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## Technical Data Sheet

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

TDS No. B-427  
Effective Date: 08-07-2008

#### 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 -Total Thickness	0.0040 inch (0.102 mm)
Adhesion to:	ASTM D 1000	
-Stainless Steel	20 minute dwell 24 hour dwell	38 oz/in (42 N/100 mm) 49 oz/in (54 N/100 mm)
-Polypropylene	20 minute dwell 24 hour dwell	25 oz/in (28 N/100 mm) 33 oz/in (36 N/100 mm)
Tack	ASTM D 2979 Polyken™ Probe Tack (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 -Machine -Cross	12 lbs/in (210 N/100 mm), 152% 11 lbs/in (193 N/100 mm), 195%
Flammability	ASTM D 1000 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 30 days in Xenon Arc Weatherometer	No visible effect

PERFORMANCE PROPERTIES	CHEMICAL RESISTANCE
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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 Testling 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.

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