Technical Data Sheet

BRADY B-407 TRANSLUCENT MATTE POLYOLEFIN LABEL STOCK

TDS No. B-407
Effective Date: 10/11/2005

Description:

GENERAL

Print Technology: Thermal transfer
Materials Type: Translucent polyolefin
Finish: Matte
Adhesive: Permanent acrylic
Liner: Polypropylene coated natural paper release liner

APPLICATIONS

B-407 is recommended for general purpose label applications that require a clear thermal transfer printable material. B-407 can also be used as a thermal transfer printable overlaminate. B-407 is not recommended for outdoor use.

RECOMMENDED RIBBONS

Brady series R4900 and R6200 black
Brady series R4400 white

REGULATORY/AGENCY APPROVALS

Based on the results of testing using recognized analytical methods performed by a third party, independent laboratory, B-407 is RoHS compliant to the current TAG MCV proposal to the EU Commission Directive 2002/95/(RoHS) for cadmium (<100 ppm), lead (<1000 ppm), hexavalent chromium (<1000 ppm), mercury (<1000 ppm), polybrominated biphenyls (PBBs < 1000 ppm), and polybrominated diphenyl ethers (PBDE's <1000 ppm).

Details:

PHYSICAL PROPERTIES	TEST METHODS	AVERAGE RESULTS
Thickness	ASTM D 1000 -Substrate -Adhesive -Total	 0.0036 inch (0.091 mm) 0.0009 inch (0.023 mm) 0.0045 inch (0.114 mm)
Adhesion to: -Stainless Steel	ASTM D 1000 20 minute dwell 24 hour dwell	 36 oz/in (40 N/100 mm) 44 oz/in (47 N/100 mm)
-Smooth ABS	20 minute dwell 24 hour dwell	36 oz/in (40 N/100 mm) 39 oz/in (43 N/100 mm)
-Polypropylene	20 minute dwell 24 hour dwell	29 oz/in (32 N/100 mm) 33 oz/in (36 N/100 mm)
Tack	ASTM D 2979 Polyken™ Probe Tack 1 second dwell	24 oz (669 g)

Performance properties tested on B-407 printed with Series R4900 and R6200 ribbons and a BradyPrinter™ THT Model 300X thermal transfer printer. Printed samples of B-407 were laminated to aluminum and allowed to dwell 24 hours before exposure to the indicated environmental conditions.

PERFORMANCE PROPERTIES	TEST METHOD	TYPICAL RESULTS
Short Term High Service Temperature	5 minutes at 212°F (100°C)	No visible effect to label at 100°C. Label shrinkage and adhesive blistering at temperatures higher than 100ºC.
Long Term High Service Temperature	30 days at 194°F (90°C)	No visible effect to label at 80°C. Adhesive blistering observed at 90°C.
Low Service Temperature	30 days at -94°F (70°C)	No visible effect
Humidity Resistance	30 days at 100°F (37°C) and 95% R.H.	No visible effect
Weatherability*	ASTM G155, Cycle 1 30 days in Xenon Arc Weatherometer	Label became severely cracked and brittle.

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)	Print still legible at 150 cycles with the R4900 and R6200 ribbons.

*B-407 is not recommended for long-term outdoor use.

PERFORMANCE PROPERTY	CHEMICAL RESISTANCE

Samples printed with Series R4900 and R6200 ribbons. Samples laminated to aluminum panels and allowed to dwell 24 hours prior to testing. 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/ ADHESIVE	R4900	R6200
Methyl Ethyl Ketone	No visible effect	No visible effect w/o rub, complete print removal with rub	Slight print fade w/o rub, complete print removal with rub
Isopropyl Alcohol	No visible effect	No visible effect with or without rub	No visible effect w/o rub, moderate print removal with rub
Mineral Spirits	No visible effect	No visible effect with or without rub	No visible effect with or without rub
Brake Fluid	No visible effect	No visible effect w/o rub, complete print removal with rub	Moderate print removal w/o rub, complete print removal with rub
SAE 20 WT Oil @70°C	No visible effect	No visible effect with or without rub	No visible effect with or without rub
Mil 5606 Oil	Label stained red	No visible effect with or without rub</ td>	No visible effect with or without rub
Gasoline	Slight adhesive ooze	No visible effect w/o rub, moderate print removal with rub	No visible effect with or without rub
Skydrol® 500B-4	No visible effect	Slight print removal w/o rub, complete print removal with rub	Slight print fade w/o rub, complete print removal with rub
Glass Cleaner	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 with or without rub
10% Sodium Hydroxide Solution	No visible effect	No visible effect with or without rub	Slight print fade with or without rub
10% Sulfuric Acid Solution	No visible effect	No visible effect with or without rub	No visible effect with or without rub
Northwoods™ Buzz Saw Degreaser	No visible effect	No visible effect with or without rub	Slight print removal w/o rub, complete print removal with rub

Product testing, customer feedback, and history of similar products, support a customerperformance 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.

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ASTM: American Society for Testing and Materials (U.S.A.)
S. I.: International System of Units
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.
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