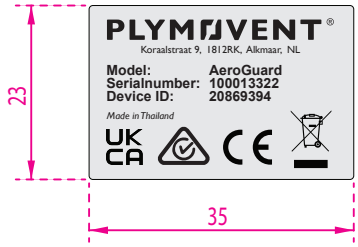
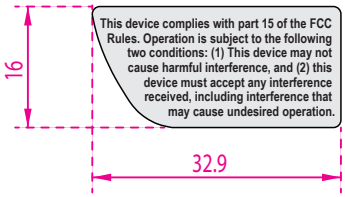
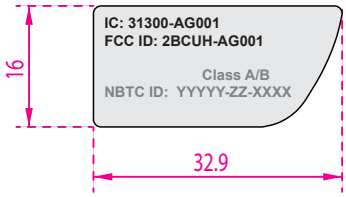
AeroGuard - Product label specifications



Label material:	BRADY B-434A (Printable Gloss Metallized Polyester Label)
Ribbon:	BRADY R6300 (Brady Series R6000 Halogen Free)
Printer:	Zebra ZT411
Printing resolution:	600 dpi





Label material:	SL-S194NL UL SILVER
Ribbon:	SL-R191T UL Black
Printer:	MAX Bepop CPM-100HG5
Printing resolution:	400 dpi

Technical Data Sheet

BRADY B-434A THERMAL TRANSFER PRINTABLE GLOSS METALLIZED POLYESTER LABEL STOCK

TDS No. B-434A
Effective Date: 10/05/2022

Description:
GENERAL
Print Technology: Thermal Transfer
Material Type: Metallized Polyester
Finish: Gloss
Adhesive: Permanent Acrylic

APPLICATIONS
Rating plate and general purpose labeling on textured surfaces.

RECOMMENDED RIBBONS
Brady Series R6000 Halogen Free
Brady Series R4900

REGULATORY/AGENCY APPROVALS
UL: B-434A is a UL Recognized Component when printed with the Brady Series R4900 and the Brady Series R6000 Halogen Free ribbons. See UL file MH17154 for specific details. UL information can be accessed on-line at UL.com in the UL Product iQ area.

CSA: B-434A is a CSA Accepted material when printed with the Brady Series R4900 and the Brady Series R6000 ribbon. See CSA Acceptance Record LS 41833 for specific details. CSA information can be accessed online at https://www.csagroup.org/testing-certification/product-listing/

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
B-434A is designed to withstand numerous solvents while maintaining excellent image quality.

Details:

PHYSICAL PROPERTIES	TEST METHODS	AVERAGE RESULTS
Thickness	ASTM D 1000 -Substrate -Adhesive -Total (excluding liner)	 0.002 inch (0.051 mm) 0.002 inch (0.051 mm) 0.004 inch (0.102 mm)
Adhesion to: -Stainless Steel	ASTM D 1000 20 minute dwell 24 hour dwell	 104 oz/in (114 N/100 mm) 113 oz/in (123 N/100 mm)
-Textured ABS	20 minute dwell 24 hour dwell	57 oz/in (62 N/100 mm) 69 oz/in (76 N/100 mm)
-Polypropylene	20 minute dwell 24 hour dwell	96 oz/in (105 N/100 mm) 111 oz/in (121 N/100 mm)

The following testing was performed on B-434A samples printed with the Brady Series R4900 and the Brady Series R6000 Halogen Free ribbons. Samples laminated to aluminum panels. All samples allowed to dwell 24 hours prior to testing. Unless noted, results are the same for both ribbons.

PERFORMANCE PROPERTIES	TEST METHODS	TYPICAL RESULTS
Long Term High Service Temperature	30 days at various temperatures	No visible effect at 266°F (130°C). Slight label discoloration at 293°F (145°C), label

		still functional.
Long Term Low Service Temperature	30 days at -94°F (-70°C)	No visible effect
Short Term High Service Temperature	5 minutes at various temperatures	No visible effect at 374°F (190°C). Slight label shrinkage at 392°F (200°C), label still functional
Humidity Resistance	30 days at 100°F (38°C), 95% R.H.	No visible effect
UV Light Resistance	ASTM G155, Cycle 1 (no spray) 30 days in 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 B117 30 days in 5% solution chamber	No visible effect
Abrasion Resistance	Taber Abraser, CS10 grinding wheel, 500 g/arm (Fed. Std. 191A, Method 5306)	Print legible after 100 cycles

