

**BRADY B-417 THERMAL TRANSFER PRINTABLE TRANSLUCENT VINYL TAPE**

TDS No. B-417  
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 adhesive

**APPLICATIONS**

B-417 is an excellent material for wire and cable identification. This material has good clarity, conformability and is self-extinguishing. B-417 has outstanding water and oil resistance.

B-417 is recommended for application onto small diameter wires with low surface energy wire jacketing materials.

**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-417 is UL Recognized to UL969 Labeling and Marking Standard when printed with the Brady Series R4300 and R7950 ribbons. See UL files MH62024 for specific details.

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 -Total Thickness	0.0042 inch (0.107 mm)
Adhesion to:	ASTM D 1000	
-Stainless Steel	20 minute dwell 24 hour dwell	48 oz/in (53 N/100 mm) 55 oz/in (60 N/100 mm)
-Polypropylene	20 minute dwell 24 hour dwell	54 oz/in (59 N/100 mm) 63 oz/in (69 N/100 mm)
Tack	ASTM D 2979 Polyken™ Probe Tack (1 second dwell, 1 cm/sec separation)	25.0 oz (710 g)

Tensile Strength and Elongation	ASTM D 1000 -Machine	12 lbs/in (210 N/100 mm), 174%
Flammability	ASTM D 1000 Average Burn Time	ABT less than 10 seconds

Performance properties tested with white printable zone of B-417 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 193°F (90°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 30 days in Q-Sun Xenon Test Chamber	No visible effect
Weatherability	ASTM G155, Cycle 1 30 days in Xenon arc Weather-Ometer®	No visible effect

PERFORMANCE PROPERTIES	CHEMICAL RESISTANCE
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White printable zone of B-417 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>	No visible effect	No visible effect
Isopropyl Alcohol	No visible effect	No visible effect
Mineral Spirits	Slight edge lift	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 20/50 WT Oil at 70°C	No visible effect	No visible effect
Yellow 77® Wire Pulling Lubricant	No visible effect	No visible effect
<b>Aerospace Related Fluids</b>		

JP-8 Jet Fuel	Slight edge lift	No visible effect
MIL-H-5606 Oil	No visible effect	No visible effect

B-417 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.)  
 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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