

**BRADY B-434 THERMAL TRANSFER PRINTABLE GLOSS METALLIZED POLYESTER LABEL STOCK**

TDS No. B-434  
Effective Date: 06/27/2012

**Description:**

**GENERAL**

**Print Technology:** Thermal Transfer  
**Material Type:** Metallized Polyester  
**Finish:** Glossy  
**Adhesive:** Permanent Acrylic

**APPLICATIONS**

Rating plate and general purpose labeling on textured surfaces.

**RECOMMENDED RIBBONS**

Brady Series R4900  
Brady Series R6000  
Brady Series R6000 Halogen Free (Previously known as R6000HF)

**REGULATORY/AGENCY APPROVALS**

**UL:** B-434 is a UL Recognized Component when printed with the Brady R4900, R6000 and R6000 Halogen Free Series ribbons. See UL file MH17154 for specific details. UL information can be accessed online at *UL.com*. Search in *Certifications* area.

**CSA:** B-434 is a CSA Accepted material when printed with the Brady R4900 and R6000 Series ribbon. See CSA Acceptance Record LS 41833 for specific details. CSA information can be accessed online at *directories.csa-international.org*.

Brady B-434 is RoHS compliant to 2005/618/EC MCV amendment to RoHS Directive 2002/95/EC.

**SPECIAL FEATURES**

B-434 is designed to withstand numerous solvents while maintaining excellent image quality.

**Details:**

PHYSICAL PROPERTIES	TEST METHODS	AVERAGE RESULTS
Thickness	ASTM D 1000 -Substrate -Adhesive -Total	0.002 inch (0.051 mm) 0.002 inch (0.051 mm) 0.004 inch (0.102 mm)
Adhesion to: -Stainless Steel	ASTM D 1000 20 minute dwell 24 hour dwell	86 oz/in (94 N/100 mm) 97oz/in (106 N/100 mm)
-Textured ABS	20 minute dwell 24 hour dwell	14 oz/in (15 N/100 mm) 18 oz/in (20 N/100 mm)
-Polypropylene	20 minute dwell 24 hour dwell	67 oz/in (73 N/100 mm) 77 oz/in (84 N/100 mm)
Tack	ASTM D 2979 Polyken™ Probe Tack 1 second dwell	47 oz (1333 g)
Tensile Strength and Elongation	ASTM D 1000 -Machine Direction	42 lbs/in (736 N/100 mm), 118%

The following testing was performed on B-434 samples printed with Brady Series R4900, R6000 and R6000 Halogen Free ribbons. Samples laminated to aluminum panels. All samples allowed to dwell 24 hours prior to testing. Unless noted, results are the same for all three ribbons.

PERFORMANCE PROPERTIES	TEST METHODS	EFFECT TO TAPE	EFFECT TO PRINT
Long Term High Service Temperature	30 days at 194°F (90°C)	No visible effect	No visible effect
Long Term Low Service Temperature	30 days at -40°F (-40°C)	No visible effect	No visible effect

Humidity Resistance	30 days at 100°F (37°C), 95% R.H.	No visible effect	No visible effect
UV Light Resistance	30 days in UV Sunlighter™ 100	Slight yellowing of label	No visible effect
Weatherability	ASTM G155, Cycle 1 30 days in Xenon Arc Weatherometer	Topcoat becomes chalky	No visible effect
Abrasion Resistance	Taber Abraser, CS-10 grinding wheels, 500 g/arm (Fed. Std. 191A, Method 5306)	No visible effect	Print legible up to: R4800: 50 cycles R4900: 40 cycles R6000: 135 cycles R6000 Halogen Free: 135 cycles

<b>PERFORMANCE PROPERTY</b>	<b>SOLVENT RESISTANCE</b>
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Samples printed with Series R4900, R6000 and R6000 Halogen Free ribbons. Labels printed using a 3:1 barcode ratio with a 5 mil narrow X dimension bar. 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 period. Samples rubbed 10 times with a cotton swab immersed in test fluid after final immersion.

CHEMICAL REAGENT	SUBJECTIVE OBSERVATION OF VISUAL CHANGE				
	LABEL STOCK	PRINTING IMMERSION ONLY <sup>1</sup>	R4900 PRINT WITH COTTON SWAB RUB	R6000 PRINT WITH COTTON SWAB RUB	R6000 Halogen Free PRINT WITH COTTON SWAB RUB
Methyl Ethyl Ketone	Slight adhesive ooze	Print Removed	Print Removed	Print Removed	Print Removed
1,1,1-Trichloroethane	Slight adhesive ooze	NVE <sup>2</sup>	Print Removed	Slight Removal	Obsolete
Toluene	Slight adhesive ooze	NVE	Print Removed	Print Removed	Print Removed
Isopropyl Alcohol	NVE	NVE	NVE	NVE	NVE
Mineral Spirits	NVE	NVE	NVE	NVE	NVE
JP-4 Jet Fuel	NVE	NVE	NVE	NVE	NVE
ASTM Reference Fuel B	NVE	NVE	NVE	NVE	Not Tested
SAE 20 WT Oil	NVE	NVE	NVE	NVE	NVE
ASTM #3 Oil	NVE	NVE	NVE	NVE	NVE
Mil 5606 Oil	NVE	NVE	NVE	NVE	NVE
Skydrol® 500B-4	Slight adhesive ooze	Print Removed	Print Removed	Print Removed	Print Removed
Super Agitene®	NVE	NVE	NVE	NVE	NVE
BIOACT® EC-7R™	NVE	NVE	NVE	NVE	NVE
Deionized Water	NVE	NVE	NVE	NVE	NVE
3% Alconox® Detergent	NVE	NVE	NVE	NVE	NVE
10% Sodium Hydroxide Solution	NVE	NVE	NVE	NVE	NVE
10% Sulfuric Acid Solution	NVE	NVE	NVE	NVE	NVE

<sup>1</sup>Results same for R4900, R6000 and R6000HF ribbons

<sup>2</sup>NVE=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  
SAE: Society of Automotive Engineers (U.S.A.)  
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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