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

TDS No. B-7727
Effective Date: 02/27/2026

Description:

GENERAL

Print Technology: Thermal transfer
Material Type: White polyimide
Finish: Gloss
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 ribbon. See UL file MH17388 for specific details. UL information can be accessed on line at UL.com in the UL Product iQ area.

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-7727 is dibutyl and dioctyl tin free.

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 designed to withstand high heat wave solder processes with labels placed on the bottom of boards where they may come in physical contact with solder.

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 -Epoxy PC Board	ASTM D1000 20 minute dwell 24 hour dwell 20 minute dwell 24 hour dwell	 45 oz/in (49 N/100 mm) 56 oz/in (61 N/100 mm) 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 the Brady Series R6000 Halogen Free thermal transfer ribbon. Printed samples were laminated to aluminum and allowed to dwell 24 hours before exposure to the indicated conditions. High-temperature performance is evaluated in a controlled laboratory using forced-air ovens.

Actual performance in customer applications may vary due to differences in environment, surface types, chemistries, conditions, and any physical contact with the label during processing.

PERFORMANCE PROPERTIES	TEST METHODS	TYPICAL RESULTS
Short Term High Service Temperature	80 seconds at various temperatures	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 various temperatures	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 various temperatures	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 500ºF (260°C). Label remains functional. Print is legible
Long Term High Service Temperature	1000 hours at various temperatures	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 Ionox® 3955 Micronox® MX2501	 Severe print removal Complete print removal

*B-7727 is not recommended for outdoor use.

PERFORMANCE PROPERTY	CHEMICAL RESISTANCE

Samples printed with the Brady 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 150°F (65°C)	No visible effect	1	5
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

Performance: It remains the responsibility of the user to assess the risk of using this product. We recommend customers develop test protocols to validate the product's fitness for use in their actual application.

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.

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
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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
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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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