# Avery Dennison<sup>®</sup> VisiFlex<sup>™</sup> V-8000 Series **High Visibility Reflective Film**

Issued: June 2019

Avery Dennison® VisiFlex™ V-8000 Series High Visibility Reflective Film is engineered to improve the day and nighttime visibility of emergency response, utility, and construction fleets. Highly reflective vehicle markings can improve detection and recognition, giving drivers more time to react safely and avoid a collision. Collision avoidance may help fleet managers contain costs through lower repair, maintenance, and insurance fees.

VisiFlex V-8000 Series offers durable, vibrant daytime colors. At night, its bold, high-guality microprismatic retroreflective elements efficiently return light at a wide range of angles. The single layer construction simplifies application, and eliminates the requirement for edge sealing.

Designed to be flexible, VisiFlex is purposely engineered for vehicle application, and offers excellent cutting and conformability for converters and installers.

## Features:

- Single layer construction does not require edge sealing
- Unique omnidirectional prisms not available in other products create high uniform • brightness at night
- Easy to handle and apply, conforms to simple curves •
- Withstands normal vehicle maintenance including pressure washing
- Digitally Printable<sup>1</sup>

### Finishes:

X 48" x 25 yard Rolls

## **Common Applications:**

Emergency Vehicles

Utility Vehicles

I Fleet

## **Product Availability:**

Code	Color	Durability (years)
V-8000	White	7 <sup>1</sup>
V-8005	Blue	7 <sup>1</sup>
V-8007	Green	7 <sup>1</sup>
V-8008	Red	7 <sup>1</sup>
V-8013	Fluorescent Yellow-Green	5 <sup>2</sup>
V-8014	Fluorescent Orange	5 <sup>2</sup>

<sup>1</sup>Durability in Middle East is 5 years <sup>2</sup>Durability in Middle East is 3 years

Thermal Die-cut Flat Bed Sign-cut Steel Rule Die-cut Drum Roller sign-cut

Latex Inkjet<sup>3</sup>  $\boxtimes$ UV inkiet<sup>3</sup>

Mild/Eco Solvent inkjet<sup>3</sup>

<sup>3</sup>V-8000 White only

**Conversion:** 

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Graphics and Reflective Solutions 7542 N. Natchez Ave Niles, IL 60714

Screen Print



Region: Europe



Face: Vinyl Retroreflective Film with Microprisms

Orientation: Omni-Directional

Durability: Up to 7 years

Vertical exposure only

Adhesive: Permanent **Pressure Sensitive** 

Performance:

See Page 2

Liner: 90 # polycoated

Application Surface\* Metal & Painted Metal: Flat, Simple Curves \*not for use on stainless steel or rivets

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# **Retroreflectivity:**

Typical values for the coefficients of retroreflection  $(R_A)^1$  for V-8000 are shown in Table A. The values are shown at 0° orientation<sup>2</sup>.

### Table A

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

# **Colors and Specification Limits:**

V-8000 meets the color and minimum luminance requirements for ASTM D4956, CAST (HOSDB) Publication #14/04, and TSPESC Class B<sup>2</sup>

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

ASTM Type IV	Global
Class IV	China
SABS Type III	South Africa
NFPA 1901	North America

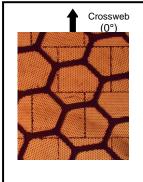
<sup>2</sup>Base White and Fluorescent Yellow-Green sheeting only

Avery Dennison suggests you obtain the current requirements from your local agency and ensure product conformance with such requirements. Your Avery Dennison Representative can assist you in this regard.

### Figure A

 ${}^{1}R_{A} =$ candelas per lux per square meter (cd/lx/m<sup>2</sup>)

<sup>2</sup> As a datum for laboratory measurements 0° is identified in the crossweb direction. See Figure A.



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#### IB 2.20 Converting Tips for Sign Films Screen Print IB 3.00

Number

IB 1.10

IB 1.20

Application Instructions of Avery Dennison Films	IB 4.00
Removal Instructions for Avery Dennison Cast, Calendered, Reflective, and Polyester Films	IB 4.10
Tips for Overlaminating, Premasking & Packaging Graphics	IB 5.50
Reflective Films on Stainless Steel	IB 6.11
V-8000 Quick Guide	IB 6.90

**Application Information:** 

The following Avery Dennison literature

Find the latest information on the Avery

www.graphics.averydennison.com. We

encourage you to check our website

Dennison website,

Subject

Preparation

periodically for updates.

Substrate Cleaning and

Storage, Maintenance and

Cleaning of PVC Films

Recommendations

application, storage, and other requirements.

provides information regarding proper



www.reflectives.averydennison.com

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## **Characteristics:**

Property	Requirement		V-8000 Series Typical Values			
Shelf-Life		NA	1 year from date of purchase when stored at the following conditions; 65°-75°F (18°-24°C) and 50% ± 5% R.H.			
Typical Film Caliper*Includes liner		NA	21 – 26 mils (533 – 660 μm)			
Min. Application Temperature	NA		60° F (16° C)			
Service Temperature	NA		-10°F to +150°F (-23°C to + 65°C)			
Peel Adhesion PSTC-2 12in/min, 90° peel angle	rate	Prepainted Panel	2.7 lb-f/in (0.47 N/mm)			
	Substrate	Stainless Steel	5.5 lb-f/in (0.96 N/mm)			
Dimensional Stability ASTM D4956	Less than 1/8" change on 9x9 panel		Pass			
Flexibility ASTM D4956 Wrap around 0.125" mandrel @ 32°F (0°C)	No C	racking	Pass			
High Pressure Wash Test 45° angle, 1200 psi, 8 inch distance	lift, cr	elamination, edge acking, or water tration	Pass			
Adhesion ASTM D4956 0.79kg 90° hanging weight	Less than 2" movement		Pass			
Chemical Resistance LS300C Immersion in diesel fuel, xylene/mineral spirits mixture	color	oftening, dulling, change, or sion loss	Pass			
Corrosion Resistance .1NaOH solution immersed for 1 hr	red ru delan	hite corrosion, ust, discoloration, nination, flaking, king, cracking, or ring	Pass			
Impact Resistance Room Temp ASTM D4956 Impact with 10 in-Ib force and 5/8 inch tip at room temperature	No damage outside impact area		Pass			

Region: Europe

#### Warranty:

This Warranty applies to the Product listed in this Data Sheet. All statements, technical information (including physical and chemical characteristics) 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 subject to the Purchaser's assent and agreement that Purchaser is responsible for, and has independently determined, the suitability of such products for its purposes or its customer's purposes. Avery Dennison reflective products are warranted to be free from defects in material and workmanship for one (1) year from the date of manufacture, unless stated otherwise in the applicable product data sheet.

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#### Definitions:

Durability: means that the Product used in a finished graphic, panel or sign situated outdoors, subject to the limitations herein and Avery Dennison Product Data Sheets and Instructional Bulletins, and applied to recommended surfaces, will not deteriorate excessively such that the finished sign, panel or graphic is inelfective for its identification when viewed under normal conditions from the intended viewing distance.

**Vertical Exposure:** means that the face of the finished graphic is  $\pm 10^{\circ}$  from vertical.

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