PERFORMANCE PROPERTY	CHEMICAL RESISTANCE

Samples were printed with the Brady Series R4900 and the Brady Series R6000 Halogen Free ribbons. Test was conducted at room temperature after a 24 hour dwell. Testing consisted of 5 cycles of 10 minute immersions in the specified chemical reagent followed by 30 minute recovery period. Samples were rubbed 10 times with a cotton swab immersed in test fluid after final immersion.

CHEMICAL REAGENT	SUBJECTIVE OBSERVATION OF VISUAL CHANGE				
	EFFECT TO LABEL STOCK	EFFECTS TO PRINTED IMAGE			
		R6000 Halogen Free		R4900	
		WITHOUT RUB	WITH RUB	WITHOUT RUB	WITH RUB
Methyl Ethyl Ketone	No visible effect	5	5	5	5
Toluene	No visible effect	5	5	5	5
Isopropyl Alcohol	No visible effect	1	1	1	1
Mineral Spirits	No visible effect	1	1	1	1
Gasoline	No visible effect	1	1	1	1
JP-8 Jet Fuel	No visible effect	1	1	1	1
Skydrol® 500B-4	No visible effect	3	5	5	5
MIL 5606 Oil	No visible effect	1	1	1	1
3% Alconox® Detergent	No visible effect	1	1	1	1
10% Sodium Hydroxide Solution	No visible effect	1	1	1	1
10% Sulfuric Acid Solution	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:
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:
Alconox® is a registered trademark of Alconox Co.
Skydrol® is a registered trademark of Solutia Inc.
Weather-Ometer® is a registered trademark of Atlas Material Testing Technology LLC
ASTM: American Society for Testing and Materials (U.S.A.)
CSA: Canadian Standards Association
SAE: Society of Automotive Engineers (U.S.A.)
UL: Underwriters Laboratories Inc. (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.

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.

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Brady North America | 6555 W. Good Hope Rd | Milwaukee, WI 53223 | USA | Tel: 414-358-6600 | Fax: 800-292-2289

BRADY R6000 HALOGEN FREE SERIES THERMAL TRANSFER RIBBON

TDS No. R6000 Halogen Free
Effective Date: 03/20/2019

Description:
Brady R6000 Halogen Free Series ribbon is halogen free and is based on a resin formulation which offers the end user a high performance image when used with Brady label materials. Advantages of the R6000 Halogen Free Series ribbon, when printed on the appropriate Brady label, include excellent solvent and scratch resistance and high heat resistance. Please refer to the appropriate product Technical Data Sheet for specific ribbon and label performance characteristics. This ribbon is recommended for printing on glossy or very smooth labelstocks.

Brady's R6000 Halogen Free Series ribbon is UL Recognized and/or CSA Accepted on various Brady labelstocks. Refer to UL file MH17154 and MH10939 and CSA Acceptance Record LS41833 for specific material and ribbon approvals.

This ribbon is available in various sizes to be used in Brady benchtop and portable thermal transfer printers.

REGULATORY 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

Details:

Ink Color:	Black
Base Film:	Polyester
Base Film Thickness:	4.8 microns
Ink Softening Temperature:	166° - 168°C (330.8° - 334.4°F)
Usage Condition:	5° - 35°C (41° - 95°F), 20 - 85% Relative Humidity

Exposure to direct sunlight, high temperature and high humidity should be avoided.

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.

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.

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Technical Data Sheet

UL Silver Specialty Tape Roll

100mm (4in) width

【Product Details】

Color / Remark	100mm(4in) width
Silver	SL-S194NL UL SILVER
Recommended Ribbon Cassette	SL-R191T UL Black
Compatible Bepop Machines	CPM-100/100H/CPM-100G3 100HG3/100G5/100HG5
Recommended Bepop Machine	CPM-100HG5

*This specialty tape roll is for use in MAX Bepop Printing and Cutting Systems. This material is made for 100mm (4in) width models. It is recommended the purchaser tests materials in their printer and work environment prior to use. Thermal transfer printing requires the appropriate temperature settings, please select appropriate print density for printing.

