

PRODUCT DATA SHEET

Avery Dennison® V 8000 Reflective Films

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Introduction

Avery Dennison® V-8000 Series High Visibility Reflective Film is engineered to improve the day and night-time visibility of emergency response, utility, and construction fleets. V-8000 Series offers durable, vibrant daytime colors. At night, its bold, high-quality microprismatic retroreflective elements efficiently return

light at a wide range of angles. The single solid metallic layer construction simplifies application, and eliminates the requirement for edge sealing.

Colors: Avery Dennison® V 8000 Reflective Films are available in white, blue, green, red, fluorescent yellow-green and fluorescent orange as standard colors.

V-8000 meets the color and minimum luminance requirements for ASTM D4965, HOSDB and TSPESC Class B2.



Face Film

Vinyl Retroreflective Film with Microprisms



Adhesive

Permanent, pressure sensitive, clear acrylic



Backing

90# imprinted StaFlat



Durability

up to 7 years unprinted



Shelf Life

1 year from date of purchase

Conversion

Avery Dennison® V8000 Reflective films can be converted using a wide variety of conversion techniques including steel rule die-cutting, thermal die-cutting, flatbed Sign-cut or Drum Roller sign-cut. It can be Screen and inkjet printed (Latex, Mild/Eco solvent or UV)³. Always test suitability of V8000 prior to use. The digitally printed films are recommended to be protected using an overlamine (see Technical Bulletin 5.3).

For application and care instructions, please refer to Technical Bulletin 6.9.

³V-8000 White only

Recommendations

Medium to long term fleet marking. Application on metal and painted metal as well as on flat, simple curves. This does not include rivets.

Features

- » Single solid metallic layer construction: resists dirt and water penetration, dents and reflectivity loss
- » Omnidirectional prisms (unique for Avery Dennison): performs well on simple vehicle curves, facing any direction, creating high uniform brightness at night
- » Easy to handle and apply, conforms to simple curves
- » Withstands normal vehicle maintenance
- » Digitally Printable (V-8000 White only)

Physical Characteristics

Product	Test method ¹	Results
Caliper, laminate	ISO 534	533 – 660 µm
Dimensional stability	ASTM D4965	0.8 mm. max
Shelf life	Stored at 22° C/50-55 % RH	1 year from the date of purchase
Durability ² (years)	Vertical exposure - unpainted	
	white, blue, green, red	up to 7 years
	Fl. Yellow-green, Fl. Orange	up to 5 years

Specification limit

Avery Dennison V-8000 typical retroreflectivity performance is comparable to the following specifications:

ASTM Type IV	Global
Class 3	Europe

2 Base White and Fluorescent Yellow-Green sheeting only

Retroreflectivity

Typical minimum values for the coefficients of retroreflection (R_A)⁴ for V-8000. The values are shown at 0° orientation⁵.

	White	Blue	Green	Red	FL Yellow-Green	FL Orange
Observation Angle 0.2°						
Entrance angle 5°	400	30	120	80	425	175
Entrance angle 30°	200	15	70	35	175	80
Entrance angle 45°	80	5	40	10	75	25
Observation Angle 0.33°						
Entrance angle 5°	275	18	75	55	250	100
Entrance angle 30°	175	10	45	25	150	65
Entrance angle 45°	75	5	30	8	65	20
Observation Angle 0.5°						
Entrance angle 5°	125	12	40	25	115	50
Entrance angle 30°	100	8	25	18	90	30
Entrance angle 45°	50	4	15	8	45	15
Observation Angle 1.0°						
Entrance angle 5°	55	7	18	10	50	20
Entrance angle 30°	35	3	10	4	25	10
Entrance angle 45°	10	2	4	2	10	3

¹ R_A = candelas per lux per square meter (cd/lx/m²)

² As a datum for laboratory measurements 0° is identified in the crossweb direction.

Temperature range

Application temperature	Minimum: +16°C
Service temperature	-23° to +65° C

Chemical properties³

Solvent resistance	Applied to aluminium
Kerosene 10 minutes and Turpentine	No effect
Toluene, 1 minute Xylene and Methyl alcohol	No effect

NOTE: Materials have to be properly dried before further processing, for example laminating, varnishing or application. The residual solvents could change the products' specific features. For good print and converting result we recommend to let the rolls acclimatize in the print/lamination room at least 24h before printing or converting. Too much temperature or humidity deviation between material and room climate can cause layflatness and/or printability issues. Generally, constant material storage conditions of ideally 20°C (+/-2°C) /50% RH (+/- 5%), without too big climate deviations, will support a more robust and stable printing/converting process.

Important

Information on physical and chemical characteristics and values in this document are based upon tests we believe to be reliable and do not constitute a warranty. They are intended only as a source of information and are given without guarantee and do not constitute a warranty. Purchasers should independently determine, prior to use, the suitability of this material to their specific use.

All technical data are subject to change. In case of any ambiguities or differences between the English and foreign versions of this document, the English version shall be prevailing and leading.

1) Test methods: More information about our test methods can be found on our website.

2) Durability: The durability is based on middle European exposure conditions. Actual performance life will depend on substrate preparation, exposure conditions and maintenance of the marking. For instance, in the case of signs facing south; in areas of long high temperature exposure such as southern European countries; in industrially polluted areas or high altitudes, exterior performance will be decreased.

3) Prolonged immersion in gasoline and similar fluids is not recommended.

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