BRADYBONDZ™ B-480A THERMAL TRANSFER PRINTABLE LIGHT GRAY POLYESTER LABEL STOCK WITH RUBBER BASED ADHESIVE

TDS No. B-480A
Effective Date: 4/12/2019

Description:

GENERAL

Print Technology: Thermal transfer
Materials Type: Top coated polyester
Finish: Light gray
Adhesive: Permanent rubber based

APPLICATIONS

Bar code labels, serial and rating plates requiring nameplate-like quality.

RECOMMENDED RIBBONS

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

REGULATORY/AGENCY APPROVALS

UL: B-480A is a UL Recognized Component when printed with the Brady Series R6000 Halogen Free and the Brady Series R6200 ribbons. See UL file PGJI2.MH17154 for specific details. UL information can be accessed on-line at UL.com in the UL Product iQ area.

cUL: B-480A is a cUL Recognized Component when printed with the Brady Series R6000 Halogen Free and Brady Series R6200 ribbons. See UL file PGJI8.MH17154 for specific details. UL information can be accessed on-line at UL.com in the UL Product iQ area.

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

Details:

PHYSICAL PROPERTIES	TEST METHODS	AVERAGE RESULTS
Thickness	ASTM D 1000 -Top Coat -Substrate -Adhesive -Total (excluding liner)	 0.0004 inch (0.010 mm) 0.0020 inch (0.051 mm) 0.0020 inch (0.051 mm) 0.0044 inch (0.112 mm)
Adhesion to: -Stainless Steel	ASTM D 1000 20 minute dwell 24 hour dwell	 155 oz/inch (169 N/100 mm) 160 oz/inch (174 N/100 mm)
-Textured ABS	20 minutes dwell 24 hour dwell	54 oz/inch (59 N/100 mm) 54 oz/inch (59 N/100mm)
-Polypropylene	20 minutes dwell 24 hour dwell	140 oz/inch (153 N/100 mm) 143 oz/inch (156 N/100mm)
-Painted Enamel	20 minutes dwell 24 hour dwell	144 oz/inch (157 N/100 mm) 149 oz/inch (162 N/100 mm)
-Powder Coated Metal (polyester coating)	20 minutes dwell 24 hour dwell	102 oz/inch (111 N/100 mm) 104 oz/inch (113 N/100 mm)
Tack	ASTM D 2979 Polyken™ Probe Tack 0.5 second dwell	39 oz (1122 g)
Dielectric Strength	ASTM D 1000	8000 Volts

Performance properties tested on B-480A printed with the Brady Series R6000 Halogen Free and the Brady Series R6200 ribbons. Printed samples were laminated to aluminum and allowed to dwell 24 hours before exposure to the indicated environments. Unless noted, results are the same for both ribbons.

PERFORMANCE PROPERTIES	TEST METHOD	TYPICAL RESULTS
High Service Temperature	30 days at various temperatures	No visible effect to label at 110°C. Slightly darker at 120°C. Slight shrinkage and darker at 145°C, but label still functional.
Low Service Temperature	30 days at -70°C	No visible effect
Short Term High Service Temperature	5 minutes at various temperatures	Slight shrink, no visible effect to label at 180°C. Slight shrink, no visible effect to label at 200°C. Slight shrink, no visible effect to label at 210°C.
Humidity Resistance	30 days at 100°F (37°C) and 95% relative humidity.	No visible effect
Weatherability	ASTM G155, Cycle 1 30 days in Xenon Arc Weatherometer	Darkened, but label still functional.
Salt Fog Resistance	ASTM B 117 30 days in 5% salt fog solution chamber	No visible effect
Abrasion Resistance	Taber Abraser, CS-10 grinding wheels, 500 g/arm (Fed. Std. 191A, Method 5306)	R6000 Halogen Free: Print legible after 100 cycles

PERFORMANCE PROPERTY	CHEMICAL RESISTANCE

Samples were printed with the Brady Series R6000 Halogen Free and the Brady Series R6200 ribbons. 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		R6200	
		WITHOUT RUB	WITH RUB	WITHOUT RUB	WITH RUB
Acetone	Slight adhesive ooze	1	5	1	5
Toluene	Slight adhesive ooze	1	5	1	5
Isopropyl Alcohol	No visible effect	1	1	1	1
Mineral Spirits	No visible effect	1	1	1	1
Gasoline	Slight adhesive ooze	1	1	1	1
JP-8 Jet Fuel	Slight adhesive ooze	1	1	1	1
Brake Fluid	No visible effect	1	1	1	2
Skydrol® 500B-4	Slight adhesive ooze	1	2	2	4
SAE 20 WT Oil at 70°C	No visible effect	1	1	1	1
MIL 5606 Oil	No visible effect	1	1	1	1
Formula 409® Cleaner	No visible effect	1	1	1	1

Northwoods™ Buzz Saw Citrus Degreaser	No visible effect	1	1	1	1
Deionized Water	No visible effect	1	1	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 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:
ASTM: American Society for Testing and Materials (U.S.A.)
BRADYBONDZ™ is a trademark of Brady Worldwide, Inc.
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.
SAE: Society of Automotive Engineers (U.S.A.)
Skydrol® is a registered trademark of the Monsanto Company
UL: Underwriters Laboratories Inc. (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.

Product compliance information is based upon information provided by suppliers of the raw materials used by Brady to manufacture this product or based on results of testing using recognized analytical methods performed by a third party, independent laboratory. As such, Brady makes no independent representations or warranties, express or implied, and assumes no liability in connection with the use of this information.

WARRANTY
Brady products are sold with the understanding that the buyers will test them in actual use and determine for themselves their adaptability to their intended uses. Brady warrants to the buyers that its products are free from defects in material and workmanship, but limits its obligation under this warranty to replacement of the product shown to Brady's satisfaction to have been defective at the time Brady sold it. This warranty does not extend to any persons obtaining the product from the buyers. This warranty is in lieu of any other warranty, express or implied, including, but not limited to, any implied warranty of merchantability or fitness for a particular purpose, and of any other obligations or liability on Brady's part. Under no circumstances will Brady be liable for any loss, damage, expense, or consequential damages of any kind arising in connection with the use, or inability to use, Brady's products.

Copyright 2019 Brady Worldwide, Inc. | All Rights Reserved
Material may not be reproduced or distributed in any form without written permission.