



Technical Data Sheet

BRADY B-483 THERMAL TRANSFER PRINTABLE LABEL STOCK

TDS No. B-483
Effective Date: 06/27/2012

Description:

GENERAL

Print Technology: Thermal transfer

Material Type: White Polyester

Finish: Glossy

Adhesive: Permanent Rubber Based

APPLICATIONS

B-483 is designed for high adhesion to textured metals and low surface energy plastics. Print-On-Demand floor labels can be created using ToughStripe™ labels (B-483 colors overlaminated with B-634 clear polyester overlaminate). ToughStripe™ labels are designed for use in cartridge form with the GlobalMark® 2 and BMP™ 71 label printer.

RECOMMENDED RIBBONS

Brady Series R6000
Brady Series R6000 Halogen Free (previously known as R6000HF)
Brady Series R4900
Brady Series R4400 colored thermal transfer ribbons.

REGULATORY/AGENCY APPROVALS

UL: B-483 is a UL Recognized Component to UL969 Labeling and Marking Standard when printed with Brady Series R6000 and Series R6000 Halogen Free ribbons. See UL file MH17154 for specific details. UL information can be accessed on line at UL.com. Search in *Certifications* area. The Brady Series R4900 ribbon is also UL approved.

CSA: B-483 is CSA Accepted to C22.2 No.0.15-95 Adhesive Labels Standard when printed with Brady Series R6000 ribbon. See CSA file 041833 for specific details. CSA information can be accessed online at directories.csa-international.org.

Brady B-483 is RoHS compliant to 2005/618/EC MCV amendment to RoHS Directive 2002/95/EC.

SPECIAL FEATURES

B-483 is specifically designed to adhere to powder coated surfaces.

Details:

| PHYSICAL PROPERTIES | TEST METHODS | AVERAGE RESULTS |
|----------------------------------|--------------------------------------------------------|----------------------------------------------------------------------------|
| Thickness | ASTM D 1000 -Substrate -Adhesive -Total | 0.0020 inch (0.051 mm) 0.0020 inch (0.051 mm) 0.0040 inch (0.102 mm) |
| Adhesion to: -Stainless Steel | ASTM D 1000 20 minute dwell 24 hour dwell | 155 oz/in (169 N/100 mm) 160 oz/in (174 N/100 mm) |
| -Textured ABS | 20 minute dwell 24 hour dwell | 55 oz/in (60 N/100 mm) 54 oz/in (59 N/100 mm) |
| -Polypropylene | 20 minute dwell 24 hour dwell | 140 oz/in (153 N/100 mm) 143 oz/in (156 N/100 mm) |
| -Painted Enamel | 20 minute dwell 24 hour dwell | 144 oz/in (157 N/100 mm) 149 oz/in (162 N/100 mm) |
| -Powder Coated Metal | 20 minute dwell 24 hour dwell | 102 oz/in (111 N/100 mm) 104 oz/in (113 N/100 mm) |
| Tack | ASTM D 2979 Polyken™ Probe Tack 0.5 second dwell | 39 oz (1122 g) |



Performance properties tested on B-483 printed with Series R6000, R6000 Halogen Free and R4900 ribbons. Printed samples of B-483 were laminated to aluminum before exposure to the indicated environmental condition. Results the same for both ribbons unless noted otherwise.

| PERFORMANCE PROPERTIES | TEST METHODS | TYPICAL RESULTS |
|------------------------------------|----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| Long Term High Service Temperature | 30 days at 248°F (120°C) | No visible effect |
| Long Term 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 |
| Weatherability | ASTM G155, Cycle 1 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) | R6000: Print legible after 100 cycles R6000 Halogen Free: Print legible after 100 cycles |