【UL969 Standard Information】

Color / Remark	100mm(4in) width
UL969 Standard Link	http://database.ul.com/cgi-bin/XYV/cgifind.new/LISEXT/1FRAME/index.html
Certification Category	PGJI 2
File No.MH48229	File No.MH48229

【Composition】

Subject	Content	Measurement
Film	Aluminized polyester film with surface coating Brushed silver / matte finish	50 μm
Adhesive	Acrylic type adhesive	-
Release Liner	Double-sided poly-laminated fine paper - blue	-

【Dimensions】

Product	100mm (4in) width vinyl
Printable Surface Dimensions (Width X Length)	100mm x 10m/roll (4.17in x 32.8ft)

【Performance：Adhesion】

Subject	Test Description	Test Result	Test Method
Adhesive Force	After 30 min.	13.0 N/25 mm	Internal Method
	After 24 hrs.	16.0 N/25 mm	Internal Method
	JIS Method	4.6 N/10mm	JIS Z 0237 (*1)
Holding Power	See test method	NC 30000	Internal Method
Ball Tack	See test method	7 No.	J. Dow Method

・*1 : JIS Z 0237 has been revised on Dec. 21st, 2009.
・The above data is intended for informative and environmental safety purpose only, and does not constitute a guarantee or warranty of product performance. As performance may vary according to practices and conditions, sufficient testing prior to use is strongly recommended.

STORAGE

・Avoid storage in high humidity environments, or environments with high or low temperatures.
Ideal temperature: 10C - 35C (50F - 95F)
Ideal relative humidity: 35 - 80 %
**At a temperature of 35C (95F), relative humidity should be less than 60 %
** At a relative humidity of 80 %, temperature should be less than 27C (80.6F)
・At extreme conditions, the adhesion and/or bonding strength may deteriorate causing the labels to become easier to peel off.
・Avoid contact with moisture or chemicals. Please store tape rolls in the included plastic bag.
・Avoid exposure to direct sunlight, keep a distance from light sources (including fluorescent lamps).
・To ensure a longer shelf life, store the rolls in a standing position and take care to avoid damage caused by impacting or impressing the material.

IMPORTANT NOTICE

All products are subject to careful quality control throughout the manufacturing process and are warranted to be of merchantable quality and free from manufacturing defects. Published information concerning tape rolls is based upon research which we believe to be reliable, although such information does not constitute a warranty. Because of the variety of uses of tape rolls, and the continuing development of new applications, the purchaser should carefully consider the suitability and performance of the product for each intended use, and the purchaser shall assume all risks regarding such use. All product specifications are subject to change without prior notice.

Printing Materials MH48229

Guide Information

MAX CO LTD

6-6 NIHONBASI HAKOZAKI CHO, CHUO-KU TOKYO 103-8502 JP

unprinted stock dsg: SL-S194N/UL, SL-S194NL/UL

Pressure-sensitive systems

Suitable for additional printing with one or more of the following inks (in the black color unless otherwise indicated):

Thermal transfer ribbon

Max Co. Ltd. SL-R191T

Application Surface	Max Temp (°C)	Min Temp (°C)	Indoor Use	Outdoor Use	Additional Conditions
Acrylic paint	100	-40	Yes	Yes	-
Aluminum	100	-40	Yes	Yes	-
Galvanized steel	100	-40	Yes	Yes	-
Melamine paint	100	-40	Yes	Yes	-
Nickel plated metal	100	-40	Yes	Yes	-
Stainless steel	100	-40	Yes	Yes	-
Epoxy	80	-40	Yes	Yes	-
Epoxy paint	80	-40	Yes	Yes	-
Phenolic - Phenol Formaldehyde	80	-40	Yes	Yes	-
Polyphenylene oxide/ether	80	-40	Yes	Yes	-
Acrylonitrile butadiene styrene	60	-40	Yes	Yes	-
Polycarbonate	60	-40	Yes	Yes	-
Polypropylene	60	-	Yes	No	-
Polystyrene	60	-40	Yes	Yes	-
Polyvinyl chloride	60	-40	Yes	Yes	-
Unsaturated polyester - thermoset	60	-40	Yes	Yes	-

NOTE - Printing systems are enclosed in a cassette with the ribbon. The cassette is to be inserted in a compatible printer for end user printing.

