BRADY B-768 THERMAL TRANSFER PRINTABLE GLOSSY WHITE LOW PROFILE STATIC DISSIPATIVE POLYIMIDE LABEL STOCK

TDS No. B-768
Effective Date:11/20/2023

Description:

GENERAL

Print Technology: Thermal transfer
Material Type: Polyimide
Finish: Glossy
Adhesive: Static Dissipative Permanent Acrylic

APPLICATIONS

Printed circuit board and electronic component pre-process labeling

RECOMMENDED RIBBONS

Brady Series R4900A
Brady Series R6000 Halogen Free
Brady Series R6300
Brady Series R8965
Brady Series RR103

REGULATORY/AGENCY APPROVALS:

UL: Brady B-768 is a UL Recognized Component to UL969 Labeling and Marking Standard when printed with the Brady Series R6300 and Brady Series R6000 Halogen Free ribbons. See UL file MH17154 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-768 is constructed with a static dissipative adhesive. This product has adhesive surface resistivity values in the recommended range for dissipative ESD packaging materials as defined by ANSI/ESD S5412008 (between 10^4 and 10^{11} ohms).

B-768 has a low profile (1 mil) film allowing for easier use in processes which demand thin and/or lighter weight label materials.

B-768 in combination with the Brady Series R6300 or R6000 Halogen Free ribbon meets the requirements of MIL-STD-202G, Method 215K.

B-768 is designed to withstand multiple cycles of harsh condition washes for printed circuit boards.

The R4900A, R6300 and R8965 ribbons are recommended for use in non reflow applications for aqueous cleaning.

Details:

PHYSICAL PROPERTIES	TEST METHODS	AVERAGE RESULTS
Thickness	ASTM D1000 -Substrate	0.0014 inch (0.035 mm)

	-Adhesive -Total (excluding liner)	0.0017 inch (0.043 mm) 0.0031 inch (0.078 mm)
Adhesion to: -Stainless Steel	ASTM D1000 20 minute dwell 24 hour dwell	 40 oz/in (44 N/100 mm) 47 oz/in (51 N/100 mm)
Tack	ASTM D2979 Polyken™ Probe Tack 0.5 second dwell	49 oz (1400 g)
Drop Shear	PSTC-7 (except use ½" x 1" sample)	>100 hours
Dielectric Strength	ASTM D1000	9800 volts
Adhesive Surface Resistivity	EOS/ESD STM11.11	5.9 x 10^7 ohms/sq

Performance properties tested on B-768 printed with the Brady Series R6300 ribbon. Printed samples of B-768 were laminated to aluminum and allowed to dwell 24 hours before exposure to the indicated environmental conditions.

PERFORMANCE PROPERTIES	TEST METHODS	AVERAGE RESULTS
Short Term High Service Temperature	80 seconds at various temperatures	No visible effect to label at 572° F (300°C) and 626°F (330°C), label discolors slightly but still functional, 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 536°F (280°C), moderately discolors at 572°F (300°C) but remains functional. Print is still legible.
	2 hours at various temperatures	No visible effect to label at 338°F (170°C) and 392°F (200°C). Label discolors slightly at 446°F (230°C), moderately at 500°F (260°C), but remains functional. Print is still legible.
Long Term High Service Temperature	1000 hours at various temperatures	Label discolors slightly at 248°F (120°C), and discolors moderately at 293°F (145°C), but remains functional. Print is still legible.
Low Service Temperature	1000 hours at -112°F (-80°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	No visible effect
Weatherability*	ASTM G155, Cycle 1 1000 hours in Xenon Arc Weather-Ometer®	No visible effect
Salt Fog Resistance	ASTM B117 1000 hours in 5% salt fog solution chamber	No visible effect
Abrasion Resistance	Taber Abraser, CS-10 grinding wheels,250 g/arm (Fed. Std. 191A, Method 5306)	Print legible up to 50 cycles with the R6300 Ribbon Print legible up to 100 cycles with the R6000 Halogen Free Ribbon
Chemical Vapor Phase Resistance	Label adhered to epoxy PC board and exposed to the vapor of 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.	

	Micronox® MX 2501	Severe print removal

*B-768 is not recommended for outdoor use.

PERFORMANCE PROPERTY	CHEMICAL RESISTANCE

Test samples were printed with the Brady Series R6300 and R6000 Halogen Free ribbons. Labels were adhered to an epoxy PC board. Test samples were exposed to the indicated environments. All test samples were immersed in the test fluids for 10 minutes prior to rubbing with a cotton swab ten times. Note: Samples were tested without exposure to reflow conditions.

CHEMICAL REAGENT	SUBJECTIVE OBSERVATION OF VISUAL CHANGE				
	EFFECT TO LABEL	R6300		R6000 Halogen Free	
		WITHOUT RUB	WITH RUB	WITHOUT RUB	WITH RUB
Kyzen Corp, 15% Aquanox® A4625 at 140°F (60°C)	No visible effect	1	2	1	5
Kyzen Corp, 7% Aquanox® A4382 at at 150°F (65°C)	No visible effect	1	1	1	5
Kyzen Corp, 10% Aquanox® A4638 at 145°F (63°C)	No visible effect	1	1	1	1
Zestron, 15% Atron® AC205 at 150°F (65°C)	No visible effect	1	1	3	5
Zestron, 15% Atron® AC207 at 150°F (65°C)	No visible effect	1	1	5	5
Zestron, 15% Vigon® A201 at 150°F (65°C)	No visible effect	1	2	1	5
Zestron, 15% Vigon® N600 at 150°F (65°C)	No visible effect	1	1	1	5
Isopropyl Alcohol 99% at 180°F (82°C)	No visible effect	1	1	1	2
Deionized water at 212°F (100°C)	No visible effect	1	1	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
Chemical Resistance	MIL-STD-202G, Method 215K

Test samples were printed with the Brady Series R6300 and R6000 Halogen Free ribbons. Labels were printed with alphanumerics and bar codes. Test samples were subjected to 3 cycles of 3 minute immersions immediately followed by a toothbrush rub after each immersion.

TEST FLUID	RESULTS R6300	RESULTS R6000 Halogen Free
Solvent A 1 part IPA, 3 parts Mineral Spirits	Meets requirements	Meets requirements
Solvent C	Meets requirements	Meets requirements

Terpene Defluxer		
Solvent D Saponifier @ 70°C	Meets requirements	Meets requirements

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:
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® is a registered trademark of the Kyzen Corporation
Atron® is a registered trademark of the Zestron 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.

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