Technical Data Sheet

BRADY B-799 LASER PRINTABLE NYLON CLOTH LABEL

TDS No. B-799
Effective Date: 01/14/2002

Description:
Brady B-799 is a polyamide coated nylon cloth with a permanent acrylic pressure sensitive adhesive and a topcoat specifically formulated for laser or write-on printing.

B-799 is designed for wiremarking and general labeling applications that require a permanent identification label. B-799 is not recommended for outdoor use.

B-799 has good laser print resolution, good solvent resistance, smudge resistance, and moderate temperature performance. The specially formulated permanent adhesive will bond to many surfaces. It is recommended to test for permanency before use on any surface.

Brady B-799 meets the requirements of a halogen-free material per DIN VDE 0472 part 815. (Statement based on review of product construction and confirmatory halogen content test run at an independent test laboratory.)

Details:

PHYSICAL PROPERTIES	TEST METHODS	AVERAGE RESULTS
Thickness	ASTM D 1000 -Substrate -Adhesive -Total	 0.0045 inch (0.115 mm) 0.0020 inch (0.051 mm) 0.0065 inch (0.166 mm)
Adhesion to: -Stainless Steel -Textured ABS -Polypropylene	ASTM D 1000 20 minute dwell 24 hour dwell 20 minute dwell 24 hour dwell 20 minute dwell 24 hour dwell	 45 oz/inch (50 N/100 mm) 80 oz/inch (88 N/100 mm) 35 oz/inch (39 N/100 mm) 40 oz/inch (44 N/100 mm) 24 oz/inch (26 N/100 mm) 24 oz/inch (26 N/100 mm)
Tack	ASTM D 2979 Polyken™ Probe Tack 1 second dwell, 1 cm/sec separation	29 oz (900 grams)
Drop Shear	PSTC-7 (except use 1/2" x 1" sample)	9 hours
Tensile Strength and Elongation	ASTM D 1000 -Machine	 80 lb/in (1400 N/100 mm), 50%

Performance properties tested on B-799 printed with a Hewlett Packard LaserJet 5P laser printer. Printed samples of B-799 were laminated to aluminum and allowed to dwell 24 hours before exposure to the indicated environmental conditions.

PERFORMANCE PROPERTIES	TEST METHODS	TYPICAL RESULTS
Short Term High Service Temperature	5 minutes at 293°F (145°C)	No visible effect to label at 145°C. Slight shrinkage at 180°C but label still functional.
Long Term High Service Temperature	30 days at 193°F (90°C)	No visible effect to label at 90°C. Slight discoloration at 110°C but label still functional. At 120°C label is severely discolored.
Low Service Temperature	30 days at -40°F (-40 °C)	No visible effect
Humidity Resistance	30 days at 100°F, 95% R.H.	No visible effect
UV Light Resistance	30 days in UV Sunlighter™ 100	No visible effect
Weatherability[1]	ASTM G155, Cycle 1 30 days in Xenon Arc Weatherometer	Material wrinkled and embrittled
Abrasion Resistance	Taber Abraser, CS-10 grinding wheels, 500 g/arm (Fed. Std. 191A, Method 5306)	Slight topcoat removal and print smear, but print remains legible to 150 cycles

[1]B-799 is not recommended for long-term outdoor use.

PERFORMANCE PROPERTY	CHEMICAL RESISTANCE

Samples printed with Hewlett Packard LaserJet 5P laser printer. Samples were laminated to aluminum panels and wrapped around a 12 AWG, TFE jacketed wire and allowed to dwell 24 hours prior to test. Test was conducted at room temperature except where noted. Testing consisted of 5 cycles of 10 minute immersions in the specified test fluid followed by a 30 minute period. After final immersion, samples rubbed 10 times with cotton swab saturated with test fluid.

CHEMICAL REAGENT	SUBJECTIVE OBSERVATION OF VISUAL CHANGE		
	EFFECT TO LABEL STOCK	HEWLETT PACKARD LASERJET 5P PRINTER	
		EFFECT TO PRINT WITHOUT RUB	EFFECT TO PRINT WITH RUB
Methyl Ethyl Ketone	Complete unwrap	No visible effect	Moderate print removal
1,1,1-Trichloroethane	Complete unwrap	No visible effect	Moderate print removal
Isopropyl Alcohol	Complete unwrap	No visible effect	Complete print removal
Mineral Spirits	Complete unwrap	No visible effect	Comple te print removal
Northwoods™Buzz Saw Degreaser	Complete unwrap	No visible effect	Complete print removal
SAE 20 WT Oil at 70°C	No visible effect, label discoloration	No visible effect	No visible effect
Mil 5606 Oil	Slight unwrap, label stained red	No visible effect	No visible effect
Speedi Kut Cutting Oil 332	No unwrap, label discoloration	No visible effect	No visible effect
Gasoline	Adhesive failure, label discoloration	No visible effect	Slight print removal
Rust Veto® 342	Moderate unwrap, label discoloration	No visible effect	Complete print removal
Deionized Water	No visible effect	No visible effect	No visible effect
3% Alconox® Detergent	No visible effect	No visible effect	No visible effect
5% Salt Solution	No visible effect	No visible effect	No visible effect
10% Sodium Hydroxide Solution	Complete unwrap	No visible effect	No visible effect
10% Sulfuric Acid Solution	No visible effect	No visible effect	No visible effect

Product testing, customer feedback, and history of similar products, support a customerperformance 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°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:
Alconox® is a registered trademark of Alconox Co.
Northwoods™ is a trademark of the Superior Chemical Corporation
Polyken™ is a trademark of Testing Machines Inc.
Rust Veto® is a registered trademark of the E.F. Houghton & Co.
Sunlighter™ is a trademark of the Test Lab Apparatus Company
ASTM: American Society for Testing and Materials (U.S.A.)
PSTC: Pressure Sensitive Tape Council (U.S.A.)
SAE: Society of Automotive Engineers (U.S.A.)
All S.I. Units (metric) are mathematically derived from the U.S. Conventional Units.

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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