

BRADY B-409 MATTE POLYOLEFIN LABEL STOCK

TDS No. B-409
Effective Date: 06/11/2009

Description:

GENERAL

Print Technology: Dot Matrix and Laser

Material Type: Polyolefin

Finish: Matte

Adhesive: Permanent Acrylic

APPLICATIONS

Designed for use in labeling applications requiring excellent solvent resistance and print permanency. B-409 is not recommended for outdoor exposure use. Dot-matrix printing of barcodes is not recommended.

RECOMMENDED RIBBONS

Dot Matrix Ribbons

Brady Series R2000 and R5000

REGULATORY

B-409 is RoHS compliant to 2005/618/EC MCV amendment to RoHS Directive 2002/95/EC

SPECIAL FEATURES

Brady B-409 provides outstanding performance in laser and xerographic printing processes. B-409 also provides permanency and smudge resistance with dot matrix printing method. B-409 meets the requirements of MIL-STD-202F, Method 215J.

Details:

PHYSICAL PROPERTIES	TEST METHODS	AVERAGE RESULTS
Thickness	ASTM D 1000 -Substrate -Adhesive -Total	0.0083 inch (0.210 mm) 0.0010 inch (0.025 mm) 0.0093 inch (0.235 mm)
Adhesion to: -Stainless Steel	ASTM D 1000 20 minute dwell 24 hour dwell	30 oz/in (33 N/100 mm) 40 oz/in (44 N/100 mm)
-Textured ABS	20 minute dwell 24 hour dwell	5 oz/in (5 N/100 mm) 5 oz/in (5 N/100 mm)
-Polypropylene	20 minute dwell 24 hour dwell	25 oz/in (27 N/100 mm) 30 oz/in (33 N/100 mm)
Tack	ASTM D 2979 Polyken™ Probe Tack 1 second dwell	16 oz (450 g)
Tensile Strength and Elongation	ASTM D 1000 -Machine Direction	25 lbs/in (438 N/100 mm), 80%
Application Temperature	Lowest application temperature to stainless steel	50°F (10°C)

The following testing is performed with B-409 laser printed on the Hewlett Packard laserjet 4 and dot matrix printed with the Brady Series 2000 and 5000 ribbons. Samples laminated to aluminum panels. All samples allowed to dwell 24 hours prior to testing.

PERFORMANCE PROPERTIES	TEST METHODS	TYPICAL RESULTS
High Service Temperature	30 days at 193°F (90°C)	No visible effect
Low Service Temperature	30 days at -94°F (-70°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	Label material chalky, no visible effect to print.

Weatherability	ASTM G155, Cycle 1 30 days in Xenon Arc Weatherometer	Label destroyed
Abrasion Resistance	Taber Abraser, CS-10 grinding wheels, 250 g/arm (Fed. Std. 191A, Method 5306)	Print still legible at 4000 cycles.
MIL-STD-202, Method 215J	Solvent immersion/toothbrush rub test in: - IPA/mineral spirits solution - Terpene cleaner - Alkaline detergent solution	No visible effect to dot matrix print, laser toner removed in IPA/mineral spirits and terpene cleaner.
PERFORMANCE PROPERTY		CHEMICAL RESISTANCE

The following testing is performed with B-409 laser printed on the Hewlett Packard Laserjet 4 and dot matrix printed with the Brady Series 2000 and 5000 ribbons. Samples laminated to aluminum panels. All samples allowed to dwell 24 hours prior to testing. 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 cotton swabs saturated with test fluid. Testing was conducted at room temperature.

CHEMICAL REAGENT	SUBJECTIVE OBSERVATION OF VISUAL CHANGE		
	APPEARANCE OF TAPE	APPEARANCE OF LASER PRINT	APPEARANCE OF DOT MATRIX PRINT
Methyl Ethyl Ketone	Slight adhesive ooze	No visible effect w/o rub, print removed when rubbed	No visible effect
1,1,1-Trichloroethane	Slight adhesive ooze	Slight bleed w/o rub, print removed when rubbed	No visible effect
Toluene	Slight adhesive ooze	Slight bleed w/o rub, print removed when rubbed	No visible effect
Isopropyl Alcohol	No visible effect	No visible effect	No visible effect
Mineral Spirits	No visible effect	Slight bleed w/o rub, print removed when rubbed	No visible effect
JP-8 Jet Fuel	Slight adhesive ooze	Slight bleed w/o rub, print removed when rubbed	No visible effect
SAE 20 WT Oil	Slight label discoloration	No visible effect	No visible effect
Mil 5606 Oil	Label discolored red	No visible effect	No visible effect
Speedi Kut Cutting Oil 332	Label discoloration	No visible effect	No visible effect
Gasoline	Slight label discoloration	Slight bleed w/o rub, print removed when rubbed	No visible effect
Rust Veto® 377	Slight label discoloration	Print removed when rubbed	No visible effect
Super Agitene®	No visible effect	No visible effect w/o rub, print removed when rubbed	No visible effect
Deionized Water	No visible effect	No visible effect	No visible effect
3% Alconox® Detergent	No visible effect	No visible effect	No visible effect
10% Sodium Hydroxide Solution	No visible effect	No visible effect	No visible effect
10% Sulfuric Acid Solution	Slight label discoloration	No visible effect	No visible effect

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.
Polyken™ is a trademark of Testing Machines Inc.
Rust Veto® is a registered trademark of the E.F. Houghton & Co.
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 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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