

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. Avery Dennison® 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.

Avery Dennison® V-8000 meets the color and minimum luminance requirements for DIN 30170 and HOSDB.



Face Film

Vinyl Retroreflective Film with Microprisms



Adhesive

Permanent, pressure sensitive, clear acrylic



Backing

90# StaFlat, Poly-Coated with Easy Apply™ technology



Durability

up to 7 years unprinted



Shelf Life

1 year from date of purchase

Conversion

Avery Dennison® V-8000 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 Avery Dennison® V-8000 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)
- » The Easy Apply™ technology helps prevent wrinkles and bubbles during application

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 Fl. Yellow-green, Fl. Orange	up to 7 years up to 5 years

Specification limit

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

DIN 30710

Germany

HOSDB (Home Office Scientific Development Branch)

Europe

Avery Dennison® recommends the user to obtain the current requirements from their local governing agency to ensure product conformance.

V-8000 Series meets the coefficients of retroreflection (RA) based on HOSDB specs shown below:

Minimum Coefficient of Retroreflection (RA) cd/lx/m ²							
Observation Angle	Entrance Angle	White	Blue	Green	Red	FL Yellow-Green	FL Orange
0.2	5°	350	25	-	60	300	160
	30°	150	12	-	25	150	80
	45°	40	3	-	7	33	18
0.33°	5°	150	10	-	25	80	80
	30°	60	4	-	10	60	50
	45°	30	2	-	5	16	20
0.5°	5°	110	7	-	20	50	45
	30°	60	3	-	10	20	20
	45°	20	1,3	-	3,6	9	8
1.0°	5°	9	1	-	2,5	8	8
	30°	6	0,75	-	1	6	4
	45°	3	-	-	-	2	2

Temperature range

Application temperature

Minimum: +16°C

Service temperature

-23° to +65° C

Chemical properties³

Solvent resistance

Applied to aluminium

Kerosene and Turpentine 10 minutes

No effect

Toluene, Xylene and 1 minute

No effect

Methyl alcohol

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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