Technical Data Sheet

BRADY B-416A GLOSSY WHITE LOW PROFILE THERMAL TRANSFER PRINTABLE POLYIMIDE LABEL STOCK

TDS No. B-416A
Effective Date: 08/21/2018

Description:

GENERAL

Print Technology: Thermal Transfer
Material Type: White Polyimide
Finish: Glossy
Adhesive: Permanent Acrylic

APPLICATIONS

Printed circuit board and electronic component preprocess labeling

RECOMMENDED RIBBONS

Brady Series R6000 Halogen Free and R8963

REGULATORY/AGENCY APPROVALS

UL: B-416A is UL Recognized to UL969 Labeling and Marking Standard when printed with the Brady Series R6000 Halogen Free ribbon. See UL file MH17154 for specific details.

Brady B-416A is RoHS compliant to 2005/618/EC MCV amendment to RoHS Directive 2011/65/EU.
Brady B-416A is also compliant to the halogen requirements of IEC 61249-2-21 (2003-11).

SPECIAL FEATURES

The B-416A is a low profile glossy white circuit board label.

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

Details:

PHYSICAL PROPERTIES	TEST METHODS	AVERAGE RESULTS
Thickness	ASTM D 1000 -Substrate -Adhesive -Total	 0.0016 inch (.04009 mm) 0.0012 inch (.03126 mm) 0.0028 inch (.07135 mm)
Adhesion to: -Stainless Steel -Epoxy PC Board	ASTM D 1000 20 minute dwell 24 hour dwell 20 minute dwell 24 hour dwell	 44 oz/in (48 N/100mm) 57 oz/in (62 N/100 mm) 35 oz/in (38 N/100 mm) 49 oz/in (54 N/100 mm)
Tack	ASTM D 2979 Polyken™ Probe Tack 1 second dwell	46 oz (1300 g)
Drop Shear	PSTC-7 (except use 1/2" x 1" sample)	>80 hours

Performance properties tested on this label material printed with Series R6000 Halogen Free ribbon. Printed samples 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 518°F (270°C)	No visible effect to label at 518°F (270°C)
	5 minutes at 446°F (230°C)	No visible effect to label at 446°F (230°C)
	2 hours at 338°F (170°C)	No visible effect to label at 170°C
Long Term High Service Temperature	1000 hours at 212°F (100°C)	No visible effect to label at 100°C, label discolors slightly at 120°C, moderately at 145°C, but remains functional.
Low Service Temperature	1000 hours at -94°F (-70°C)	No visible effect
Humidity Resistance	1000 hours at 100°F (37°C), 95% R.H.	No visible effect
Weatherability*	ASTM G155, Cycle 1 1000 hours in Xenon Arc Weatherometer	Moderate discoloration

Salt Fog Resistance	ASTM B 117 30 days 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)	R6000 Halogen Free: Print legible after 100 cycles

*B-416A is not recommended for outdoor use.

PERFORMANCE PROPERTIES	HEAT/CHEMICAL/ ABRASION RESISTANCE

B-416A samples printed with Series R6000 Halogen Free or R8963 thermal transfer ribbons. Samples exposed to the indicated environments. Abrasion Performance tested with 10 strokes of a cotton applicator saturated with the tested fluid. **Two chemicals were tested (Isopropyl Alcohol 99%, 82°C - 10 minutes and DI water 100°C - 10 minutes) with R6000 and R8963. The test results were all "No visible effect".**

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.

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ASTM: American Society for Testing and Materials (U.S.A.)
BradyPrinter™ is a trademark of Brady Worldwide, Inc.
PSTC: Pressure Sensitive Tape Council (U.S.A.)
Polyken™ is a trademark of Testing Machines Inc.
UL: Underwriters Laboratories Inc. (U.S.A.)

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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