



PROTECT AND PRESERVE THE INTEGRITY OF ELECTRONIC COMPONENTS

Harsh under-hood and under-carriage conditions can threaten the reliability of high-value electronic components like control units, sensors, actuators and motors. GORE® Automotive Vents improve component reliability and longevity. They allow continuous flow of air and gases, to equalize pressures and protect enclosure seals. They also protect electronics by blocking entry of contaminants like water, automotive fluids, salts, dirt and mud. As a qualified automotive partner, Gore delivers advanced venting technologies in weldable, snap-fit and adhesive constructions, to fit any application.

GORE® Automotive Vents for adhesive installation

Our low-profile, lightweight adhesive vents are the perfect fit for your small, densely-configured electronics. They install easily, bond securely, provide lasting hydrophobic and oleophobic protection, and have excellent roll-off to maintain airflow. Choose from multiple sizes and configurations, or ask our engineering team to help you identify the best fit for your application:

- **High Durability Series:** These 100% ePTFE all-membrane vents provide our highest level of protection and durability in the harshest conditions. Designed to perform reliably in either outside-mount or inside-mount applications. For outside mounting, use of a target frame is recommended. A range of sizes, for small to medium enclosures.
- **High Airflow Series:** These laminate vents provide our highest airflow, for faster pressure equalization. Designed for inside mounting only. A choice of sizes, for small to medium enclosures.

Sustained protection for electronics,
with the attributes you asked for:

- **Streamline your inventory:** Our versatile portfolio offers the sizes, airflow and WEP resistance to suit all your applications.
- **Simplify component design:** These lightweight, low-profile vents fit in the tightest spaces.
- **Support high-volume production:** Our durable silicone adhesive bonds securely in automated installation.
- **Enable continued reliability:** Our high roll-off, thermally-stable and chemically-resistant membrane is designed for sustained venting performance.

High Durability Series: Outside or Inside Mount


Product Name (order number for samples)	AVS 2475	AVS 2485	AVS 2455	AVS 2515	AVS 2555
Product Number (order number for series production)	AVE230206	AVE230408	AVE230610	AVE230814	AVE230919
Product quantity/form	6000 pcs./roll	5000 pcs./roll	5000 pcs./roll	4000 pcs./roll	3000 pcs./roll



Product Performance Characteristics

Main vent functionality	Our highest level of protection and durability in the harshest conditions				
Minimum Water Entry Pressure (WEP) ¹ for properly-installed part	≥ 600 mbar/30 sec				
Minimum airflow ² for GORE Membrane material for properly-installed part	7.8 l/h/cm ² @ 70 mbar 0.2 l/h @ 70 mbar	7.8 l/h/cm ² @ 70 mbar 1.0 l/h @ 70 mbar	7.8 l/h/cm ² @ 70 mbar 1.8 l/h @ 70 mbar	7.8 l/h/cm ² @ 70 mbar 3.9 l/h @ 70 mbar	7.8 l/h/cm ² @ 70 mbar 4.8 l/h @ 70 mbar
Typical airflow ² for GORE Membrane material for properly-installed part	12 l/h/cm ² @ 70 mbar 0.4 l/h @ 70 mbar	12 l/h/cm ² @ 70 mbar 1.5 l/h @ 70 mbar	12 l/h/cm ² @ 70 mbar 2.8 l/h @ 70 mbar	12 l/h/cm ² @ 70 mbar 6.0 l/h @ 70 mbar	12 l/h/cm ² @ 70 mbar 7.4 l/h @ 70 mbar
Operating temperatures	T _{min} = -40 °C T _{max} = +150 °C				
Membrane characteristic	Hydrophobic and oleophobic				
Membrane type	100% ePTFE (AM2XE)				
Membrane construction	All-membrane, without backing material				
Pressure-sensitive adhesive	AD103 Silicone				
Housing size	Small to Medium				
Housing material	All typical metal and plastic housing materials				
Vent installation and mounting recommendations	Designed for automated installation. Use of a target frame is recommended.				

Design & Dimensions

Vent diameter		ID = 2.00 mm OD = 5.70 mm	ID = 4.00 mm OD = 8.00 mm	ID = 5.50 mm OD = 10.00 mm	ID = 8.00 mm OD = 14.00 mm	ID = 8.89 mm OD = 19.05 mm
Vent thickness	0.30 mm					

Environmental Performance

GORE® Automotive Vents for adhesive installation have been extensively tested according to the following performance standards. Please contact your Gore representative for more detailed information.

