BRADY WHEN PERFORMANCE MATTERS MOST™

Technical Data Sheet

BRADY B-500 POLYMER COATED CLOTH TAPE

TDS No. B-500

Effective Date: 08/19/2005

**Description:**

Brady B-500 is a polymer coated cloth with a printable topcoat and a rubber based pressure sensitive adhesive.

Brady B-500 is a general purpose material for a variety of pre-printed labeling and wire marking applications requiring durability and economy.

Brady B-500 has good oil and water resistance and good print durability. B-500 has excellent flexibility for wrapping around curved surfaces.

**Details:**

| PHYSICAL PROPERTIES | TEST METHODS | AVERAGE RESULTS |
|---|---|---|
| Thickness | ASTM D 1000 | 0.0088 inch (0.223 mm) |
| Adhesion to:<br>-Stainless Steel<br><br><br>-Polypropylene<br><br><br>-Textured ABS | ASTM D 1000<br>20 minute dwell<br>24 hour dwell<br><br>20 minute dwell<br>24 hour dwell<br><br>20 minute dwell<br>24 hour dwell | 68 oz/in (74 N/100 mm)<br>75 oz/in (82 N/100 mm)<br><br>63 oz/in (69 N/100 mm)<br>68 oz/in (74 N/100 mm)<br><br>20 oz/in (22 N/100 mm)<br>25 oz/in (27 N/100 mm) |
| Tack | ASTM D 2979<br>Polyken™ Probe Tack<br>1 second dwell | 35 oz (1000 g) |
| Tensile Strength and Elongation | ASTM D 1000<br>-Machine Direction<br>-Cross Direction | 45 lbs/in (788 N/100 mm), 7%<br>32 lbs/in (560 N/100 mm), 18% |
| Application Temperature | Lowest application temperature to stainless steel | 50°F (10°C) |

The following testing is performed with pre-printed B-500 white wiremarkers and unprinted flat B-500 samples. Wiremarker samples were wrapped on 0.080" OD wires and flat samples were applied to flat aluminum panels. All samples allowed to dwell 24 hours prior to testing.

| 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 | N o visible effect |
| Weatherability | ASTM G 155, Cycle 1 | Very slight unwrap to wiremarker, no visible effect to |

| | | |
|---|---|---|
| | 30 days in Xenon Arc Weatherometer | printing |
| Salt Fog Resistance | ASTM B 117<br>30 days in 5% salt fog solution chamber | Slight unwrap to wiremarker, no visible effect to printing |
| Abrasion Resistance | Taber Abraser, CS-10 grinding wheels, 250 g/arm (Fed. Std. 191A, Method 5306) | Pre-printed wiremarker still legible after 100 cycles |

| PERFORMANCE PROPERTY | CHEMICAL RESISTANCE |
|---|---|

Pre-printed B-500 white wiremarkers were wrapped around 0.080" OD wire and unprinted B-500 samples were laminated to flat aluminum panels. Samples 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. Testing was conducted at room temperature.

| CHEMICAL REAGENT | SUBJECTIVE OBSERVATION OF VISUAL CHANGE | |
|---|---|---|
| | APPEARANCE OF WIREMARKER | APPEARANCE OF FLAT SAMPLE |
| Methyl Ethyl Ketone | Marker fell off | Topcoat removed, adhesive failure |
| 1,1,1-Trichloroethane | Severe unwrap, topcoat wrinkled | Topcoat delamination, adhesive failure |
| Isopropyl Alcohol | Slight unwrap | No visible effect |
| JP-4 Jet Fuel | Slight unwrap | No visible effect |
| SAE 20 WT Oil | No visible effect | No visible effect |
| Mil 5606 Oil | Slight unwrap | No visible effect |
| Speedi Kut Cutting Oil 332 | No visible effect | No visible effect |
| Gasoline | Moderate unwrap | Slight adhesive ooze |
| Rust Veto® 377 | Slight unwrap | No visible effect |
| Skydrol® 500B-4 | Severe unwrap, topcoat wrinkled, adhesive soft | Topcoat delaminated from cloth |
| Super Agitene® | Moderate unwrap | Slight adhesive ooze |
| Deionized Water | No visible effect | No visible effect |
| 3% Alconox® Detergent | No visible effect | No visible effect |
| 10% Sodium Hydroxide Solution | Severe unwrap | Severe edge lift |
| 10% Sulfuric Acid Solution | No visible effect | No visible effect |
| Northwoods™ Buzz Saw<br>Citrus Degreaser | Slight unwrap | No visible effect |
| 5% Salt Water Solution | No visible effect | No visible effect |

Note: Environmental aging and chemical resistance test results may be different on colored B-500 wiremarkers.

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.

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.!
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**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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