

BRADY B-7727 AUTO-DISPENSABLE GLOSSY WHITE THERMAL TRANSFER PRINTABLE POLYIMIDE LABEL STOCK

TDS No. B-7727
Effective Date: 07/08/2016

Description:

GENERAL

Print Technology: Thermal transfer

Material Type: White polyimide (2 mil film)

Finish: Glossy

Adhesive: Permanent Acrylic

APPLICATIONS

Printed circuit board and electronic component preprocess labeling, especially with auto-dispensing requirements.

RECOMMENDED RIBBONS

Brady Series R6000 Halogen Free

REGULATORY/AGENCY APPROVALS

Brady B-7727 is UL Recognized to UL969 Labeling and Marking Standard when printed with the Brady Series R6000 Halogen Free ribbons. See UL file MH17388 for specific details.

Brady B-7727 is RoHS compliant to RoHS Directive 2011/65/EU.

B-7727 is dibutyl and dioctyl tin free.

SHELF LIFE

2 years when the product is stored in its original packaging in an environment below 80°F (27°C) and 80% RH.

SPECIAL FEATURES

The B-7727 is designed for auto-dispense applications.

B-7727, in combination with the Series R6000 Halogen Free ribbon, meets the requirements of MIL-STD-202G, Method 215K.

Preheat can be employed to further enhance print permanence in the case of extreme solvent and or/or abrasion exposure.

B-7727 is designed to withstand multiple cycles of harsh condition washes for printed circuit boards.

Details:

PHYSICAL PROPERTIES	TEST METHODS	TYPICAL RESULTS
Thickness	ASTM D1000 -Substrate (topcoat and film) -Adhesive -Total (excluding liner)	0.0027 inch (0.068 mm) 0.0013 inch (0.033 mm) 0.0040 inch (0.101 mm)
Adhesion to: -Stainless Steel	ASTM D1000 20 minute dwell 24 hour dwell	45 oz/in (49 N/100 mm) 56 oz/in (61 N/100 mm)
-Epoxy PC Board	20 minute dwell 24 hour dwell	35 oz/in (38 N/100 mm) 48 oz/in (52 N/100 mm)
Tack	ASTM D2979 Polyken™ Probe Tack 0.5 second dwell	42 oz (1200 g)
Drop Shear	PSTC-7 (1/2" x 1" sample)	> 100 hours
Dielectric Strength	ASTM D1000	12,000 volts

Performance properties tested on B-7727 printed with Brady Series R6000 Halogen Free thermal transfer ribbon. Printed samples of B-7727 were laminated to aluminum and allowed to dwell 24 hours before exposure to the indicated environmental conditions.

PERFORMANCE PROPERTIES	TEST METHODS	TYPICAL RESULTS
Short Term High Service Temperature	80 seconds at 572°F (300°C)	No visible effect to label at 572°F

		(300°C), label discolors slightly at 626°F (330°C) but is still functional, label still functional but moderately discolored at 662°F (350°C); print is still legible
	5 minutes at 500°F (260°C)	No visible effect to label at 500°F (260°C), label discolors slightly at 518°F (270°C), at 572°F (300°C) label moderately discolors and adhesive discolors at label edge. Label remains functional. Print is legible
	2 hours at 338°F (170°C)	No visible effect to label at 338°F (170°C), label discolors slightly at 374°F (190°C), moderately at 428°F (220°C) and severely at 500°F (260°C). Label remains functional. Print is legible
Long Term High Service Temperature	1000 hours at 212°F (100°C)	No visible effect to label at 212°F (100°C), label discolors slightly at 248°F (120°C), moderately at 293°F (145°C). Label remains functional. Print is legible
Low Service Temperature	1000 hours at -94°F (-70°C)	No visible effect
Humidity Resistance	1000 hours at 100°F (37°C)/95%RH	No visible effect
UV Light Resistance	ASTM G155, cycle 1, Dry 1000 hours in Q-Sun Xenon Test Chamber	Topcoat turns yellow, label remains functional
Weatherability*	ASTM G155, Cycle 1 1000 hours in Xenon arc Weather-Ometer®	Slight discoloration
Salt Fog Resistance	ASTM B117 1000 hours in 5% salt fog solution chamber	No visible effect
Abrasion Resistance	Taber Abraser, CS-10 grinding wheels, 500 g/arm (Fed. Std. 191A, Method 5306)	Print legible after 100 cycles
Chemical Vapor Phase Resistance	Labels adhered to epoxy PC board and exposed to the vapor of the boiling chemical for 10 minutes and then rubbed with a cotton swab saturated with the chemical for 10 rubs Test samples were baked 4 minutes at 160°C prior to testing lonox® 3955 Micronox® MX2501	Severe print removal Complete print removal