Thermal Shock Resistance Test

Vent durability under changing temperature conditions

METHOD: ISO 16750-4

TEST CONDITIONS:

- cycling temperatures between T_{min} and T_{max} within 30 seconds
- 30 minutes conditioning at each temperature
- minimum 200 cycles

Ice-Water-Shock Resistance Test

Vent resistance to repeated thermal shock by submersion in ice water

METHOD: ISO 16750-4


TEST CONDITIONS:

- heating to +125 °C for 60 minutes
- rapid submersion in 5% NaCl ice water for 5 minutes
- 20 cycles

1. WEP (Water Entry Pressure) Resistance: WEP Resistance measures how much pressurized water a membrane can withstand before it leaks. It is measured at standard ambient temperature and pressure.

2. Measured at standard ambient temperature and pressure. This is a calculated value from material airflow.

High Airflow Series: Inside Mount Only

AVS 252S	AVS 254S
AVE930307	AVE930610
5000 pcs./roll	5000 pcs./roll
	
Faster pressure equalization from our highest airflow	
≥ 600 mbar/30 sec	
65.5 l/h/cm ² @ 70 mbar 4.6 l/h @ 70 mbar	65.5 l/h/cm ² @ 70 mbar 15.5 l/h @ 70 mbar
73.0 l/h/cm ² @ 70 mbar 5.1 l/h @ 70 mbar	73.0 l/h/cm ² @ 70 mbar 17.3 l/h @ 70 mbar
T _{min} = -40 °C T _{max} = +150 °C	
Hydrophobic and oleophobic	
ePTFE/PET (LM9XX)	
Laminate, with backing material	
AD103 Silicone	
Small	Medium
All typical metal and plastic housing materials	
Designed for automated installation. Inside mount only	
ID = 3.00 mm OD = 7.00 mm	ID = 5.50 mm OD = 10.00 mm
0.30 mm	

Environmental Performance (continued)

Fluid Resistance Test

Vent protection against typical automotive chemical loads

METHOD: ISO 16750-5

Product performance depends on application method (i.e., cotton cloth, brush, spray, immersion, pouring) and the specific contaminant applied.

Climate Resistance Test

Vent durability in hot, humid environments

METHOD: DIN-EN-60068-2-67

TEST CONDITIONS:

- 85 °C temperature
- 85% relative humidity
- 1,000 hours

Salt Spray Resistance Test

Vent resistance to salt, water and mist over an extended period

METHOD: ISO 16750-4

TEST CONDITIONS:

- according to IEC 60068-2-52
- severity level 5 (equals a four-week test period)

Storage and Handling Recommendation

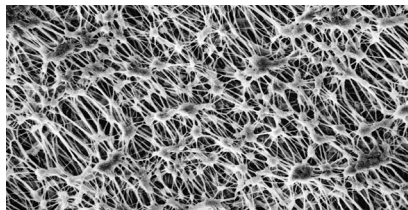
Storage	Recommended Storage Range
Humidity	10-90% rH (Nominal storage humidity is 50% rH)
Temperature	5-40 °C (Nominal storage temperature is 22 °C)
Duration	< 12 months

Why the GORE Membrane matters

Only GORE® Automotive Vents incorporate the performance benefits of the GORE Membrane. Made of expanded polytetrafluoroethylene (ePTFE), it's engineered with billions of pores. These pores are 700X larger than an air molecule, to ensure reliable airflow and pressure equalization. Yet at 20,000X smaller than a drop of water, these pores effectively block entry of liquids, dirt and debris.

The GORE Membrane is:

- chemically inert
- non-shedding
- UV-resistant
- temperature-resistant
- hydrophobic and oleophobic



The GORE Membrane
magnified 40,000 times

What GORE® Automotive Vents can offer you

GORE® Automotive Vents deliver innovative technology, backed by decades of research and testing. Our product portfolio has proven itself in the harshest environments: literally billions of our vents have been installed in automotive applications worldwide. Today, virtually every global OEM trusts GORE® Automotive Vents to extend the reliability and longevity of their exterior lighting, electronics and powertrain products and assemblies.

Our vents have been engineered with varied properties to fit in any automotive application. With technical support and testing centers in the US, Germany, Japan and China, our application engineers are easily accessible — and ready to work in close partnership with your design team, from product concept through manufacturing integration.

Contact Us

To discuss options and solutions for your newest application, call your local Gore representative or send your inquiry from our website: gore.com/autovents

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