BRADY B-7576 THERMAL TRANSFER PRINTABLE TAMPER-EVIDENT METALLIZED POLYESTER LABEL STOCK

TDS No. B-7576
Effective Date: 27-Jun-2012

Description:

GENERAL
Print Technology: Thermal Transfer
Material Type: Metallized Polyester
Finish: Matte Silver
Adhesive: Tamper Indicating Acrylic

APPLICATIONS
Rating and serial plates that require high performance and evidence of label removal.

RECOMMENDED RIBBONS
Brady series R6000 Halogen Free (Previously known as R6000HF)
Brady Series R6000
Brady Series R4400 colored (red, blue, and green)

REGULATORY/AGENCY APPROVALS
Brady B-7576 is UL Recognized to UL969 Labeling and Marking Standard when printed with Brady Series R6000 and R6000 Halogen Free ribbons. See UL file MH17154 for specific details. UL information can be accessed online at *ul.com*. Search in *Certifications* area.

Brady B-7576 is RoHS compliant to 2005/618/EC MCV amendment to RoHS Directive 2002/95/EC.

SPECIAL FEATURES
B-7576 is designed to leave a "VOID" footprint when the label is removed. In addition, a "VOID" pattern will appear on the top surface of the label in order to prevent it from being reused. Recommended 24 hour room temperature dwell before removal for full tamper evident performance. The adhesive nature of product does not allow for repositioning and requires minimal handling in order to prevent prematurely exposed VOID pattern.

Details:

PHYSICAL PROPERTIES	TEST METHODS	AVERAGE RESULTS
Thickness	ASTM D 1000 -Substrate -Adhesive -Total	 0.0021 inch (0.053 mm) 0.0007 inch (0.018 mm) 0.0028 inch (0.071 mm)
Adhesion to: -Stainless Steel	ASTM D 1000 30 minute dwell	 39 oz/in (43 N/100 mm)
-Aluminum	30 minute dwell	34 oz/in (37 N/100 mm)
-Glass	30 minute dwell	41 oz/in (45 N/100 mm)
-Smooth ABS	30 minute dwell	40 oz/in (44 N/100 mm)
-Textured ABS	30 minute dwell	5 oz/in (5 N/100 mm)
-Polypropylene	30 minute dwell	31 oz/in (34 N/100 mm)
-Painted Enamel	30 minute dwell	36 oz/in (39 N/100 mm)
-Powder Coated Enamel	30 minute dwell	8 oz/in (9 N/100 mm)

Drop Shear	PSTC-7 (except use 1/2" x 1" sample)	23 hours
Tensile Strength and Elongation	ASTM D 1000 -Machine Direction -Cross Direction	 50 lbs/in (876 N/100 mm), 78% 54 lbs/in (946 N/100 mm), 85%
Application Temperature	Lowest application temperature to stainless steel	39ºF (4ºC)

Tamper evident adhesive performance properties were tested on B-7576 laminated to the indicated surfaces, exposed to the indicated environments and removed from the environments prior to testing. The label was removed at a 135º angle with a peel rate of 90 in/min and the remaining VOID adhesive pattern on each surface was observed.

	SUBJECTIVE OBSERVATION OF ADHESIVE PERFORMANCE (PERCENTAGE OF VOID PATTERN RETAINED)			
SURFACE TYPE	**24 hours @ 72ºF (22ºC)**	**30 days at 104ºF (40ºC)**	**30 days at -40ºF (-40ºC)**	**30 days at -94ºF (-70ºC)**
Laminated to: -Stainless Steel	80%-95%	85%-100%	80%-95%	85%-100%
-Aluminum	80%-95%	80%-95%	80%-95%	85%-100%
-Glass	80%-95%	80%-95%	80%-95%	85%-100%
-Smooth ABS	85%-100%	85%-100%	85%-100%	85%-100%
-Textured ABS	20%-35%	30%-45%	15%-30%	10%-25%
-Polypropylene	80%-95%	75%-90%	80%-95%	85%-100%
-Painted enamel	85%-100%	80%-95%	85%-100%	85%-100%
-Powder coated metal	45%-60%	60%-75%	50%-65%	25%-40%

Performance properties tested on B-7576 samples printed using Series R6000 and R6000 Halogen Free thermal transfer ribbons. Printed samples of B-7576 were laminated to aluminum before exposure to the indicated environmental condition.

PERFORMANCE PROPERTIES	**TEST METHODS**	**TYPICAL RESULTS**
High Service Temperature	30 days at 212°F (100°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	No visible effect
Weatherability	ASTM G155, Cycle 1 30 days in Xenon Arc Weatherometer	No visible effect to print. Some loss of tamper evidence

The tamper evident VOID pattern of B-7576 was retained after exposure to all of the listed conditions except for weatherometer.

* Continuous long term exposure to high temperature and high humidity levels may allow the VOID pattern to appear more obvious through the topside of the label.

PERFORMANCE PROPERTY	**CHEMICAL RESISTANCE**

Samples printed with Brady Series R6000 and R6000 Halogen Free thermal transfer ribbons and then laminated to aluminum panels. Test was conducted at room temperature 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		
	LABEL STOCK SUBSTRATE/ADHESIVE	R6000/R6000 Halogen Free EFFECTS OF IMMERSION	R6000/R6000 Halogen Free COTTON SWAB RUBS
Methyl Ethyl Ketone	No visible effect	No visible effect	Ink removed
1,1,1-Trichloroethane	No visible effect	No visible effect	Ink removed
Toluene	No visible effect	No visible effect	Ink removed
Isopropyl Alcohol	No visible effect	No visible effect	No visible effect
Mineral Spirits	No visible effect	No visible effect	No visible effect
JP-8 Jet Fuel	No visible effect	No visible effect	No visible effect
SAE 20 WT Oil	No visible effect	No visible effect	No visible effect
Mil 5606 Oil	No visible effect	No visible effect	No visible effect
Gasoline	No visible effect	No visible effect	No visible effect
Rust Veto® 342	No visible effect	No visible effect	No visible effect
Skydrol® 500B-4	No visible effect	No visible effect	Ink removed
Super Agitene®	No visible effect	No visible effect	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	Silver part of label gone (around edges)	No visible effect	No visible effect
10% Sulfuric Acid Solution	No visible effect	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°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.

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ASTM: American Society for Testing and Materials (U.S.A.)
PSTC: Pressure Sensitive Tape Council (U.S.A.)
SAE: Society of Automotive Engineers (U.S.A.)

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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