



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

TDS No. B-489  
 Effective Date: 01/22/2019

**Description:**

**GENERAL**

**Print Technology:** Thermal Transfer

**Material Type:** Polyester

**Finish:** Matte

**Adhesive:** Permanent rubber based

**APPLICATIONS**

B-489 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-489 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*.

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

**Details:**

PHYSICAL PROPERTIES	TEST METHODS	AVERAGE RESULTS
Thickness	ASTM D 1000 -Total (excluding liner)	0.0044 inch (0.112 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)

Tack	ASTM D 2979 Polyken™ Probe Tack 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-489 printed using the Brady Series R4300 and the Brady Series R6200 ribbons. Printed samples of B-489 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 30 days in Xenon Arc Weatherometer	No visible effect
Salt Fog Resistance	ASTM B 177 30 days in 5% salt fog solution chamber	No visible effect
Abrasion Resistance	Tabler Abraser, CS-10 grinding wheels, (Fed.Std. 191A, Method 5306) 500g/arm, 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.

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.

**WARRANTY**

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

Copyright 2019 Brady Worldwide, Inc. All Rights Reserved  
 Material may not be reproduced or distributed in any form without written permission.