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 -Total Thickness	0.0040 inch (0.102mm)
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)
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)	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 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-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.

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