

## BRADY B-8459 THERMAL TRANSFER PRINTABLE MATTE WHITE POLYESTER LABEL STOCK

TDS No. B-8459  
Effective Date: 11/12/2019

### Description:

#### GENERAL

Print Technology: Thermal Transfer  
Material Type: White polyester  
Finish: Matte  
Adhesive: Permanent Acrylic

### APPLICATIONS

Designed for applications such as topside of printed circuit boards and rating plates that utilize high quality/density alphanumerics, barcodes and graphics.

### RECOMMENDED RIBBONS

Brady Series R4900  
Brady Series R6000 Halogen Free

### REGULATORY/AGENCY APPROVALS

**UL:** B-8459 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.

**cUL:** B-8459 is a cUL Recognized Component when printed with the Brady Series R4900 and the Brady Series R6000 Halogen Free ribbons. See UL file PGJ18.MH17154 for specific details. UL information can be accessed on-line at UL.com in the UL Product iQ area.

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<br>-Substrate<br>-Adhesive<br>-Total | 0.0020 inch (0.0508 mm)<br>0.0008 inch (0.0203 mm)<br>0.0028 inch (0.0711 mm) |
| Adhesion to:<br>-Stainless Steel | ASTM D 1000<br>20 minute dwell<br>24 hour dwell  | 57 oz/inch (62 N/100 mm)<br>61 oz/inch (67 N/100 mm)                          |
| -Polypropylene                   | 20 minute dwell<br>24 hour dwell                 | 49 oz/inch (54 N/100 mm)<br>50 oz/inch (55 N/100 mm)                          |

|      |                                                                             |               |
|------|-----------------------------------------------------------------------------|---------------|
| Tack | ASTM D 2979<br>Polyken™ Probe Tack<br>(1 second dwell, 1 cm/sec separation) | 46 oz (1310g) |
|------|-----------------------------------------------------------------------------|---------------|

Performance properties tested on B-8459 printed with the Brady Series R4900, and the Brady Series R6000 Halogen Free black ribbons. Printed samples were laminated to aluminum and allowed to dwell 24 hours before exposure to the indicated environments. Unless noted, results the same for both ribbons.

| PERFORMANCE PROPERTIES              | TEST METHOD                                                                     | TYPICAL RESULTS                                                                            |
|-------------------------------------|---------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| Short Term High Service Temperature | 5 minutes at various temperatures                                               | No visible effect to label at 180°C. Label shrinkage at 210°C;                             |
| High Service Temperature            | 30 days at various temperatures                                                 | No visible effect to label at 100°C. Slight discoloration at 120°C;                        |
| Low Service Temperature             | 30 days at -40°C                                                                | No visible effect                                                                          |
| Humidity Resistance                 | 30 days at 100°F (37°C) and 95% relative humidity.                              | No visible effect                                                                          |
| UV Light Resistance                 | 30 days in UV Sunlighter™ 100                                                   | No visible effect                                                                          |
| Weatherability                      | ASTM G155, Cycle 1<br>30 days in Xenon Arc Weatherometer                        | No visible effect                                                                          |
| Salt Fog Resistance                 | ASTM B 117<br>30 days in 5% salt fog solution chamber                           | No visible effect                                                                          |
| Abrasion Resistance                 | Taber Abraser, CS10 grinding wheels,<br>250 g/arm (Fed. Std. 191A, Method 5306) | R4900: Print legible after 30 cycles<br>R6000 Halogen Free: Print legible after 125 cycles |

| PERFORMANCE PROPERTY | CHEMICAL RESISTANCE |
|----------------------|---------------------|
|----------------------|---------------------|

Samples were printed with the Brady Series R4900 and the Brady Series R6000 Halogen Free ribbons. Samples were laminated to aluminum panels and allowed to dwell 24 hours prior to testing. Testing was conducted at room temperature and consisted of 30 minute immersions in the specified test fluid. After immersion, the samples were removed from the test fluid and the printed image rubbed 10 times with a cotton swab saturated with the test fluid. The rating scale below shows the effect to the quality of the print for each sample.

| CHEMICAL REAGENT               | SUBJECTIVE OBSERVATION OF VISUAL CHANGE |                             |                             |
|--------------------------------|-----------------------------------------|-----------------------------|-----------------------------|
|                                | EFFECT TO LABEL STOCK                   | R4900                       | R6000 Halogen Free          |
| Methyl Ethyl Ketone            | No visible effect                       | Print removed when immersed | Print removed when immersed |
| Isopropyl Alcohol              | No visible effect                       | No visible effect           | No visible effect           |
| Mineral Spirits                | No visible effect                       | No visible effect           | No visible effect           |
| SAE 20 WT Oil @ 70°C           | No visible effect                       | No visible effect           | No visible effect           |
| Mil 5606 Oil                   | No visible effect                       | No visible effect           | No visible effect           |
| Speedi Kut Cutting Oil 332     | No visible effect                       | No visible effect           | No visible effect           |
| Gasoline                       | No visible effect                       | No visible effect           | No visible effect           |
| Rust Veto® 342                 | No visible effect                       | No visible effect           | No visible effect           |
| Northwoods™ Buzz Saw Degreaser | No visible effect                       | Print removed when rubbed   | Print removed when rubbed   |
| Deionized Water                | No visible effect                       | No visible effect           | No visible effect           |
| 5% Salt Solution               | No visible effect                       | No visible effect           | No visible effect           |
| 3% Alconox® Detergent          | No visible effect                       | No visible effect           | No visible effect           |
| 10% Sodium Hydroxide Solution  | No visible effect                       | No visible effect           | No visible effect           |
| 10% Sulfuric Acid Solution     | No visible effect                       | No visible effect           | 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.

Northwoods™ is a trademark of the Superior Chemical Corporation

Polyken™ is a trademark of Testing Machines Inc.

Rust Veto® is a registered trademark of the E.F. Houghton & Co.

Sunlighter™ is a trademark of the Test Lab Apparatus Company ASTM:

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

SAE: Society of Automotive Engineers (U.S.A.)

UL: Underwriters Laboratories Inc. (U.S.A.)

cUL: 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.

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