

## BRADY B-184 ALUMINUM FOIL TAPE

TDS No. B-184

Effective Date: 01/11/2019

### Description:

#### GENERAL

**Print Technology:** Dot Matrix

**Material Type:** Dead Soft Aluminum Foil

**Finish:** Matte

**Adhesive:** Permanent Acrylic

### APPLICATIONS

Dot matrix printable or write-on aluminum foil label. B-184 can also be used as a wiremarker because of its excellent conformability around wire.

### RECOMMENDED RIBBONS

Brady Series R2000

Brady Series R5000

### 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](http://www.bradycanada.ca/weee-rohs)

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

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

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

### SPECIAL FEATURES

The aluminum foil used in B-184 is conductive. B-184 has excellent "memory" when wrapped on a wire, and may remain wrapped around a wire or cable even if the adhesive fails.

### Details:

| PHYSICAL PROPERTIES              | TEST METHODS                                                        | AVERAGE RESULTS                                                                                      |
|----------------------------------|---------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| Thickness                        | ASTM D 1000<br>-Topcoat<br>-Substrate (foil)<br>-Adhesive<br>-Total | 0.0009 inch (0.023 mm)<br>0.0026 inch (0.066 mm)<br>0.0011 inch (0.028 mm)<br>0.0046 inch (0.116 mm) |
| Adhesion to:<br>-Stainless Steel | ASTM D 1000<br>20 minute dwell<br>24 hour dwell                     | 60 oz/in (66 N/100 mm)<br>70 oz/in (77 N/100 mm)                                                     |
| -Textured ABS                    | 20 minute dwell<br>24 hour dwell                                    | 20 oz/in (22 N/100 mm)<br>25 oz/in (27 N/100 mm)                                                     |
| -Polypropylene                   | 20 minute dwell<br>24 hour dwell                                    | 50 oz/in (55 N/100 mm)<br>55 oz/in (60 N/100 mm)                                                     |
| Tack                             | ASTM D 2979<br>Polyken™ Probe Tack<br>1 second dwell                | 19 oz (550 g)                                                                                        |
| Tensile Strength and Elongation  | ASTM D 1000                                                         | 25 lbs/in (438 N/100 mm), 10%                                                                        |
| Application Temperature          | Lowest application temperature to steel                             | 50°F (10°C)                                                                                          |

The following testing is performed with the B-184 printed with the Brady Series R2000 and Brady Series R5000 ribbons. All samples allowed to dwell 24 hours prior to testing.

| PERFORMANCE PROPERTIES   | TEST METHODS                    | TYPICAL RESULTS                                                                       |
|--------------------------|---------------------------------|---------------------------------------------------------------------------------------|
| High Service Temperature | 30 days at various temperatures | Very slight label discoloration at 130°C.<br>At higher temperatures up to 160°C label |

|                         |                                                                               |                                                                   |
|-------------------------|-------------------------------------------------------------------------------|-------------------------------------------------------------------|
|                         |                                                                               | is still functional, but discolours to a brownish/gold color.     |
| 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                                                 | Very slight label discoloration                                   |
| Weatherability          | ASTM G155, Cycle 1<br>30 days in Xenon Arc Weatherability                     | Slight Series 2000 and 5000 print fade                            |
| Salt Fog Resistance     | ASTM B 117<br>30 days in 5% salt fog solution chamber                         | Salt precipitated on label surface, label print difficult to read |
| Abrasion Resistance     | Taber Abraser, CS-10 grinding wheels, 500 g/arm (Fed. Std. 191A, Method 5306) | Series 2000 and 5000 print still legible after 600 cycles         |

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

Samples were printed with Brady Series R2000 and Brady Series R5000 ribbons, laminated to aluminum panels, and dwelled 24 hours prior to test. Testing consisted of 5 cycles of 10 minute immersions in the specified chemicals followed by 30 minute recovery periods. After the final immersion the samples were rubbed with cotton swabs. Testing was conducted at room temperature.

| CHEMICAL REAGENT                      | SUBJECTIVE OBSERVATION OF VISUAL CHANGE                    |                                            |
|---------------------------------------|------------------------------------------------------------|--------------------------------------------|
|                                       | APPEARANCE OF TAPE                                         | APPEARANCE OF SERIES R2000 AND R5000 PRINT |
| Methyl Ethyl Ketone                   | Topcoat turns slightly white; topcoat removed when rubbed. | Print removed when rubbed                  |
| 1,1,1-Trichloroethane                 | Topcoat removed when rubbed                                | Print removed when rubbed                  |
| Isopropyl Alcohol                     | No visible effect                                          | No visible effect                          |
| JP-4 Jet Fuel                         | No visible effect                                          | No visible effect                          |
| ASTM Reference Fuel B                 | No visible effect                                          | No visible effect                          |
| SAE 20 WT Oil                         | No visible effect                                          | No visible effect                          |
| Mil-H-5606 Oil                        | No visible effect                                          | No visible effect                          |
| Speedi Kut Cutting Oil 332            | No visible effect                                          | No visible effect                          |
| Rust Veto® 377                        | No visible effect                                          | No visible effect                          |
| Skydrol® 500B-4                       | Topcoat softened                                           | Print smear when rubbed                    |
| Super Agitene®                        | No visible effect                                          | No visible effect                          |
| Deionized Water                       | No visible effect                                          | No visible effect                          |
| 3% Alconox® Detergent                 | No visible effect                                          | No visible effect                          |
| Northwoods™ Buzz Saw Citrus Degreaser | Label edge lift; topcoat degraded                          | Print removed                              |

Unless reported differently, results were the same for Brady Series R2000 and Brady Series R5000 ribbons.

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.

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.)

SAE: Society of Automotive Engineers (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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