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Technical Data Sheet

BRADY B-422 THERMAL TRANSFER PRINTABLE GLOSSY WHITE POLYESTER LABEL STOCK

TDS No. B-422
Effective Date: 11-Mar-2010

Description:

GENERAL

Print Technology: Thermal transfer
Materials Type: White polyester
Finish: Glossy white
Adhesive: Permanent acrylic

APPLICATIONS

Electronic PCB and component identification, bar code label and rating plates and solar panel identification.

RECOMMENDED RIBBONS

Brady series R6000
Brady series R4400 (colors - red, blue, green, white)
Brady series R4900 (alternate)
Brady series R6000HF

AGENCY APPROVALS

UL: B-422 is a UL Recognized Component to UL969 Labeling and Marking Standard when printed with Brady Series R6000 ribbon. R6000HF UL Recognition pending. See UL file MH17154 for specific details. UL information can be accessed on line at *UL.com*. Search in *Certifications* area. The Brady Series R4900 ribbon is also UL approved.
CSA: B-422 is CSA Accepted to C22.2 No.0.15-95 Adhesive Labels Standard when printed with Brady Series R6000 ribbon. See CSA file 041833 for specific details. CSA information can be accessed online at directories.csa-international.org.

Brady B-422 is RoHS compliant to 2005/618/EC MCV amendment to RoHS Directive 2002/95/EC.

SPECIAL FEATURES

B-422 is designed to withstand exposure to numerous solvents and exhibits good adhesion to many surfaces including low surface energy plastics.
B-422 is UL Recognized for Outdoor Use on glass, thermoset polyester plastic and polyvinyl fluoride plastic surfaces to support solar panel identification applications.

Details:

PHYSICAL PROPERTIES	TEST METHODS	AVERAGE RESULTS
Thickness	ASTM D 1000	
	-Substrate	0.002 inch (0.0508 mm)
	-Adhesive	0.002 inch (0.0508 mm)
	-Total	0.004 inch (0.1016 mm)
Adhesion to:	ASTM D 1000	
-Stainless Steel	20 minute dwell	47 oz/inch (51 N/100 mm)
	24 hour dwell	55 oz/inch (60 N/100 mm)
-Textured ABS	20 minute dwell	30 oz/inch (33 N/100 mm)
	24 hour dwell	35 oz/inch (38 N/100 mm)
-Polypropylene	20 minute dwell	47 oz/inch (51 N/100 mm)
	24 hour dwell	51 oz/inch (55 N/100 mm)

-Enamel Painted Metal	20 minute dwell 24 hour dwell	54 oz/inch (59 N/100 mm) 61 oz/inch (67 N/100 mm)
-Powder Coated Metal	20 minute dwell 24 hour dwell	45 oz/inch (49 N/100 mm) 50 oz/inch (55 N/100 mm)
Tack	ASTM D 2979 Polyken™ Probe Tack 1 second dwell	37 oz (1150 g)
Tensile Strength and Elongation	ASTM D 1000 -Machine	45 lbs/inch (788 N/100 mm), 75%
Dielectric Strength	ASTM D 1000	7000 Volts

Performance properties tested on B-422 printed with Series R4900, R6000 and R6000HF ribbons. Printed samples of B-422 were laminated to aluminum and allowed to dwell 24 hours before exposure to the indicated environments. Unless noted, results are the same for both ribbons.

PERFORMANCE PROPERTIES	TEST METHOD	TYPICAL RESULTS
High Service Temperature	30 days at 212°F (100°C)	No visible effect
Low Service Temperature	30 days at -40°F (-40°C)	No visible effect
Humidity Resistance	30 days at 100°F (37°C) and 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 117 30 days in 5% salt fog solution chamber	No visible effect

PERFORMANCE PROPERTY	CHEMICAL RESISTANCE

Samples printed with Series R4900, R6000 and R6000HF ribbons. Samples laminated to aluminum panels and allowed to dwell 24 hours prior to testing. Test conducted at room temperature. Testing consisted of 5 cycles of 10 minute immersions in the specified test fluid followed by a 30 minute recovery period. After final immersion, samples rubbed 10 times with cotton swab saturated with test fluid.

CHEMICAL REAGENT	SUBJECTIVE OBSERVATION OF VISUAL CHANGE			
	EFFECT TO LABEL STOCK	R4900	R6000	R6000HF
Methyl Ethyl Ketone	Slight adhesive ooze	No visible effect w/o rub, complete print removal after rub	No visible effect w/o rub, complete print removal after rub	No visible effect w/o rub, complete print removal after rub
1,1,1-Trichloroethane	Slight adhesive ooze	No visible effect w/o rub, complete print removal after rub	No visible effect w/o rub, complete print removal after rub	Obsolete
Toluene	Slight adhesive ooze	No visible effect w/o rub, complete print removal after rub	No visible effect w/o rub, complete print removal after rub	No visible effect w/o rub, severe print removal after rub
Freon® TMS	No visible effect	No visible effect w/o rub, slight print removal after rub	No visible effect w/o rub, slight print removal after rub	Obsolete
Isopropyl Alcohol	No visible effect	No visible effect	No visible effect	No visible effect
Mineral Spirits	No visible effect	No visible effect	No visible effect	No visible effect
JP-8 Jet Fuel	Slight adhesive ooze	No visible effect	No visible effect	No visible effect
ASTM #3 Oil	No visible effect	No visible effect	No visible effect	No visible effect
Mil 5606 Oil	No visible effect	No visible effect	No visible effect	No visible effect

Gasoline	Slight adhesive ooze	No visible effect w/o rub, slight print removal after rub	No visible effect w/o rub, slight print removal after rub	No visible effect
Skydrol® 500B-4	Slight adhesive ooze	No visible effect w/o rub, complete print removal after rub	No visible effect w/o rub, complete print removal after rub	No visible effect w/o rub, severe print removal after rub
Super Agitene®	No visible effect	No visible effect	No visible effect	No visible effect
Alphametals BIOACT® EC-7™	Slight adhesive ooze	No visible effect	No visible effect	Not tested
Deionized Water	No visible effect	No visible effect	No visible effect	No visible effect
3% Alconox® Detergent	No visible effect	No visible effect	No visible effect	No visible effect
10% Sodium Hydroxide Solution	No visible effect	No visible effect	No visible effect	No visible effect
10% Sulfuric Acid Solution	No visible effect	No visible effect	No visible effect	No visible effect

Product testing, customer feedback, and history of similar products, support a customer performance expectation of at least ***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 degrees F (27°C) and 60% RH* . We are confident that our product will perform well beyond this time frame. However, it remains the responsibility of the user to assess the risk of using such product. We encourage customers to develop functional testing protocols that will qualify a product's fitness for use, in their actual applications.

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ASTM: American Society for Testing and Materials (U.S.A.)
CSA: Canadian Standards Association
UL: Underwriters Laboratories Inc. (U.S.A.)
All S.I. Units (metric) are mathematically derived from the 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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Brady North America | 6555 W. Good Hope Rd | Milwaukee, WI 53223 | USA | Tel: 414-358-6600 | Fax: 800-292-2289