



## BRADY B-427 THERMAL TRANSFER PRINTABLE TRANSLUCENT VINYL TAPE

TDS No. B-427

Effective Date: 08-Jul-2008

### Description:

#### GENERAL

**Print Technology:** Thermal Transfer

**Material Type:** Translucent vinyl

**Finish:** Provided in a self-laminated format with a white printable zone and a translucent overlaminating area.

**Adhesive:** Permanent acrylic

#### APPLICATIONS

B-427 is an excellent material for wire and cable identification. This material has good clarity, conformability and is self-extinguishing. B-427 has outstanding water and oil resistance.

#### RECOMMENDED RIBBONS

Brady Series R4300 black and R4500 colored (red, blue, green) for thermal transfer printing.

#### REGULATORY/AGENCY APPROVALS

B-427 is UL Recognized to UL969 Labeling and Marking Standard when printed with the Brady Series R4300 and R6200 ribbons. See UL files MH17154 for specific details.

B-427 is RoHS compliant to 2005/618/EC MCV amendment to RoHS Directive 2002/95/EC.

***Note- Due to past non-compliant B-427 materials in the market, only B-427 products with RoHS compliance statement on product packaging are RoHS compliant.***

**Details:**

| PHYSICAL PROPERTIES  | TEST METHODS  | AVERAGE RESULTS  |
|--|---|--|
| Thickness  | ASTM D 1000<br>-Total Thickness   | 0.0040 inch (0.102 mm)   |
| Adhesion to:<br><br>-Stainless Steel<br><br>-Polypropylene | ASTM D 1000<br><br>20 minute dwell<br>24 hour dwell<br><br>20 minute dwell<br>24 hour dwell | <br><br>38 oz/in (42 N/100 mm)<br>49 oz/in (54 N/100 mm)<br><br>25 oz/in (28 N/100 mm)<br>33 oz/in (36 N/100 mm) |
| Tack   | ASTM D 2979<br>Polyken™ Probe Tack<br>(1 second dwell, 1 cm/sec separation)                 | 13.3 oz (378 g)  |
| Drop Shear   | PSTC-7 (except use 1/2" x 1" sample)  | 3.3 hours  |
| Tensile Strength and Elongation                            | ASTM D 1000<br>-Machine<br>-Cross   | 12 lbs/in (210 N/100 mm), 152%<br>11 lbs/in (193 N/100 mm), 195%   |
| Flammability   | ASTM D 1000<br>Average Burn Time  | ABT less than 10 seconds   |

Performance properties tested with white printable zone of B-427 printed with Brady Series R4300 black thermal transfer ribbon. Samples wrapped around 0.080" OD TFE wire in a self-laminating format.

| PERFORMANCE PROPERTIES   | TEST METHODS   | TYPICAL RESULTS   |
|--------------------------|--|---|
| High Service Temperature | 30 days at 158°F (70°C)                                      | Slight discoloration. No visible effect at 140°F (60°C) |
| 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                                       |
| Weatherability           | ASTM G 155, Cycle 1<br>30 days in Xenon Arc<br>Weatherometer | No visible effect                                       |

| PERFORMANCE PROPERTIES | CHEMICAL RESISTANCE |
|------------------------|---------------------|
|------------------------|---------------------|

White printable zone of B-427 was printed with Brady Series R4300 black thermal transfer ribbon. Samples wrapped around 0.080" OD TFE wire in a self-laminating format. Except where noted, testing was conducted at room temperature after 24 hour dwell. Testing consisted of 5 cycles of a 10 minute immersion in the specified test fluid followed by a 30 minute recovery period.

| CHEMICAL REAGENT                     | SUBJECTIVE OBSERVATION OF VISUAL CHANGE |                     |
|--------------------------------------|---|---------------------|
|                                      | SUBSTRATE/ADHESIVE                      | SERIES R4300 RIBBON |
| <b>Cleaners and Solvents</b>         |   |                     |
| Isopropyl Alcohol                    | No visible effect                       | No visible effect   |
| Mineral Spirits                      | No visible effect                       | No visible effect   |
| Northwoods™ Buzz Saw Terpene Cleaner | No visible effect                       | No visible effect   |
| Formula 409®                         | No visible effect                       | No visible effect   |
| Deionized Water                      | No visible effect                       | No visible effect   |
| <b>Fuels, Oils and Lubricants</b>    |   |                     |
| Gasoline                             | Moderate unwrap                         | No visible effect   |
| Brake Fluid                          | No visible effect                       | No visible effect   |
| SAE 30 WT Oil at 70 °C               | No visible effect                       | No visible effect   |
| Yellow 77® Wire Pulling Lubricant    | No visible effect                       | No visible effect   |
| Deionized Water                      | No visible effect                       | No visible effect   |
| <b>Aerospace Related Fluids</b>      |   |                     |
| JP-8 Jet Fuel                        | No visible effect                       | No visible effect   |
| Skydrol® 500B-4                      | Material destroyed                      | NA                  |
| MIL-H- 5606 Oil                      | No visible effect                       | No visible effect   |

