Technical Data Sheet

BRADY B-184 ALUMINUM FOIL LABEL STOCK

TDS No. B-184
Effective Date: 10/19/2020

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 RIBBON

Brady Series R5000

REGULATORY APPROVALS

For information on the Weee-RoHS compliance status for a Brady Product go to one of the following websites:
In Canada: www.bradycanada.ca/weee-rohs
In Europe: www.bradyeurope.com/rohs
In Japan: www.brady.co.jp/products/labelsuse/rohs
All other regions: www.bradyid.com/weee-rohs

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	
	-Substrate	0.0035 inch (0.089 mm)
	-Adhesive	0.0011 inch (0.028 mm)
	-Total (excluding liner)	0.0046 inch (0.116 mm)
Adhesion to:	ASTM D 1000	
-Stainless Steel	20 minute dwell	56 oz/in (61 N/100 mm)
	24 hour dwell	72 oz/in (79 N/100 mm)
-Textured ABS	20 minute dwell	18 oz/in (20 N/100 mm)
	24 hour dwell	26 oz/in (28 N/100 mm)
-Polypropylene	20 minute dwell	55 oz/in (60 N/100 mm)
	24 hour dwell	64 oz/in (70 N/100 mm)
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 Brady Series R5000 ribbon and laminated to an aluminum panel. All samples were allowed to dwell 24 hours at room temperature before exposure to the indicated environments.

PERFORMANCE PROPERTIES	TEST METHODS	TYPICAL RESULTS
High Service Temperature	30 days at various temperatures	No effect at 120°C; slight label discoloration at 145°C; At temperatures up to 160°C, label is functional but

		discolors to a brownish/gold color.
Low Service Temperature	30 days at -40°F (-40°C)	No visible effect to label or print
Humidity Resistance	30 days at 100°F (37°C), 95% R.H.	No visible effect to label or print
UV Light Resistance	ASTM G155, Cycle 1, Dry 30 days in Xenon Test Chamber	No effect to label; very slight print fade
Weatherability	ASTM G155, Cycle 1 30 days in Xenon Arc Weather-Ometer®	No effect to label; slight print fade
Salt Fog Resistance	ASTM B117 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)	Print legible after 600 cycles

PERFORMANCE PROPERTY	CHEMICAL RESISTANCE

Samples were printed with Brady Series R5000 ribbon, laminated to aluminum panels and dwelled 24 hours prior to test. Testing was conducted at room temperature. 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 10 times with a cotton swab saturated with test fluid.

CHEMICAL REAGENT	SUBJECTIVE OBSERVATION OF VISUAL CHANGE		
	EFFECT TO LABEL STOCK	EFFECT TO PRINT	
		WITHOUT RUB	WITH RUB
Methyl Ethyl Ketone	Topcoat turns slightly white; topcoat removed when rubbed.	2	5
Toluene	Topcoat removed when rubbed	1	5
Isopropyl Alcohol	No visible effect	1	1
JP-8 Jet Fuel	No visible effect	1	1
Gasoline	No visible effect	1	1
SAE 20 WT Oil	No visible effect	1	1
Mil-H-5606 Oil	No visible effect	1	1
Speedi Kut Cutting Oil 332	No visible effect	1	1
Rust Veto® 377HF	No visible effect	1	1
Skydrol® 500B-4	No visible effect	1	2
Super Agitene®	No visible effect	1	1
Deionized Water	No visible effect	1	1
3% Alconox® Detergent	No visible effect	1	1
Northwoods™ Buzz Saw Citrus Degreaser	Topcoat destroyed due to metal film corrosion	1	1

Rating Scale:
1= no visible effect
2= slight smear or print removal, detectable but minimal smear
3= moderate smear or print removal (print still legible)

4= severe smear or print removal (print illegible or just barely legible)
5= complete print and/or topcoat removal
NP= print removed prior to rub

Shelf Life
Shelf life is 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°F (27°C) and 60% RH. It remains the responsibility of the user to assess the risk of using this product. We encourage customers to develop testing protocols that will qualify a product's fitness for use in their actual application.

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Northwoods™ is a trademark of the Superior Chemical Corporation.
Rust Veto® is a registered trademark of the E.F. Houghton & Co.
Skydrol® is a registered trademark of the Monsanto 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.)
Weather-Ometer® is a registered trademark of Atlas Material Testing Technology LLC
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.
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