Technical Data Sheet

B-711 ONE STEP PROTECT™ BACKSIDE PRINTED CLEAR POLYESTER LABEL WITH CLEAR BORDER

TDS No. B-711
Effective Date: 11/14/2022

Description:

GENERAL

Print Technology: Thermal transfer
Materials Type: Polyester
Finish: Gloss
Adhesive: Permanent acrylic

APPLICATIONS

Brand label, rating and serial plates using alphanumerics, barcodes, graphic symbols and logos that require name plate quality. Applications requiring additional print protection from chemicals and abrasion.

RECOMMENDED RIBBONS

Brady Series R6000 Halogen Free
Brady Series R4400 (colors - red, blue, green, white)
Brady Series R4900 and R6200 (alternates)

REGULATORY/AGENCY 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

Brady B-711 is underside printed for increased abrasion and chemical resistance of the print.
Note: Dimensions of the label will include the border, therefore, the printable area will be less than the size of the label.

Details:

PHYSICAL PROPERTIES	TEST METHODS	AVERAGE RESULTS
Thickness	ASTM D 1000	
	-Substrate	0.005 inch (0.127 mm)
	-Adhesive	0.002 inch (0.051 mm)
	-Total including border (excluding liner)	0.007 inch (0.178 mm)
Adhesion to:	ASTM D 1000	
-Stainless Steel	20 minute dwell	69 oz/inch (76 N/100 mm)
	24 hour dwell	69 oz/inch (76 N/100 mm)
-Textured ABS	20 minutes dwell	11 oz/inch (12 N/100 mm)
	24 hour dwell	11 oz/inch (12 N/100 mm)
-Polypropylene	20 minutes dwell	30 oz/inch (33 N/100 mm)
	24 hour dwell	30 oz/inch (33 N/100 mm)
-Polyester Powder Coated Paint	20 minutes dwell	42 oz/inch (46 N/100 mm)
	24 hour dwell	46 oz/inch (50 N/100 mm)

Performance properties tested on B-711 underside printed with the Brady Series R6000 Halogen Free ribbon. Printed samples were laminated to aluminum and allowed to dwell 24 hours before exposure to the indicated environments.

PERFORMANCE PROPERTIES	TEST METHOD	TYPICAL RESULTS
Long Term High Service Temperature	30 days at various temperatures	No visible effect to label at 100°C. Slight discoloration at 120°C. Moderate discoloration at 130°C but label is still functional.
Long Term Low Service Temperature	30 days at -80°C	No visible effect
Short Term High Service Temperature	5 minutes at various temperatures	No visible effect to label at 170°C. Slight shrinkage at 190°C, label remains functional. Label becomes non-functional at 210°C due to shrinkage.
Humidity Resistance	30 days at 100°F (37°C) and 95% relative humidity.	No visible effect
UV Light Resistance	ASTM G155, Cycle 1 (No Spray) 30 days in Q-Sun Xenon Test Chamber	No visible effect
Weatherability	ASTM G155, Cycle 1 30 days in Xenon Arc Weather-Ometer®.	No visible effect
Salt Fog Resistance	ASTM B 117 30 days in 5% salt fog solution chamber	No visible effect
Abrasion	Taber Abraser, CS10 grinding wheels, 1,000 g/arm (Fed. Std. 191A, Method 5306)	Print legible after 1,000 cycles

PERFORMANCE PROPERTY	CHEMICAL RESISTANCE

Samples were printed with the Brady Series R6000 Halogen Free ribbon. Samples were laminated to aluminum panels and allowed to dwell 24 hours prior to testing. Testing was conducted at room temperature and consisted of 30 minute immersions in the specified test fluid. After immersion, the samples were removed from the test fluid and the printed image rubbed 10 times with a cotton swab saturated with the test fluid. The rating scale below shows the effect to the quality of the print for each sample.

CHEMICAL REAGENT	SUBJECTIVE OBSERVATION OF VISUAL CHANGE		
	EFFECT TO LABEL STOCK	EFFECTS TO PRINTED IMAGE	
		R6000 Halogen Free	
		WITHOUT RUB	WITH RUB
Methyl Ethyl Ketone	Slight adhesive ooze	1	1
Toluene	Slight adhesive ooze	1	1
Isopropyl Alcohol	No visible effect	1	1
Mineral Spirits	No visible effect	1	1
Gasoline	Slight adhesive ooze	1	1
JP-8 Jet Fuel	Slight adhesive ooze	1	1
Brake Fluid DOT 3	No visible effect	1	1
SAE 20 WT Oil at 70°C	No visible effect	1	1
Skydrol® 500B-4	Slight adhesive ooze	1	1
Formula 409® Cleaner	No visible effect	1	1

Super Agitene	No visible effect	1	1
Deionized Water	No visible effect	1	1
3% Alconox	No visible effect	1	1
10% Sodium Hydroxide	No visible effect	1	1
10% Sulfuric Acid	No visible effect	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.

Trademarks:
Formula 409® is a registered trademark of the Clorox Company
Skydrol® is a registered trademark of the Monsanto Company
ASTM: American Society for Testing and Materials (U.S.A.)
SAE: Society of Automotive Engineers (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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