Technical Data Sheet

BRADY B-498 THERMAL TRANSFER PRINTABLE, REPOSITIONABLE COATED VINYL CLOTH LABEL STOCK

TDS No. B-498
Effective Date: 06/06/2008

Description:

GENERAL
Print Technology: Thermal Transfer
Material Type: Coated Vinyl Cloth
Finish: Semi-Gloss White, Yellow and Orange
Adhesive: Repositionable Rubber Based

APPLICATIONS
Wire, cable, and general identification numbers, letters and conduit and voltage markers

RECOMMENDED RIBBONS WHITE - MATERIAL
Brady Series R6200 (Brady Series R4300 and R6000 ribbons also acceptable)

REGULATORY/AGENCY APPROVALS
UL: B-498 is a UL Recognized Component to UL969 Labeling and Marking Standard when printed with Brady Series R6200 ribbon. See UL file MH17154 for specific details. UL information can be accessed online at *UL.com*. Search in *Certifications* area.

Brady B-498 is RoHS compliant to 2005/618/EC MCV amendment to RoHS Directive 2002/95/EC.

SPECIAL FEATURES
B-498 has a specially formulated top coat for very good thermal transfer print quality. The adhesive and cloth backing give excellent holding power, yet allow for clean removal and repositioning.

Details:

PHYSICAL PROPERTIES	TEST METHODS	AVERAGE RESULTS
Total Thickness	ASTM D1000	0.0073 inch (0.185 mm)
Adhesion to: -Stainless Steel -Polypropylene	ASTM D1000 20 minute dwell 24 hour dwell 20 minute 24 hour dwell	 65 oz/inch (71 N/100 mm) 70 oz/inch (77 N/100 mm) 56 oz/inch (61 N/100 mm) 63 oz/inch (69 N/100 mm)
Tack	ASTM D 2979 Polyken™ Probe Tack (1 second dwell, 1 cm/sec separation)	35 oz (1000 g)
Application Temperature	Lowest application temperature to stainless steel	50°F (10°C)
Tensile Strength and Elongation	ASTM D1000 -Machine Direction	 55 lbs./in (960 N/100 mm) 6%

The following testing is performed with the B-498 printed with the Brady Series R6200 ribbon. All samples were allowed to dwell 24 hours prior to testing. Samples were tested on flat aluminum panels and wrapped around 0.080" O.D. TFE wires.

PERFORMANCE PROPERTIES	TEST METHODS	TYPICAL RESULTS
High Service Temperature	30 days at 175°F (80°C)	Slight darkening. Topcoat appears more clothlike. No visible effect on print quality.
Low Service Temperature	30 days at -40°F (-40°C)	No visible effect
Humidity Resistance	30 days at 100°F (38°C), 95% R.H.	Topcoat appears more clothlike. No visible effect on print quality.
UV Light Resistance	30 days in UV Sunlighter™ 100	No visible effect
Weatherability*	ASTM G155, Cycle 1 30 days in Xenon Arc Weatherometer	Topcoat appears more clothlike. Some edge lift on flat panel samples. No lift on wrapped wiremarkers. No visible effect on print quality.
Salt Fog Resistance	ASTM B117	Topcoat appears more clothlike. Slight

	30 days in 5% salt fog solution chamber	edge lift on flat panel samples. No lift on wrapped wiremarkers. No visible effect on print quality.
Abrasion Resistance	Fed. Std. 191A, Method 5306 Taber Abraser, CS-10 grinding wheels, 250 g/arm	Moderate print removal after 100 cycles. Print still legible.

*Not intended for extended, direct exposure to outdoor weathering.

PERFORMANCE PROPERTY	CHEMICAL RESISTANCE

Samples of white were printed with the Series R6200 ribbon, laminated to flat aluminum panels and wrapped around 0.080" OD TFE jacketed wire, and allowed to dwell 24 hours prior to test. Testing consists of 5 cycles of 10 minute immersions in the specified chemicals followed by 30 minute recovery periods. After the final immersion the flat samples were rubbed with cotton swabs. Testing was conducted at room temperature except where noted.