*B-7727 is not recommended for outdoor use.

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

Samples printed with Series R6000 Halogen Free thermal transfer ribbon. Samples laminated to epoxy PC board. Test samples were exposed to the indicated environments. Test samples were baked 4 minutes at 160°C before testing. All test samples were immersed in the test fluids for 10 minutes. Samples were rubbed 10 times with a cotton swab saturated with the test fluid.

CHEMICAL REAGENT	SUBJECTIVE OBSERVATION OF VISUAL CHANGE		
	EFFECT TO LABEL	R6000 HALOGEN FREE	
		WITHOUT RUB	WITH RUB
Kyzen Corp. 15% Aquanox® A4625 at 140°F (60°C)	No visible effect	1	4
Kyzen Corp. 17% Aquanox® A4520 at 140°F (60°C)	No visible effect	1	3
Kyzen Corp. 10% Aquanox® A4638 at 150°F (65°C)	No visible effect	1	1
Kyzen Corp. 20% Aquanox® A4703 at 145°F (63°C)	No visible effect	1	1
Zestron, 15% Atron® AC205 at 150°F (65°C)	No visible effect	1	5
Zestron, 15% Atron® AC207 at	No visible effect	1	5

150°F (65°C)			
Zestron, 15% Vigon® A201 at 150°F (65°C)	No visible effect	1	5
Zestron, 15% Vigon® N600 at 150°F (65°C)	No visible effect	1	5
Isopropyl Alcohol 99% at 180°F (82°C)	No visible effect	1	2
Deionized water at 212°F (100°C)	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 removal

PERFORMANCE PROPERTY	TEST METHOD
Solvent Resistance	MIL-STD-202G, Method 215K

Test samples were printed with Series R6000 Halogen Free thermal transfer ribbon. Labels were printed with alphanumerics and barcodes.

Test samples were subjected to 3 cycles of 3 minute immersions immediately followed by a toothbrush rub after each immersion.

TEST FLUID	RESULTS R6000 HALOGEN FREE
Solvent A 1 part IPA, 3 parts mineral spirits	Meets requirement
Solvent C Terpene Defluxer	Meets requirement
Solvent D Saponifier @ 70°C	Meets requirement

Trademarks:

- ANSI: American National Standards Institute (U.S.A.)
- ASTM: American Society for Testing and Materials (U.S.A.)
- All S.I. Units (metric) are mathematically derived from the U.S. Conventional Units
- Aquanox SSA™ is a trademark of Kyzen Corporation.
- Atron® is a registered trademark of the Zestron Corporation
- Ionox® is a registered trademark of the Kyzen Corporation
- Micronox® is a registered trademark of the Kyzen Corporation
- PSTC: Pressure Sensitive Tape Council (U.S.A.)
- Polyken™ is a trademark of Testing Machines Inc.
- UL: Underwriters Laboratories Inc. (U.S.A.)
- Vigon® is the registered trademark of Zestron Corporation
- Weather-Ometer® is a registered trademark of Atlas Material Testing Technology LLC

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 2016 W.H. Brady, N.V. | All Rights Reserved
Material may not be reproduced or distributed in any form without written permission.

Brady Europe | Industriepark C3 Lindestraat 20 | B9240 Zele | Belgium | Tel: +32 52.45.7811 | Fax: +32 52.45.7812