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Technical Data Sheet

BRADY
WHEN PERFORMANCE MATTERS MOST

BRADY B-439 THERMAL TRANSFER PRINTABLE COLORED VINYL LABEL STOCK

TDS No. B-439
Effective Date: 03/21/2019

Description:

GENERAL

Print Technology: Thermal Transfer

Materials Type: Vinyl

Finish: Gloss

Adhesive: Permanent acrylic

APPLICATIONS

B-439 is designed for applications requiring various colors such as finished product identification, rating plates and general purpose identification.

B-439 is designed for use in ambient conditions with limited solvent exposure.

RECOMMENDED RIBBONS

Brady Series R4900
Brady Series R6000 Halogen Free
Brady Series R4400W (white)

REGULATORY APPROVALS

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

Details:

PHYSICAL PROPERTIES	TEST METHODS	AVERAGE RESULTS
Thickness	ASTM D 1000 -Substrate -Adhesive -Total (excluding liner)	0.0032 inch (0.0813 mm) 0.0010 inch (0.0254 mm) 0.0042 inch (0.1067 mm)
Adhesion to: -Stainless Steel	ASTM D 1000 24 hour dwell	100 oz/in (109 N/100 mm)
Tack	ASTM D 2979 Polyken™ Probe Tack 1 second dwell	38 oz (g)
Tensile Strength and Elongation	ASTM D 1000 -Machine Direction -Cross Direction	 10 lbs/in (175 N/100 mm),105% 11 lbs/in (196 N/100 mm),181%

The following testing was performed using 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 the same for both ribbons.

PERFORMANCE PROPERTIES	TEST METHODS	EFFECT TO TAPE	EFFECT TO PRINT
High Service Temperature	30 days at 176°F (80°C)	No visible effect	No visible effect
Low Service Temperature	30 days at -94°F (-70°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 material shrinkage	No visible effect
Weatherability	ASTM G155, Cycle 1 30 days in Xenon Arc Weatherometer	Slight material shrinkage and color loss	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: R4900 50 cycles R6000 Halogen Free 280 cycles

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 cotton swab immersed in test fluid after final immersion.

CHEMICAL REAGENT	SUBJECTIVE OBSERVATION OF VISUAL CHANGE			
	EFFECT TO LABEL STOCK	PRINTING IMMERSION ONLY[1]	R4900 PRINT WITH COTTON SWAB RUB	R6000 Halogen Free PRINT WITH COTTON SWAB RUB
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
Super Agitene®	NVE	NVE	NVE	NVE
Alphametals 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[2]	NVE	NVE	NVE
10% Sulfuric Acid Solution	NVE	NVE	NVE	NVE

[1]Results the same for the Brady Series R4900 and the Brady Series R6000 Halogen Free ribbons [2]NVE = No Visible Effect

B-439 is not recommended for use in harsh solvents such as 1,1,1 - Trichloroethane, Methyl Ethyl Ketone or Toluene.

Shelf Life:
Shelf life is one year 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)
Alconox® is a registered trademark of Alconox Co.
All S.I. Units (metric) are mathematically derived from the U.S. Conventional
BIOACT® is a registered trademark of Petroferm, Inc.

PolykenSunlighter™ is a trademark of Testing Machines Inc.™ is a trademark of the Test Lab Apparatus Company

Super Agitene® is a registered trademark of Graymills Corporation 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 representation or warranties, express or implied, and assumes no liability in connection with the use of this information.

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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 obligations 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 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.