

BRADY B-439 THERMAL TRANSFER PRINTABLE COLORED VINYL LABEL STOCK

TDS No. B-439
Effective Date: 10/26/2021

Description:

GENERAL

Print Technology: Thermal Transfer

Materials Type: Vinyl

Finish: Gloss

Adhesive: Permanent acrylic

Colors: White, yellow, red, light blue, green, orange, black, gray and purple.

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 (1077g) |
| 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 are 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 a 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 |
| Alphamets BIOACT® EC-7R™ | NVE | NVE | NVE | NVE |
| Deionized Water | NVE | NVE | NVE | NVE |
| 3% Alconox® Detergent | NVE | NVE | NVE | NVE |
| 10% Sodium | NVE ² | NVE | NVE | NVE |

| | | | | |
|----------------------------|-----|-----|-----|-----|
| Hydroxide Solution | | | | |
| 10% Sulfuric Acid Solution | NVE | NVE | NVE | NVE |

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

²NVE = 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.
 Polyken™ is a trademark of Testing Machines Inc.
 Sunlighter™ 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.

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