

**BRADY B-435 THERMAL TRANSFER PRINTABLE GLOSS METALLIZED POLYESTER LABEL STOCK**

TDS No. B-435

Effective Date: 2/14/2019

**Description:**

**GENERAL**

**Print Technology:** Thermal Transfer

**Material Type:** Metallized Polyester

**Finish:** Gloss

**Adhesive:** Permanent Acrylic

**APPLICATIONS**

Rating plate and general purpose labeling

**RECOMMENDED RIBBONS**

Brady Series R4900

Brady Series R6000 Halogen Free

**REGULATORY/AGENCY APPROVALS**

**UL:** B-435 is a UL Recognized Component when printed with the Brady Series R4900 and the Brady Series R6000 Halogen Free ribbons. See UL file MH17154 for specific details. UL information can be accessed on-line at UL.com in the UL Product iQ area.

**CSA:** B-435 is a CSA Accepted material when printed with the Brady R6000 Series ribbon. See CSA Acceptance Record LS 41833 for specific details. CSA information can be accessed online at [directories.csa-international.org](http://directories.csa-international.org).

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

In Canada: [www.bradycanada.ca/weee-rohs](http://www.bradycanada.ca/weee-rohs)

In Europe: [www.bradyeurope.com/rohs](http://www.bradyeurope.com/rohs)

In Japan: [www.brady.co.jp/products/labelsuse/rohs](http://www.brady.co.jp/products/labelsuse/rohs)

All other regions: [www.bradyid.com/weee-rohs](http://www.bradyid.com/weee-rohs)

**Details:**

PHYSICAL PROPERTIES	TEST METHODS	AVERAGE RESULTS
Thickness	ASTM D 1000 -Substrate -Adhesive -Total	0.0020 inch (0.0508 mm) 0.0007 inch (0.0165 mm) 0.0027 inch (0.0673 mm)
Adhesion to: -Stainless Steel	ASTM D 1000 20 minute dwell 24 hour dwell	66 oz/in (72 N/100 mm) 84 oz/in (92 N/100 mm)
Tack	ASTM D 2979 Polyken™ Probe Tack 0.5 second dwell	17 oz (472 g)
Drop Shear	PSTC-7 (except use 1/2" x 1" sample)	40 hours
Tensile Strength and Elongation	ASTM D 1000 -Machine Direction -Cross Direction	40 lbs/in (698 N/100 mm), 118% 49 lbs/in (858 N/100 mm), 66%

Performance properties were tested on B-435 printed with the Brady Series R4900 and the Brady Series R6000 Halogen Free ribbons. Samples were laminated to aluminum panels. All samples were allowed to dwell 24 hours prior to testing. Unless noted, results are the same for all ribbons.

PERFORMANCE PROPERTIES	TEST METHODS	TYPICAL RESULTS
Long Term High Service Temperature	30 days at 194°F (90°C)	No visible effect
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	30 days in UV Sunlighter™ 100	Slight yellowing of label. No visible effect to print.

Weatherability	ASTM G155, Cycle 1 30 days in Xenon Arc Weatherometer	Topcoat becomes chalky. No visible effect to print.
Abrasion Resistance	Taber Abraser, CS-10 grinding wheels, 500 g/arm (Fed. Std. 191A, Method 5306)	Print legible up to: R4900 50 cycles R6000 Halogen Free 100 cycles

<b>PERFORMANCE PROPERTY</b>	<b>CHEMICAL RESISTANCE</b>
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Samples were printed with the Brady Series R4900 and the Brady Series R6000 Halogen Free 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 period. Samples rubbed 10 times with cotton swab immersed in test fluid after final immersion.

CHEMICAL REAGENT	SUBJECTIVE OBSERVATION OF VISUAL CHANGE			
	EFFECT TO LABEL STOCK	PRINTING IMMERSION ONLY*	R4900 PRINT WITH COTTON SWAB RUB	R6000 Halogen Free PRINT WITH COTTON SWAB RUB
Methyl Ethyl Ketone	NVE**	NVE	Print Removed	Print Removed
Toluene	NVE	NVE	Print Removed	Print Removed
Isopropyl Alcohol	NVE	NVE	NVE	NVE
Mineral Spirits	NVE	NVE	NVE	NVE
JP-4 Jet Fuel	NVE	NVE	NVE	NVE
ASTM #3 Oil	NVE	NVE	NVE	NVE
Mil 5606 Oil	NVE	NVE	NVE	NVE
Skydrol® 500B-4	NVE	NVE	Print Removed	Print Removed
Super Agitene®	NVE	NVE	NVE	NVE
BIOACT® EC-7R™	NVE	NVE	NVE	Not Tested
Deionized Water	NVE	NVE	NVE	NVE
3% Alconox® Detergent	NVE	NVE	NVE	NVE
10% Sodium Hydroxide Solution	NVE	NVE	NVE	NVE
10% Sulfuric Acid Solution	NVE	NVE	NVE	NVE

\* Results same for the Brady Series R4900 and the Brady Series R6000 Halogen Free ribbons

\*\* NVE= No Visible Effect

#### Shelf Life:

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:

Alconox® is a registered trademark of Alconox Co.

BIOACT® is a registered trademark of Petroferm, Inc.

EC7R™ is a trademark of Petroferm Inc.

Polyken™ is a trademark of Testing Machines Inc.

Skydrol® is a registered trademark of the Monsanto Company

Sunlighter™ is a trademark of the Test Lab Apparatus Company

Super Agitene® is a registered trademark of Graymills Corporation

ASTM: American Society for Testing and Materials (U.S.A.)

CSA: Canadian Standards Association

PSTC: Pressure Sensitive Tape Council (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.

Product compliance information is based upon information provided by suppliers of the raw materials used by Brady to manufacture this product or based on results of testing using recognized analytical methods performed by a third party, independent laboratory. As such, Brady makes no independent representations or warranties, express or implied, and assumes no liability in connection with the use of this information.

#### **WARRANTY**

Brady products are sold with the understanding that the buyers will test them in actual use and determine for themselves their adaptability to their intended uses. Brady warrants to the buyers that its products are free from defects in material and workmanship, but limits its obligation under this warranty to replacement of the product shown to Brady's satisfaction to have been defective at the time Brady sold it. This warranty does not extend to any persons obtaining the product from the buyers. This warranty is in lieu of any other warranty, express or implied, including, but not limited to, any implied warranty of merchantability or fitness for a particular purpose, and of any other obligations or liability on Brady's part. Under no circumstances will Brady be liable for any loss, damage, expense, or consequential damages of any kind arising in connection with the use, or inability to use, Brady's products.

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In Japan: [www.brady.co.jp/products/labelsuse/rohs](http://www.brady.co.jp/products/labelsuse/rohs)

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Toluene	NVE	NVE	Print Removed	Print Removed
Isopropyl Alcohol	NVE	NVE	NVE	NVE
Mineral Spirits	NVE	NVE	NVE	NVE
JP-4 Jet Fuel	NVE	NVE	NVE	NVE
ASTM #3 Oil	NVE	NVE	NVE	NVE
Mil 5606 Oil	NVE	NVE	NVE	NVE
Skydrol® 500B-4	NVE	NVE	Print Removed	Print Removed
Super Agitene®	NVE	NVE	NVE	NVE
BIOACT® EC-7R™	NVE	NVE	NVE	Not Tested
Deionized Water	NVE	NVE	NVE	NVE
3% Alconox® Detergent	NVE	NVE	NVE	NVE
10% Sodium Hydroxide Solution	NVE	NVE	NVE	NVE
10% Sulfuric Acid Solution	NVE	NVE	NVE	NVE

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