

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

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 -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 |
|------------------------|---------------------|
|------------------------|---------------------|

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 |
| Cleaners and Solvents | 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 |
| Fuels, Oils and Lubricants | | |
| 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 |
| Aerospace Related Fluids | | |

| | | |
|----------------|-------------------|-------------------|
| 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

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