

Avery Dennison® OmniBrite™ S-9000 Series

Flexible Vinyl Retroreflective Sheeting for RF Welding

ISSUED: NOV 2020

Overview

Avery Dennison Omni-Brite S-9000 Series flexible vinyl sheeting is a multi-layer, microprismatic, retroreflective material ideal for RF welding. This visibility-enhancing material is designed for use on safety apparel and traffic cone sleeves. Avery Dennison Omni-Brite S-9000 Series features a unique micro-prismatic technology that increases daytime and nighttime visibility at all relevant angles and rotations. It has excellent flexibility for conformability to traffic cones and safety vests. Avery Dennison Omni-Brite S-9000 is suitable for conversion into garment safety tape compliant with the ANSI / ISEA 107- 2004 American National Standard for High-Visibility Safety Apparel and the European Standard EN471 and EN ISO 20471.

Availability

Series/Color

S-9000 White

S-9113 Fluorescent Yellow-Green

Compliance

International	ANSI/ISEA 107-2004 Sec 7.1	Europe	EN471, EN ISO 20471
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Avery Dennison recommends the user obtain the current requirements from their local governing agency to ensure product conformance.

Test Methodology

Performance

Abrasion : using a weight of 9kPa for 5,000 cycles of a woolen fabric per EN 530:1994, method 2	Retains greater than 100 cd/lx/m2 after testing
Flexing : at a temperature of 23C for 7,500 cycles per ISO 7854:1997, method A	Retains greater than 100 cd/lx/m2 after testing
Folding at Cold Temperatures : expose and fold at (-20+/-1) C for four hours per ISO 4675:1990	Retains greater than 100 cd/lx/m2 after testing
Temperature Variation : expose to a cycle at 50 +/- 2 C for 12 hours and immediately follow with a cycle at -30 +/- 2 C for 20 hours	Retains greater than 100 cd/lx/m2 after testing
Washing : Washed 50 times in accordance with ISO 6330:2000, method 2A.	Retains greater than 100 cd/lx/m2 after testing
Performance When Wet : expose to rainfall simulation	Retains greater than 100 cd/lx/m2 after testing
Dry Cleaning	Do not dry clean
Typical Film Caliper (w/out backing film)	10 to 12 mils

Converting

S-9000 may be converted into vest tape or cone sleeves using the following methods:

- RF Welding
- Screen printing

Substrates

Avery Dennison S-9000 Series sheeting is designed to be RF welded to varying vinyl backing films. Users are urged to carefully evaluate, under actual use conditions, any sheeting application to vinyls. Failure caused by other substrates, materials, contamination, or improper surface preparation is not the responsibility of Avery Dennison. Please refer to Instructional Bulletins for full details of substrate requirements.

Instructional Bulletins

Please refer to Instructional Bulletins which detail proper handling, storage, and converting of Avery Dennison retroreflective films, overlays, inks, and application tapes. Instructional Bulletins may be found in the Customer Tools section of our [website](#).



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Product Data Bulletin
Page 1 of 2

Table A

Minimum Coefficient of Retroreflection (R_A) $\text{cd}/\text{fc}/\text{ft}^2$ ($\text{cd}/\text{lx}^{-1}\cdot\text{m}^2$) (EN471, ANSI/ISEA 107-2004)			
Observation Angle	Entrance Angle	White	Fluorescent Yellow-Green
0.2°1(2°)	5°	530	725
	20°	330	600
	30°	215	380
	40°	70	190
0.33° (20°)	5°	510	380
	20°	300	340
	30°	200	250
	40°	60	150
1°	5°	65	70
	20°	40	65
	30°	30	57
	40°	15	31
1.5° (1° 30')	5°	22	23
	20°	15	21
	30°	12	15
	40°	6	10

Table B

Daytime color specification limits (EN471, ANSI/ISEA 107-2004 Sec 7.1)									
Colors	1		2		3		4		Luminance Factor Y
	x	y	x	y	x	y	x	y	
White	.303	.300	.368	.366	.340	.393	.274	.329	≥ 27
Fluorescent Yellow-Green	.387	.610	.356	.494	.398	.452	.460	.540	≥ 70

Warranty

WARRANTY

All statements, technical information and recommendations about Avery Dennison products are based upon tests believed to be reliable but do not constitute a guarantee or warranty. All Avery Dennison products are sold with the understanding that Purchaser has independently determined the suitability of such products for its purposes. Avery Dennison products are warranted to be free from defects in material and workmanship for either one year (or the period stated on the specific product information literature in effect at time of delivery, if longer) from date of shipment if said product is properly stored and applied. It is expressly agreed and understood that Avery Dennison's sole obligation and Purchaser's exclusive remedy under this warranty, under any other warranty, express or implied, or otherwise, shall be limited to repair or replacement of defective product without charge at Avery Dennison's plant or at the location of product (at Avery Dennison's election), or in the event replacement or repairs is not commercially practical, to Avery Dennison's issuing Purchaser a credit reasonable in light of the defect in the product. Avery Dennison's liability for defective products shall not exceed the purchase price paid therefore by Purchaser and in no event shall Avery Dennison be responsible for any incidental or consequential damages whether foreseeable or not, caused by defects in such product, whether such damage occurs or is discovered before or after replacement or credit, and whether or not such damage is caused by Avery Dennison's negligence. NO EXPRESS WARRANTIES AND NO IMPLIED WARRANTIES, WHETHER OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR USE, OR OTHERWISE (EXCEPT AS TO TITLE), OTHER THAN THOSE EXPRESSLY SET FORTH ABOVE WHICH ARE MADE EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, SHALL APPLY TO PRODUCTS SOLD BY AVERY DENNISON. AVERY DENNISON SPECIFICALLY DISCLAIMS AND EXCLUDES ALL OTHER SUCH WARRANTIES. NO WAIVER, ALTERATION, ADDITION OR MODIFICATION OF THE FOREGOING CONDITIONS SHALL BE VALID UNLESS MADE IN WRITING AND MANUALLY SIGNED BY AN OFFICER OF AVERY DENNISON.

