BRADY
WHEN PERFORMANCE MATTERS MOST™

Technical Data Sheet

BRADY B-109 TAG

TDS No. B-109
Effective Date: 05/02/2008

Description:
GENERAL
Print Technology: Thermal transfer and dot matrix
Material Type: Cross laminated polyethylene film tag
Finish: Matte

APPLICATIONS
B-109 is a multipurpose tag that can be used for a variety of tag applications including identification of multiconductor cables, inventory, equipment, lockout, safety warning repair and work-in-progress.

B-109 is extremely tear resistant. It is also a good cold-weather tag.

RECOMMENDED RIBBONS
Brady Series R4300 and R6200 black ribbons for thermal transfer printing.
Brady Series R2000 black ribbon for dot matrix printing.

REGULATORY/AGENCY APPROVALS
B-109 is RoHS compliant to 2005/618/EC MCV amendment to RoHS Directive 2002/95/EC.

Note- Past B-109 in the market is RoHS compliant using Exemption 10a for DecaBDE in Polymeric Materials (10/13/2005). Materials labeled with RoHS compliant statement on product packaging is PBDE free and is RoHS compliant without Exemption 10a for DecaBDE.

Details:

PHYSICAL PROPERTIES	TEST METHODS	AVERAGE RESULTS
Thickness	ASTM D 1000 -Substrate	 0.0085 inch (0.216 mm)
Hole Tear Strength	Brady LAB F003* -Machine Direction -Cross Direction	 30.4 lbs. (13.8 kg) 23.4 lbs. (10.6 kg)
Tear Propagation Resistance	ASTM D 1938 -Machine Direction -Cross Direction	 10.7 lbs. (4.8 kg) 10.2 lbs. (4.6 kg)
Tensile Strength and Elongation	ASTM D 1000 -Machine Direction -Cross Direction	 69 lbs/in (1208 N/100 mm), 430% 81 lbs/in (1418 N/100 mm), 336%
Dielectric Strength	ASTM D 1000	61,500 volts

* LAB F003 is a Brady Worldwide, Inc. laboratory test procedure and is available upon request.

Performance Properties tested on B-109 printed with Brady Series R2000 dot matrix ribbon using Brady SLV-DAT-PRT dot matrix printer, and Brady Series R4300 and R6200 thermal transfer ribbons using a BradyPrinter™ THT Model 300X+II thermal transfer printer.

PERFORMANCE PROPERTIES	TEST METHODS	TYPICAL RESULTS
Long Term High Service Temperature	30 days at 120°F (49°C) 30 days at 176°F (80°C) 30 days at 193°F (90°C) 30 days at 212°F (100°C)	No visible effect Slight edge curl Slight edge curl Moderate edge curl
Long Term Low Service Temperature	30 days at -40°F (-40°C)	No visible effect
Humidity Resistance	30 days at 100°F (37°C), 95% R.H.	No visible effect
UV Light Resistance	ASTM G115, Cycle 1, without water spray 30 days in Xenon Arc Chamber	Yellow discoloration of tag. Print still legible.
Weatherability	ASTM G155, Cycle 1 30 days in Xenon Arc Weatherometer	Slight yellow discoloration of tag. Print still legible.

PERFORMANCE PROPERTY	CHEMICAL RESISTANCE

Samples were printed with Brady Series R2000 dot matrix ribbon and with Series R4300 and R6200 thermal transfer ribbons. Test was conducted at room temperature after 24 hour dwell. Testing consisted of 5 cycles of 10 minute immersions in the specified chemical reagent followed by 30 minute recovery periods. After last immersion samples rubbed 10 times with cotton swab.

CHEMICAL REAGENT	SUBJECTIVE OBSERVATION OF VISUAL CHANGES		
	R2000	R4300	R6200
Methyl Ethyl Ketone	No visible effect w/o rub, complete print removal w/rub	No visible effect w/o rub, complete print removal w/rub	No visible effect w/o rub, complete print removal w/rub
Toluene	No visible effect w/o rub, complete print removal w/rub	No visible effect w/o rub, complete print removal w/rub	No visible effect w/o rub, complete print removal w/rub
Isopropyl Alcohol	No visible effect w/o rub, slight print fade with rub	No visible effect w/o rub, slight print fade with rub	No visible effect w/o rub, slight print fade with rub
Mineral Spirits	No visible effect w/o rub, slight print fade with rub	No visible effect w/o rub, slight print fade with rub	No visible effect w/o rub, slight print fade with rub
JP-8 Jet Fuel	No visible effect w/o rub, slight print smear with rub	No visible effect w/o rub, slight print smear with rub	No visible effect w/o rub, slight print smear with rub
ASTM #3 Oil	No visible effect with or without rub	No visible effect with or without rub	No visible effect with or without rub
Mil 5606 Oil	No visible effect with or without rub. Topcoat stained pink.	No visible effect with or without rub. Topocoat stained pink.	No visible effect with or without rub. Topcoat stained pink.
Skydrol® 500B-4	No visible effect w/o rub, moderate print fade with rub	Complete print removal without rub.	Complete print removal without rub.
Super Agitene®	No visible effect w/o rub, slight print smear with rub	No visible effect w/o rub, slight print smear with rub	No visible effect w/o rub, slight print smear with rub
Deionized Water	No visible effect with or without rub	No visible effect with or without rub	No visible effect with or without rub
3% Alconox® Detergent	No visible effect with or without rub	No visible effect with or without rub	No visible effect with or without rub
10% Sulfuric Acid Solution	No visible effect with or without rub	No visible effect with or without rub	No visible effect with or without rub
10% Sodium Hydroxide Solution	No visible effect with or without rub	No visible effect w/o rub, slight print smear w/rub	No visible effect w/o rub, complete print removal w/rub

Product testing, customer feedback, and history of similar products, support a customerperformance 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 degrees 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.

Trademarks:
Alconox® is a registered trademark of Alconox Co.
BradyPrinter™ is a trademark of Brady Worldwide, Inc.
Bradywriter™ is a trademark of Brady Worldwide, Inc .
Skydrol® is a registered trademark of the Monsanto Company
Super Agitene® is a registered trademark of Graymills Corporation
ASTM: American Society for Testing and Materials (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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