

**BRADY B-412 THERMAL TRANSFER PRINTABLE POLYPROPYLENE TAG STOCK**

TDS No. B-412  
Effective Date: 06/11/2009

**Description:**

**GENERAL**

**Print Technology:** Thermal Transfer  
**Material Type:** Polypropylene Tag  
**Finish:** Matte

**APPLICATIONS**

Wire and cable identification and product inventory identification, where legibility and tensile strength are needed.

**RECOMMENDED RIBBONS**

Brady Series R4300 and Brady Series R6200

**REGULATORY**

B-412 is RoHS compliant to 2005/618/EC MCV amendment to RoHS Directive 2002/95/EC.

**Details:**

PHYSICAL PROPERTIES	TEST METHODS	AVERAGE RESULTS
Total Thickness	ASTM D 1000	0.0080 inch (0.201 mm)
Tensile Strength and Elongation	ASTM D 1000 -Machine direction	45 lbs/inch (788 N/100 mm), 65%
Hole Tear Strength	Brady LAB F003 *	9 lbs (4.1 kg)
Tear Propagation Resistance	ASTM D1938 -Machine direction	1.2 oz (32.7 g)

\* LAB F003 is a Brady Worldwide, Inc. laboratory test procedure and is available upon request. Performance properties tested on B-412 printed with Series R4300 and R6200 ribbons and a BradyPrinter™ THT Model 203X thermal transfer printer. Results the same for both ribbons unless noted otherwise.

PERFORMANCE PROPERTIES	TEST METHOD	TYPICAL RESULTS
High Service Temperature	30 days at 100°C (212°F)	Slight discoloration at 100°C
Low Service Temperature	30 days at -40°C (-40°F)	No visible effect
Humidity Resistance	30 days at 100°F (37°C) and 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
Salt Fog Resistance	ASTM B 117 30 days in 5% salt fog solution chamber	No visible effect
<b>PERFORMANCE PROPERTY</b>		<b>CHEMICAL RESISTANCE</b>

Samples printed with Series R4300 and R6200 ribbons. Test was conducted at room temperature except where noted. Testing consisted of 5 cycles of 10 minute immersions in the specified test fluid followed by a 30 minute recovery period. After final immersion, samples rubbed 10 times with cotton swab saturated with test fluid.

CHEMICAL REAGENT	SUBJECTIVE OBSERVATION OF VISUAL CHANGE		
	LABEL STOCK SUBSTRATE	R4300	R6200
Methyl Ethyl Ketone	No visible effect	No visible effect w/o rub, moderate print smear with rub	No visible effect w/o rub, slight print removal with rub
1,1,1-Trichloroethane	No visible effect	No visible effect w/o rub, slight print smear with rub	No visible effect w/o rub, moderate print smear with rub
Toluene	No visible effect	No visible effect w/o rub, moderate print smear with rub	No visible effect w/o rub, moderate print smear with rub
Isopropyl Alcohol	No visible effect	No visible effect with or without rub	No visible effect with or without rub

Mineral Spirits	No visible effect	No visible effect with or without rub	No visible effect with or without rub
JP-8 Jet Fuel	No visible effect	No visible effect with or without rub	No visible effect with or without rub
ASTM #3 Oil	Slight discoloration	No visible effect with or without rub	No visible effect with or without rub
Mil 5606 Oil	Slight discoloration	No visible effect with or without rub	No visible effect with or without rub
Skydrol® 500B-4	No visible effect	No visible effect with or without rub	Slight print fade w/o rub, severe print removal with rub
Super Agitene®	No visible effect	No visible effect with or without rub	No visible effect with or without rub
Deionized Water	No visible effect	No visible effect with or without rub	No visible effect with or without rub
3% Alconox® Detergent	No visible effect	No visible effect with or without rub	No visible effect w/o rub, slight print removal with rub
10% Sodium Hydroxide Solution	Slight discoloration	No visible effect with or without rub	No visible effect with or without rub
10% Sulfuric Acid Solution	Slight discoloration	No visible effect with or without rub	No visible effect with or without rub
Northwoods™ Buzz Saw Degreaser	Slight discoloration	Slight print bleed w/o rub, complete print removal with rub	Slight print bleed w/o rub, complete print removal with rub

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.  
 BradyPrinter™ is a trademark of Brady Worldwide, Inc.  
 Northwoods™ is a trademark of the Superior Chemical Corporation.  
 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.)  
 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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