B-427 is not recommended for use in harsh organic solvents such as methyl ethyl ketone, acetone, or 1,1,1-trichloroethane.

Product testing, customer feedback, and history of similar products, support a customer performance expectation of at least **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 degrees F (27 degrees C) and 60% RH*. We are confident that our product will perform well beyond this time frame. However, it remains the responsibility of the user to assess the risk of using such product. We encourage customers to develop functional testing protocols that will qualify a product's fitness for use, in their actual applications.

#### Trademarks:

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

Formula 409® is a registered trademark of the Chlorox Company

Northwoods™ is a trademark of the Superior Chemical Corporation

PSTC: Pressure Sensitive Tape Council (U.S.A.)

Polyken™ is a trademark of Testing Machines Inc.

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

Skydrol® is a registered trademark of the Monsanto Company

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

Yellow 77® is a registered trademark of Ideal Industries, Inc.

**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.

**WARRANTY**

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 obligation 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 of 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.

## Specification Of Thermal Transfer Printable Labels

|                                       |  |
|---------------------------------------|--|
| <b>Application(s):</b>                | Communications Cables, Panel Identification, Voice/Data Identification, Wire & Cable Marking   |
| <b>Agency Approval(s)/Compliance:</b> | UL Recognized  |
| <b>Size:</b>                          | 1.000" W x 2.250" H (25.400 mm W x 57.150 mm H)  |
| <b>Printable Area:</b>                | 1.000" W x 0.750" H (25.400 mm W x 19.050 mm H)  |
| <b>Web Width:</b>                     | 2.300" (58.42 mm)  |
| <b>Label Type/Style:</b>              | Self-Laminating Label  |
| <b>Vertical Repeat:</b>               | 2.375" (60.33 mm)  |
| <b>Horizontal Repeat:</b>             | 1.100" (27.94 mm)  |
| <b>Color:</b>                         | White/Translucent  |
| <b>Finish:</b>                        | Matte  |
| <b>Qty Per Row:</b>                   | 2  |
| <b>Material Type:</b>                 | Vinyl  |
| <b>Material Description:</b>          | Self-Laminating Vinyl  |
| <b>Brady Material #:</b>              | <a href="#">B-427</a>  |
| <b>Recommended Ribbon Series:</b>     | 4300   |
| <b>Suggested Ribbon Part#:</b>        | R4302  |
| <b>Acceptable Ribbon Series:</b>      | 6200, 4500 (colors)  |
| <b>Cable Type:</b>                    | 25 Pair Copper, 4 Pair STP, 4-12 Pair Fiber  |
| <b>Printer Compatibility:</b>         | BBP81, Brady 1244, Brady 1344, Brady 200MVP Plus, Brady 2461, Brady 300MVP Plus, Brady 300X-Plus II, Brady 3481, Brady 360X-Plus II, Brady 600X-Plus II, Brady 6441, Brady IP, Tagus T200, Tagus T300, Thermal Transfer Printers   |
| <b>Style:</b>                         | Roll-Form, Radius Corners  |
| <b>Special Properties:</b>            | Excellent abrasion and smudge resistance, Excellent water & oil resistance, Self-Extinguishing, Self-Laminating  |
| <b>RoHS Compatibility:</b>            | Compliant with RoHS Directive. NOTE: All statements concerning RoHS Directive compliance refer to 2005/618/EC MCV amendment to RoHS Directive 2002/95/EC. Product compliance is based upon information provided by suppliers of the raw materials used by Brady to manufacture these products, or by independent laboratory testing of these products. As such, Brady makes no independent representations or warranties, express or implied, and assumes no liability in connection with the use of this information. |
| <b>QTY/UOM:</b>                       | 3,000/Roll   |