



## Technical Data Sheet

### BRADY XB-400 POLYMER COATED CLOTH

TDS No. XB-400

Effective Date: 02/21/2000

#### Description:

Brady XB-400 is a polymer coated cloth with a matte thermal transfer printable topcoat and a rubber based pressure sensitive adhesive.

XB-400 is a general purpose material for labeling and marking applications requiring a thermal transfer printable surface. XB-400 is a good wire and cable marker material.

XB-400 has good smudge resistance and is resistant to oil, water, and fading. XB-400 has good flexibility for wrapping around curved surfaces.

Recommended ribbon is the Brady Series R4300 black for optimum print performance.

#### Details:

PHYSICAL PROPERTIES	TEST METHODS	AVERAGE RESULTS
Total Thickness	ASTM D 1000	0.0073 inch (0.185 mm)
Adhesion to:	ASTM D 1000	80 oz/inch (88 N/100 mm)
-Stainless Steel	20 minute dwell 24 hour dwell	91 oz/inch (100 N/100 mm)
-Polypropylene	20 minute dwell 24 hour dwell	71 oz/inch (78 N/100 mm) 86 oz/inch (94 N/100 mm)
-Textured ABS	20 minute dwell 24 hour dwell	38 oz/inch (42 N/100 mm) 38 oz/inch (42 N/100 mm)
Tack	ASTM D 2979 Polyken™ Probe Tack (1 second dwell, 1 cm/sec separation)	43.9 oz (1350 g)
Application Temperature	Lowest application temperature to stainless steel	40°F (4°C)
Tensile Strength and Elongation	ASTM D 1000 -Machine direction -Cross direction	50 lbs/inch (876 N/100 mm), 7% 35 lbs/inch (613 N/100 mm), 18%

The following testing is performed with XB-400 printed with Brady Series R4300 ribbon. All samples were allowed to dwell 24 hours prior to testing. Samples were tested on flat aluminum panels and wrapped around 0.080" OD TFE wires.

PERFORMANCE PROPERTIES	TEST METHODS	TYPICAL RESULTS
High Service Temperature	30 days at 175°F (80°C)	Slight topcoat darkening at 80°C
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	No visible effect< /td>
Weatherability	ASTM G 26 30 days in Xenon Arc Weatherometer	No visible effect
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)	Print still legible after 100 cycles
PERFORMANCE PROPERTY	CHEMICAL RESISTANCE	

Samples were printed with the R4300 ribbon, laminated to flat aluminum panels and wrapped around 0.080" OD TFE jacketed wire, and allowed to dwell 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.

SUBJECTIVE OBSERVATION OF VISUAL CHANGE

CHEMICAL REAGENT	APPEARANCE OF WIRE MARKER	R4300
Methyl Ethyl Ketone	Severe unwrap, topcoat dissolved	Topcoat dissolved, print removed when rubbed
1,1,1-Trichloroethane	Severe unwrap, topcoat dissolved	Topcoat dissolved, print removed when rubbed
Isopropyl Alcohol	Moderate unwrap	No visible effect w/o rub, moderate smear when rubbed
Gasoline	Moderate unwrap, topcoat dissolved, slight discoloring	No visible effect w/o rub, severe print removal when rubbed
JP-8 Jet Fuel	Slight unwrap	No visible effect w/o rub, slight print smear when rubbed
Mineral Spirits	Slight unwrap	No visible effect w/o rub, slight print smear when rubbed
SAE 20 WT Oil	No visible effect to wire wrap, slight material discoloring	No visible effect w/o rub, slight print smear when rubbed
Mil 5606 Oil	No visible effect to wire wrap, slight material discoloring	No visible effect w/o rub, slight print smear when rubbed
Rust Veto® 377	No visible effect to wire wrap, slight material discoloring	No visible effect w/o rub, moderate print smear when rubbed
Speedi Kut Cutting Oil 332	No visible effect to wire wrap, slight material discoloring	No visible effect w/o rub, slight print smear when rubbed
Super Agitene®	No visible effect	No visible effect w/o rub, moderate print smear when rubbed
Skydrol® 500B-4	Slight unwrap, topcoat and adhesive softened	Severe print fade w/o rub, topcoat and print removed when rubbed
Deionized Water	No visible effect	No visible effect with or without rub
3% Alconox® Detergent	No visible effect	No visible effect with or without rub
5% Salt Water Solution	No visible effect	No visible effect with or without rub
10% Sodium Hydroxide Solution	No visible effect	Severe print fade w/o rub, complete print removal when rubbed
10% Sulfuric Acid Solution	No visible effect	No visible effect with or without rub
Northwoods™ Buzz Saw Citrus Degreaser	No visible effect	No visible effect w/o rub, severe print smear when rubbed

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:

Alconox® is a registered trademark of Alconox Co.  
 BradyPrinter™ is a trademark of Brady Worldwide, Inc.  
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 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.

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