



BRADY B-489 THERMAL TRANSFER PRINTABLE LABEL STOCK

TDS No. B-489
 Effective Date: 10/03/2006

Description:

GENERAL

Print Technology: Thermal Transfer

Material Type: White Polyester

Finish: Matte white

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 Brady Series R4300 and R6200 ribbons. See UL file MH17154 for specific details. UL information can be accessed online at *UL.com*. Search in *Certifications* area.

CSA: B-489 is a CSA Accepted to C22.2 No.0.15-95 Adhesive Labels Standard when printed with the Brady Series R4300 and R6200 ribbons. See CSA file 041833 for specific details. CSA information can be accessed online at *directories.csa-international.org*.

Brady B-489 is RoHS compliant to 2005/618/EC MCV amendment to RoHS Directive 2002/95/EC.

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 (substrate and adhesive)	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) ¹

¹Tacks exceeded the equipment testing range of 1000 grams. Performance properties tested on B-489 printed with alphanumerics, and a 5 mil and 10 mil minimum X dimension barcode using Series R4300 and R6200 ribbons and a BradyPrinter™ THT 300X

Thermal Transfer Printer. 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
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Samples were printed with Series R4300 and R6200 ribbons using a Brady 300X printer, 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 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:

Two years when stored in its original packaging in an environment below 80°F (27°C) and 60%RH.

Trademarks:

Alconox® is a registered trademark of Alconox Co.
 BradyPrinter™ is a trademark of Brady Worldwide, Inc.
 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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