested on B-489A printed with the Brady Series R4300 ribbon. Printed samples of B-489A were laminated to aluminum before exposure to the indicated environmental condition.

PERFORMANCE PROPERTIES	TEST METHODS	TYPICAL RESULTS
Long Term High Service Temperature	30 days at 248°F (120°C)	No visible effect
Long Term Low 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	ASTM G155, Cycle 1 (No Spray) 30 days in Xenon Test Chamber	Very slight discoloration
Weatherability	ASTM G155, Cycle 1 30 days in Xenon Arc Weather-Ometer®	No visible effect
Salt Fog Resistance	ASTM B117 30 days in 5% salt fog solution chamber	No visible effect
Abrasion Resistance	Taber Abraser, CS-10 grinding wheels, (Fed.Std. 191A, Method 5306) 500g/arm, 100 cycles	Print still legible after 100 cycles

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

CHEMICAL REAGENT	SUBJECTIVE OBSERVATION OF VISUAL CHANGE		
	EFFECT TO LABEL STOCK	EFFECT TO TAPE	EFFECT TO PRINT
Methyl Ethyl Ketone	Slight adhesive ooze	1	2
Toluene	No visible effect	1	3
Isopropyl Alcohol	No visible effect	1	1
Mineral Spirits	Slight adhesive ooze	1	2
JP-8 Jet Fuel	No visible effect	1	3
ASTM Reference Fuel B	No visible effect	1	1
ASTM #3 Oil	Slight adhesive ooze	1	1
Mil 5606 Oil	No visible effect	1	2
Skydrol® 500B-4	Slight adhesive ooze	1	1
Super Agitene®	No visible effect	1	1
Deionized Water	No visible effect	1	1
3% Alconox® Detergent	No visible effect	1	1
10% Sodium Hydroxide Solution	No visible effect	1	1
10% Sulfuric Acid Solution	No visible effect	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

**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.
- Skydrol® is a registered trademark of the Monsanto 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.)
- Weather-Ometer® is a registered trademark of Atlas Material Testing Technology LLC
- 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.

Product compliance information is based upon information provided by suppliers of the raw materials used by Brady to manufacture this product or based on results of testing using recognized analytical methods performed by a third party, independent laboratory. As such, Brady makes no independent representations or warranties, express or implied, and assumes no liability in connection with the use of this information.

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