



**BRADY WORLDWIDE, INC.**  
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**BRADY B-502 POLYMER COATED CLOTH TAPE**

**Description:**

Brady B-502 is a polymer coated cloth with a matte printable topcoat and a rubber based pressure sensitive adhesive.

Brady B-502 is a general purpose material for labeling and marking applications requiring a write-on or dot matrix printable surface. B-502 is a good wire or cable marker material. The Brady Series 2000 and 5000 ribbons are recommended for dot matrix printing of B-502.

Brady B-502 has good smudge resistance, oil and water resistance, and fade resistance. B-502 has good flexibility for wrapping around curved surfaces.

**Details:**

PHYSICAL PROPERTIES	TEST METHODS	AVERAGE RESULTS
Thickness	ASTM D 1000	0.0096 inch (0.243 mm)
Adhesion to:	ASTM D 1000	
-Stainless Steel	20 minute dwell 24 hour dwell	63 oz/in (69 N/100 mm) 70 oz/in (77 N/100 mm)
-Textured ABS	20 minute dwell 24 hour dwell	26 oz/in (28 N/100 mm) 29 oz/in (32 N/100 mm)
-Polypropylene	20 minute dwell 24 hour dwell	60 oz/in (66 N/100 mm) 66 oz/in (72 N/100 mm)
Tack	ASTM D 2979 Polyken™ Probe Tack 1 second dwell	32 oz (920 g)
Tensile Strength and Elongation	ASTM D 1000 -Machine Direction -Cross Direction	50 lbs/in (876 N/100 mm), 7% 35 lbs/in (613 N/100 mm), 18%
Application Temperature	Lowest application temperature to stainless steel	50°F (10°C)

The following testing is performed with the B-502 printed with the Brady Series 2000 and 5000 ribbons. All samples allowed to dwell 24 hours prior to testing. Samples were tested on flat aluminum panels and wrapped around 0.120"OD wires.

PERFORMANCE PROPERTIES	TEST METHODS	TYPICAL RESULTS
High Service Temperature	30 days at 175°F (80°C)	Slight topcoat darkening and very slight Series 2000 and 5000 print fade

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
UV Light Resistance	30 days in UV Sunlighter™ 100	Slight Series 2000 and 5000 print fade
Weatherability	ASTM G 26 30 days in Xenon Arc Weatherometer	Slight Series 2000 and 5000 print fade
Salt Fog Resistance	ASTM B 117 30 days in 5% salt fog solution chamber	No visible effect
Abrasion Resistance	Taber Abraser, CS-10 grinding wheels, 250 g/arm (Fed. Std. 191A, Method 5306)	Series 2000 and 5000 print still legible after 500 cycles

<b>PERFORMANCE PROPERTY</b>	<b>CHEMICAL RESISTANCE</b>
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Samples were printed with Series 2000 and 5000 ribbons, laminated to flat aluminum panels and wrapped around 0.120"OD wire, and dwelled 24 hours prior to test. Testing consisted of 5 cycles of 10 minute immersions in the specified chemicals followed by 30 minute recovery periods. After the final immersion the flat samples were rubbed with cotton swabs. Testing was conducted at room temperature.

CHEMICAL REAGENT	SUBJECTIVE OBSERVATION OF VISUAL CHANGE		
	APPEARANCE OF WIREMARKER	APPEARANCE OF SERIES 2000 PRINT	APPEARANCE OF SERIES 5000 PRINT
Methyl Ethyl Ketone	Moderate unwrap, topcoat dissolved	Topcoat dissolved, print removed when rubbed	Topcoat dissolved, print removed when rubbed
1,1,1-Trichloroethane	Slight unwrap, topcoat and adhesive softened	Topcoat softened, moderate print removal when rubbed	Topcoat softened, moderate print removal when rubbed
Isopropyl Alcohol	Moderate unwrap	No visible effect	No visible effect
Mineral Spirits	No visible effect	No visible effect	No visible effect
JP-4 Jet Fuel	Slight unwrap	No visible effect	No visible effect
SAE 20 WT Oil	No visible effect	No visible effect	No visible effect
Mil 5608 Oil	No visible effect	No visible effect	No visible effect
Speedi Kut Cutting Oil 332	No visible effect	No visible effect	No visible effect
Gasoline	Slight unwrap	No visible effect	No visible effect
Ruet Veto® 377	No visible effect	No visible effect	No visible effect
Skydrol® 500B-4	No unwrap, topcoat and adhesive softened	Print fade, print removed when rubbed	Print fade, print removed when rubbed
Super Agitene®	Slight unwrap	No visible effect	No visible effect
Deionized Water	No visible effect	No visible effect	No visible effect
3% Alconox® Detergent	No visible effect	No visible effect	No visible effect
10% Sodium Hydroxide Solution	No visible effect	No visible effect	No visible effect
10% Sulfuric Acid Solution	No visible effect	No visible effect	No visible effect
Northwoods™ Buzz Saw Citrus Degreaser	No visible effect	No visible effect	No visible effect
5% Salt Water Solution	No visible effect	No visible effect	No visible effect

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 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 and References:** 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.  
Skydrol® is a registered trademark of the Monsanto Company  
Sunlighter™ is a trademark of the Test Lab Apparatus Company  
Super Agitene® is a registered trademark of Graymills Corporation

ASTM: American Society for Testing and Materials (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.

#### **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 obligation 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 of 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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