CHEMICAL REAGENT	SUBJECTIVE OBSERVATION OF VISUAL CHANGE	
CLEANERS & SOLVENTS	**APPEARANCE OF WIREMARKER**	**APPEARANCE OF R6200 PRINT**
Northwoods™ Buzz Saw Degreaser	No visible effect	No visible effect
Formula 409®	No visible effect	No visible effect
Acetone	Slight unwrap, topcoat removed, slight adhesive ooze	Topcoat removed, print removed
Toluene	Severe unwrap, topcoat removed, adhesive ooze	Topcoat removed, print removed
Isopropyl Alcohol	Severe unwrap	No visible effect
Mineral Spirits	Severe unwrap, moderate adhesive ooze	No visible effect
Deionized Water	No visible effect	No visible effect
FUELS, OILS, & LUBRICANTS	**APPEARANCE OF WIREMARKER**	**APPEARANCE OF R6200 PRINT**
Gasoline	Moderate unwrap, some adhesive ooze	No visible effect w/o rub, moderate print smear when rubbed
Brake Fluid	Slight unwrap	No visible effect w/o rub, severe print smear when rubbed
SAE 20 WT Motor Oil @ 70°C	No visible effect	No visible effect
Ideal Yellow 77® Wire Pulling Lubricant	No visible effect	No visible effect
AEROSPACE RELATED FLUIDS	**APPEARANCE OF WIREMARKER**	**APPEARANCE OF R6200 PRINT**
JP-8 Jet Fuel	Severe unwrap, adhesive ooze	No visible effect
Skydrol® 500B-4	Slight unwrap, topcoat removed	Topcoat removed, print removed
Mil 5606 Oil	Slight unwrap, some adhesive ooze	No visible effect

Yellow and orange material - Printed black legend

CHEMICAL RESISTANCE

RUB, DIP, IMMERSION

B-498 Orange Reagent	Rub	Dip	Immersion	B-498 Yellow Reagent	Rub	Dip	Immersion
30% Sulfuric Acid	NE	NE	NE	30% Sulfuric Acid	NE	NE	NE
10% Sulfuric Acid	NE	NE	NE	10% Sulfuric Acid	NE	NE	NE
30% Hydrochloric acid	NE	NE	F	30% Hydrochloric acid	NE	NE	F
10% Hydrochloric acid	NE	NE	NE	10% Hydrochloric acid	NE	NE	NE
Glacial Acetic	F	NT	NT	Glacial Acetic	F	F	F
5% Acetic Acid	NE	NE	NE	5% Acetic Acid	NE	NE	F
50% Sodium Hydroxide	NE	F	NT	50% Sodium Hydroxide	NE	NE	F
10% Sodium Hydroxide	F	NT	NT	10% Sodium Hydroxide	NE	NE	F
10% Ammonia	NE	NE	NE	10% Ammonia	NE	NE	NE
5% Sodium Hypochlorite	NE	NE	F	5% Sodium Hypochlorite	NE	NE	NE
10% Sodium Chloride	NE	NE	NE	10% Sodium Chloride	NE	NE	F
MEK	F	NT	NT	MEK	F	F	F
Acetone	F	NT	NT	Acetone	F	F	F
Toluene	F	NT	NT	Toluene	F	F	F
Methanol	F	F	NT	Methanol	F	NE	F
IPA	F	NE	F	IPA	F	NE	F
Heptane	F	NE	F	Heptane	NE	NE	F
Mineral Spirits	F	NT	NT	Mineral Spirits	NE	NE	F
Turpentine	F	NT	NT	Turpentine	F	F	F
Diesel Fuel	NE	F	NT	Diesel Fuel	NE	NE	F
Kerosene	F	NT	NT	Kerosene	NE	NE	F

Gasoline	F	NE	NE	Gasoline	F	F	F
ASTM #3 Oil	NE	NE	NE	ASTM #3 Oil	NE	NE	NE
SAE 20 Oil	NE	NE	NE	SAE 20 Oil	NE	NE	F
Alconox®	NE	NE	NE	Alconox ®	NE	NE	F
Water	NE	NE	NE	Water	NE	NE	NE

NE = No Effect
F = Failed (affected sample)

7 Day Immersions: Immersed in reagent for 7 days
Dip Test: Five 10 minute dips in reagent with 30 minute recovery
Rub Test: Rubbed sample for 30 second with swab soaked in reagent

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:
Formula 409® is a registered trademark of the Clorox Company
Northwoods™ is a trademark of the Superior Chemical Corporation.
Polyken™ is a trademark of Testing Machines Inc.
Skydrol® is a registered trademark of the Monsanto Company
Sunlighter™ is a trademark of the Test Lab Apparatus Company
Yellow 77® is a registered trademark of Ideal Industries,
Inc.
ASTM: American Society for Testing and Materials (U.S.A.)
SAE: Society of Automotive Engineers (U.S.A.)
S. I.: International System of Units
UL: Underwriters Laboratories Inc. (U.S.A.)

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