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

Samples printed with Series R6000, R6000 Halogen Free and R4900 ribbons. Testing was conducted after 24 hour dwell. Testing consisted of 5 cycles of 10 minute immersions in the specified chemical reagent followed by 30 minute recovery periods. 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 | R4900 | R6000 | R6000 Halogen Free |
| Methyl Ethyl Ketone | Slight adhesive ooze | No visible effect w/o rub, complete print removal after rub | No visible effect w/o rub, complete print removal after rub | No visible effect w/o rub, complete print removal after rub |
| 1,1,1-Trichloroethane | No visible effect | No visible effect w/o rub, complete print removal after rub | No visible effect w/o rub, complete print removal after rub | Obsolete |
| Toluene | No visible effect | No visible effect w/o rub, complete print removal after rub | No visible effect w/o rub, complete print removal after rub | No visible effect w/o rub, complete print removal after rub |
| Isopropyl Alcohol | No visible effect | No visible effect with or without rub | No visible effect with or without rub | No visible effect with or without rub |
| Mineral Spirits | Slight adhesive ooze | No visible effect with or without rub | No visible effect with or without rub | No visible effect with or without rub |
| JP-8 Jet Fuel | No visible effect | No visible effect with or without rub | No visible effect with or without rub | No visible effect with or without rub |
| SAE 20 WT Oil | No visible effect | No visible effect with or without rub | No visible effect with or without rub | No visible effect with or without rub |
| Mil 5606 Oil | Slight adhesive ooze | No visible effect with or without rub | No visible effect with or without rub | No visible effect with or without rub |
| Speedi Kut Cutting Oil 332 | No visible effect | No visible effect with or without rub | No visible effect with or without rub | Not Tested |
| Gasoline | No visible effect | No visible effect w/o rub, slight print removal after rub | No visible effect w/o rub, slight print removal after rub | No visible effect |
| Rust Veto® 342 | No visible effect | No visible effect with or without rub | No visible effect with or without rub | Not Tested |
| Skydrol® 500B-4 | No visible effect | Moderate print removal w/o rub, complete print removal with rub | No visible effect w/o rub, complete print removal after rub | No visible effect w/o rub, severe print removal after rub |
| Super Agitene® | Slight adhesive ooze | No visible effect with or without rub | No visible effect with or without rub | No visible effect with or without rub |
| Deionized Water | No visible effect | No visible effect with or without rub | No visible effect with or without rub | No visible effect with or without rub |
| 3% Alconox® Detergent | No visible effect | No visible effect with or without rub | No visible effect with or without | No visible effect with or without |
| Northwoods™ Buzz Saw Citrus Degreaser | No visible effect | No visible effect | No visible effect | Not Tested |

ToughStripe™ labels (B-483 colors overlaminated with B-634 clear polyester overlaminate) designed for use in cartridge form with the GlobalMark® 2 and BMP™ 71 label printers were tested in the following chemical reagents. Samples were allowed to dwell 24 hours at room temperature prior to testing. Dip testing consisted of 5 cycles of 10 minute immersions in the specified chemicals followed by 30 minute recovery periods. Samples were immersed in the chemical reagent for 7 days for the 7 day immersion test. Testing was conducted at room temperature.

| CHEMICAL REAGENT | 7 DAY IMMERSION | DIP TEST |
|---------------------------------|-----------------|----------|
| 30% Sulfuric Acid | NE | NE |
| 10% Sulfuric Acid | NE | NE |
| 30% Hydrochloric Acid | F | NE |
| 10% Hydrochloric Acid | NE | NE |
| Glacial Acetic Acid | F | F |
| 5% Acetic Acid | NE | NE |
| 50% Sodium Hydroxide | F | F |
| 10% Sodium Hydroxide | F | F |
| 10% Ammonia | F | NE |
| 5% Sodium Hypochlorite (bleach) | F | NE |
| 10% Sodium Chloride | NE | NE |
| Methanol | F | NE |
| Isopropyl Alcohol | NE | NE |
| Heptane | F | NE |
| Mineral Spirits | F | F |
| Turpentine | F | NE |
| Diesel Fuel | NE | NE |
| Kerosene | F | NE |
| Gasoline | F | NE |
| ASTM #3 Oil | NE | NE |
| SAE 20 Oil | NE | NE |
| Alconox® | NE | NE |
| Water | NE | NE |

NE = No Effect F = Failed

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 (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:

- ASTM: American Society for Testing and Materials (U.S.A.)
- Alconox® is a registered trademark of Alconox Co.
- All S.I. Units (metric) are mathematically derived from the U.S. Conventional
- BMP® is a registered trademark of Brady Worldwide, Inc.
- BradyPrinter™ is a trademark of Brady Worldwide, Inc.
- CSA: Canadian Standards Association
- Globalmark® is a registered trademark of Brady Worldwide, Inc.
- 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.
- SAE: Society of Automotive Engineers (U.S.A.)
- 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
- ToughStripe™ is a registered trademark of Brady Worldwide, Inc.
- UL: Underwriters Laboratories, Inc.

Units.

Note: All values shown are averages and should not be used for specification purposes.

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