Report Date: 2013-06-28
Last Revised: 2022-07-12

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6-6 NIHONBASHI HAKOZAKI-CHO, CHUO-KU,
TOKYO, JAPAN
PHONE: 81-3-3669-8131 TEL 81-3-3669-7104

Translated from Japan original texts

Chemical Substances Data Sheet

MAX CO., LTD.
1848 Kawai, Tamamura-machi,
Sawa-gun, Gunma, Japan
Environment and QA dept.
Tel +81-270-65-1381
Fax+81-270-65-1043
Date of revision: January 31st, 2023

This article includes the information on the following MAX products' chemical substances.
Applicable products' name: See the next page
Applicable products' code: See the next page
* This article shows the information on the Label portion only.

1. The substances specified in EU RoHS directive"RoHS3 Directive 2015/863"

No.	Substance	Inclusion threshold	Existence or nonexistence Less than threshold = Nonexistence
1	Cadmium and its compound	100ppm	Nonexistence
2	Compound of hexavalent chromium	1,000ppm	Nonexistence
3	Lead and its compound	1,000ppm	Nonexistence
4	Mercury and its compound	1,000ppm	Nonexistence
5	PBBs	1,000ppm	Nonexistence
6	PBDEs	1,000ppm	Nonexistence
7	DBP CAS No. 84-74-2	1,000ppm	Nonexistence
8	DEHP CAS No. 117-81-7	1,000ppm	Nonexistence
9	BBP CAS No. 85-68-7	1,000ppm	Nonexistence
10	DIBP CAS No. 84-69-5	1,000ppm	Nonexistence

2. The substances specified in the SVHC list (1st~27th, 224 kinds of substances) of REACH directive.

✓	The aforementioned products contain any of the said substances no more than 0.1wt%.
	The aforementioned products contain any of the said substances more than 0.1wt%. Such substances are listed in the following table.

Substance	CAS No.	Content(ppm)	Content(g)	Remark

- The aforementioned info. are subject to the available info. or disclosed info. by the material supplier at the revision date / the issued date.
  Besides, the aforementioned info. may be revised according to the revision of the relevant laws and the regulations, as well as newly available/disclosed info in the future.
- The objective of this data sheet is for your information only and not for guaranteeing the content of this data sheet.

MAX CO., LTD. Applicable products list

Product name	Product code	Relevant product parts
SL-S111NL BLACK TAPE	IL92239	LABEL portion only
SL-S112NL WHITE TAPE	IL92340	
SL-S113NL RED TAPE	IL92341	
SL-S114NL BLUE TAPE	IL92342	
SL-S115NL YELLOW TAPE	IL92343	
SL-S116NL GREEN TAPE	IL92344	
SL-S117NL PINK TAPE	IL92345	
SL-S118NL ORANGE TAPE	IL92346	
SL-S119NL SKY BLUE TAPE	IL92347	
SL-S120NL GRAY TAPE	IL92348	
SL-S121NL LETTUCE GREEN TAPE	IL92349	
SL-S123NL COBART BLUE TAPE	IL92350	
SL-S124NL NAVY BLUE TAPE	IL92351	
SL-S125NL AMETHYST TAPE	IL92352	
SL-S126NL MAHOGANY TAPE	IL92353	
SL-S110CNL CLEAR TAPE	IL92354	
SL-S153NL PET WHITE TAPE	IL92356	
SL-S154NL PET MATTE SILVER TAPE	IL92357	
SL-S141NL REFLECTIVE WHITE TAPE	IL92358	
SL-S145NL MACHINERY SURFACE WHITE TAPE	IL92359	
SL-S181PNL PAPER TAPE	IL92360	
SL-S193NL/UL WHITE TAPE	IL92361	
SL-S194NL/UL SILVER TAPE	IL92362	
SL-S190CNL/UL CLEAR TAPE	IL92363	

* This article shows the information on the label portion only.

Period