Technical Data Sheet

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*.

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-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)

Tack	ASTM D 2979 Polyken™ Probe Tack 0.5 second dwell	Greater than 35 oz (1000 g)[1]

[1] 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 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.

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