Technical Data Sheet

# BRADY B-427 THERMAL TRANSFER PRINTABLE TRANSLUCENT VINYL TAPE

TDS No. B-427
Effective Date: 10/20/2022

**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
Brady Series R4400
Brady Series R4500 colored (red, blue, green)
Brady Series R6200
Brady Series R6700

## REGULATORY/AGENCY APPROVALS

B-427 is UL Recognized to UL969A Labeling and Marking Standard when printed with the Brady Series R4300 and R7950 ribbons. See UL files MH64936 (Brady Worldwide, INC.) and MH9997 (W H Brady NV) for specific details. Brady customers should specify at purchase if they require UL969A Recognized B-427 labels. Brady sells both UL969 Recognized B-427 labels and non-approved labels depending on customer requirements.

B-427 is UL Recognized to UL2238 Cable Assemblies and Fittings for Industrial Control and Signal Distribution Standard, Section 37.16 “Tests for permanence of wrap around cord or cable label” when printed with the Brady Series R4300 and R7950 ribbons. See UL files MH62024 (Brady Worldwide, Inc.) or MH62052 (W H Brady NV) for specific details. Brady customers should specify at purchase if they require UL2238, Section 37.16 Recognized B-427 labels. Brady sells both UL2238, Section 37.16 Recognized B-427 labels and non-approved labels depending on customer requirements.

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<br>-Total Thickness | 0.0040 inch (0.102mm) |
| Adhesion to: | ASTM D 1000 | |
| -Stainless Steel | 20 minute dwell<br>24 hour dwell | 38 oz/in (42 N/100 mm)<br>49 oz/in (54 N/100 mm) |
| -Polypropylene | 20 minute dwell<br>24 hour dwell | 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) |
| Tensile Strength and Elongation | ASTM D 1000<br>-Machine<br>-Cross | <br>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 | <br>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) | No visible effect at 158°F (70°C). Moderate discoloration at 212°F 100°C) but still functional. |
| Low Service Temperature | 30 days at -94°F (-70°C) | No visible effect |
| Humidity Resistance | 30 days at 100°F (37°C), 95% R.H. | No visible effect |
| UV Light Resistance | ASTM G155, cycle 1, Dry<br>30 days in Q-Sun Xenon Test Chamber | No visible effect |
| Weatherability | ASTM G155, Cycle 1<br>30 days in Xenon arc Weather-Ometer® | 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 |
| **Cleaners and Solvents** | No visible effect | No visible effect |
| 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 |
| **Fuels, Oils and Lubricants** | | |
| 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 |

| **Aerospace Related Fluids** | | |
|---|---|---|
| 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.

Shelf Life and Fitness for Use: Product testing, customer feedback, and history of similar products, support a customer performance expectation of 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. 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 Clorox Company
Northwoods™ is a trademark of the Superior Chemical Corporation
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.)
Weather-Ometer® is a registered trademark of Atlas Material Testing Technology LLC
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.

**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 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.

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