



BRADY B-444 THERMAL TRANSFER PRINTABLE MATTE WHITE POLYVINYLFLORIDE LABEL STOCK

TDS No. B-444
 Effective Date: 1/18/2019

Description:

GENERAL

Print Technology: Thermal Transfer
Material Type: Topcoated polyvinylfluoride
Finish: Matte
Adhesive: Permanent Acrylic-Rubber Hybrid

APPLICATIONS

B-444 is recommended for applications where self-extinguishing properties are required.

RECOMMENDED RIBBONS

Brady Series R6400

REGULATORY/AGENCY APPROVALS

UL: B-444 is a UL Recognized Component when printed with the Brady Series R6400 ribbon. See UL file MH17154 for specific details. UL information can be accessed online at UL.com in the UL Product iQ area.

REGULATORY APPROVALS

For information on the Weeee-RoHS compliance status for a Brady Product go to one of the following websites:

- In Canada: www.bradycanada.ca/weeee-rohs
- In Europe: www.bradyeurope.com/rohs
- In Japan: www.brady.co.jp/products/labelsuse/rohs
- All other regions: www.bradyid.com/weeee-rohs

Details:

PHYSICAL PROPERTIES	TEST METHODS	AVERAGE RESULTS
Thickness	ASTM D 1000 -Total Thickness	0.0037 inch (0.094 mm)
Adhesion to:	ASTM D 1000	
-Stainless Steel	20 minute dwell 24 hour dwell	70 oz/in (77 N/100 mm) 80 oz/in (87 N/100 mm)
-Polypropylene	20 minute dwell 24 hour dwell	70 oz/in (77 N/100 mm) 75 oz/in (82 N/100 mm)
-Textured ABS	20 minute dwell 24 hour dwell	20 oz/in (22 N/100 mm) 20 oz/in (22 N/100 mm)
Tack	ASTM D 2979 Polyken™ Probe Tack (1 second dwell, 1 cm/sec separation)	65 oz (1850 g)
Dielectric Strength	ASTM D1000	6000 Volts
Drop Shear	PSTC-107 (1" x 0.5" test area)	>24 hours

Tensile and Elongation	ASTM D 1000 -Machine direction	23 lbf/in (40 N/10mm), 175%
Flammability	14 CFR, Section 25.853(a); Appendix F, Part 1, paragraph (a)(1)(ii); Applied to 0.025" aluminum panel	Meets Requirements
	FMVSS302 Flammability	Meets Requirements

Performance properties tested with B-444 printed with Brady Series R6400 ribbon. Samples were laminated to aluminum or stainless steel panels prior to exposure.

PERFORMANCE PROPERTIES	TEST METHODS	TYPICAL RESULTS
High Service Temperature	30 days at various temperatures	Slight discoloration at 120°C; label is functional. Moderate discoloration at 145°C; label is functional.
Low Service Temperature	30 days at various temperatures	-94°F (-70°C) - No visible effect -40°F (-40°C) - No visible effect
Short Term High Service Temperature	5 minutes at various temperatures	Slight label shrinkage no discoloration at 5 minutes at 338°F (170°C); label is functional Moderate shrinkage and slight discoloration at 356°F (180°C); label is still functional
Humidity Resistance	30 days at 100°F (38°C), 95% R.H.	No visible effect
UV Light Resistance	ASTM G155, Cycle 1 (no spray) 30 days in Xenon Arc Weatherometer	Very slight discoloration; label is still functional.
Weatherability	ASTM G155, Cycle 1 30 days in Xenon Arc Weatherometer	Very slight discoloration; label is still functional.
Salt Fog Resistance	ASTM B117 30 days 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)	R6400: Print legible after 50 cycles

PERFORMANCE PROPERTIES	CHEMICAL RESISTANCE
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B-444 was printed with Brady Series R6400 ribbon. Samples were laminated to aluminum or polyester panels. Except where noted, testing was conducted at room temperature after 24 hour dwell. Testing consisted of 5 cycles of a 10 minute immersion in the specified test fluid followed by a 30 minute recovery period.

CHEMICAL REAGENT	SUBJECTIVE OBSERVATION OF VISUAL CHANGE		
	EFFECT TO FILM/ADHESIVE	SERIES R6400 RIBBON	
		WITHOUT RUB	WITH RUB
Cleaners and Solvents			
Isopropyl Alcohol	No visible effect	No visible effect	No visible effect
Methyl Ethyl Ketone	Slight adhesive ooze	No visible effect	No visible effect
Acetone	No visible effect	No visible effect	No visible effect
Toluene	Moderate edge wrinkling	No visible effect	No visible effect
Northwoods™ Buzz Saw Cleaner and Degreaser	Moderate discoloration; Increased surface roughness	Complete Removal	Complete Removal
Formula 409®	No visible effect	Complete Removal	Complete Removal
10% Sodium Hydroxide	No visible effect	Complete Removal	Complete Removal
10% Sulfuric Acid	No visible effect	No visible effect	No visible effect
3% Alconox® Powdered Precision Cleaner	No visible effect	No visible effect	No visible effect
BIOACT® EC-7R™	No visible effect	No visible effect	No visible effect
Fuels, Oils and Lubricants			
Kerosene	No visible effect	No visible effect	No visible effect
15W40 Oil	No visible effect	No visible effect	No visible effect
DOT3 Brake Fluid	No visible effect	No visible effect	No visible effect
Aerospace Related Fluids			
Skydrol® 500 B4	No visible effect	No visible effect	No visible effect
Royco® 756	Slight adhesive ooze	No visible effect	No visible effect

B-444 is not recommended for use in contact with high pH materials such as sodium hydroxide.

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:

ASTM: American Society for Testing and Materials (U.S.A)
PSTC: Pressure Sensitive Tape Council (U.S.A.)
UL: Underwriters Laboratories Inc. (U.S.A.)
Formula 409® is a registered trademark of the Clorox Company
Northwoods™ is a trademark of the Superior Chemical Corporation
Polyken™ is a trademark of Testing Machines Inc.
Skydrol® is a registered trademark of the Eastman Chemical Company
Alconox® is a registered trademark of Alconox, Inc.
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