

BRADY B-184 ALUMINUM FOIL TAPE

TDS No. B-184
Effective Date: 02/05/2007

Description:

GENERAL

Print Technology: Dot Matrix

Material Type: Dead Soft Aluminum Foil

Finish: Matte

Adhesive: Permanent Acrylic

APPLICATIONS

Dot matrix printable or write-on aluminum foil label. B-184 can also be used as a wiremarker because of its excellent conformability around wire.

RECOMMENDED RIBBONS

Brady Series

Brady Series

REGULATORY APPROVALS

Brady B-184 is RoHS compliant to 2005/618/EC MCV amendment to RoHS Directive 2002/95/EC.

SPECIAL FEATURES

The aluminum foil used in B-184 is conductive. B-184 has excellent "memory" when wrapped on a wire, and may remain wrapped around a wire or cable even if the adhesive fails.

Details:

PHYSICAL PROPERTIES	TEST METHODS	AVERAGE RESULTS
Thickness	ASTM D 1000 -Topcoat -Substrate (foil) -Adhesive -Total	0.0009 inch (0.023 mm) 0.0026 inch (0.066 mm) 0.0011 inch (0.028 mm) 0.0046 inch (0.116 mm)
Adhesion to: -Stainless Steel	ASTM D 1000 20 minute dwell 24 hour dwell	60 oz/in (66 N/100 mm) 70 oz/in (77 N/100 mm)
-Textured ABS	20 minute dwell 24 hour dwell	20 oz/in (22 N/100 mm) 25 oz/in (27 N/100 mm)
-Polypropylene	20 minute dwell 24 hour dwell	50 oz/in (55 N/100 mm) 55 oz/in (60 N/100 mm)
Tack	ASTM D 2979 Polyken™ Probe Tack 1 second dwell	19 oz (550 g)
Tensile Strength and Elongation	ASTM D 1000	25 lbs/in (438 N/100 mm), 10%
Application Temperature	Lowest application temperature to steel	50°F (10°C)

The following testing is performed with the B-184 printed with the Brady Series 2000 and 5000 ribbons. All samples allowed to dwell 24 hours prior to testing.

PERFORMANCE PROPERTIES	TEST METHODS	TYPICAL RESULTS
High Service Temperature	30 days at 266°F (130°C)	Very slight label discoloration at 130°C. At higher temperatures up to 160°C label is still functional, but discolors to a brownish/gold color.
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	Very slight label discoloration.

Weatherability	ASTM G155, Cycle 1 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	Salt precipitated on label surface, label print difficult to read.
Abrasion Resistance	Taber Abraser, CS-10 grinding wheels, 500 g/arm (Fed. Std. 191A, Method 5306)	Series 2000 and 5000 print still legible after 600 cycles.
PERFORMANCE PROPERTY		CHEMICAL RESISTANCE

Samples were printed with Series 2000 and 5000 ribbons, laminated to aluminum panels, 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 samples were rubbed with cotton swabs. Testing was conducted at room temperature.

CHEMICAL REAGENT	SUBJECTIVE OBSERVATION OF VISUAL CHANGE	
	APPEARANCE OF TAPE	APPEARANCE OF SERIES 2000 AND 5000 PRINT
Methyl Ethyl Ketone	Topcoat turns slightly white; topcoat removed when rubbed.	Print removed when rubbed
1,1,1-Trichloroethane	Topcoat removed when rubbed	Print removed when rubbed
Isopropyl Alcohol	No visible effect	No visible effect
JP-4 Jet Fuel	No visible effect	No visible effect
ASTM Reference Fuel B	No visible effect	No visible effect
SAE 20 WT Oil	No visible effect	No visible effect
Mil-H-5606 Oil	No visible effect	No visible effect
Speedi Kut Cutting Oil 332	No visible effect	No visible effect
Rust Veto® 377	No visible effect	No visible effect
Skydrol® 500B-4	Topcoat softened	Print smear when rubbed
Super Agitene®	No visible effect	No visible effect
Deionized Water	No visible effect	No visible effect
3% Alconox® Detergent	No visible effect	No visible effect
Northwoods™ Buzz Saw Citrus Degreaser	Label edge lift; topcoat degraded	Print removed

Unless reported differently, results were the same for Series 2000 and 5000 ribbons.

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 degrees 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.
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.

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