Technical Data Sheet

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

TDS No. B-434
Effective Date: 1/18/2019

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 Halogen Free

REGULATORY/AGENCY APPROVALS

UL: B-434 is a UL Recognized Component when printed with the Brady Series R4900 and R6000 Halogen Free Series 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-434 is a CSA Accepted material when printed with the Brady Series R4900 and the Brady Series R6000 ribbon. See CSA Acceptance Record LS 41833 for specific details. CSA information can be accessed online at *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
In Europe: www.bradyeurope.com/rohs
In Japan: www.brady.co.jp/products/labelsuse/rohs
All other regions: www.bradyid.com/weee-rohs

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) 97 oz/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 0.5 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 the Brady Series R4900 and the Brady Series 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 two 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, CS10 grinding wheels, 500 g/arm (Fed. Std. 191A, Method 5306)	No visible effect	Print legible up to: R4900: 40 cycles R6000 Halogen Free: 135 cycles

PERFORMANCE PROPERTY	CHEMICAL RESISTANCE

Samples 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 a cotton swab immersed in test fluid after final immersion.

CHEMICAL REAGENT	SUBJECTIVE OBSERVATION OF VISUAL CHANGE			
	LABEL STOCK	PRINTING IMMERSION ONLY[1]	R4900 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
Toluene	Slight adhesive ooze	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 Reference Fuel B	NVE	NVE	NVE	Not Tested
SAE 20 WT Oil	NVE	NVE	NVE	NVE
ASTM #3 Oil	NVE	NVE	NVE	NVE
Mil 5606 Oil	NVE	NVE	NVE	NVE
Skydrol® 500B-4	Slight adhesive ooze	Print Removed	Print Removed	Print Removed
Super Agitene®	NVE	NVE	NVE	NVE
BIOACT® EC-7R™	NVE	NVE	NVE	NVE
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

[1]Results same for the Brady Series R4900 and the Brady Series R6000 Halogen Free ribbons

[2]NVE=No Visible Effect

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.
EC-7R™ 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
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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