

MORE RELIABLE MEMS SENSORS. HIGHER YIELDS. FASTER MARKET ENTRY.

Gore's customizable membranes and adhesives help OEMs accelerate the development of higher-accuracy, higher-reliability open port MEMS sensors, and help OSAT firms increase manufacturing efficiency and yields. Our global membrane team ensures rapid sampling and technical support through development, installation, handling and use.

Performance Advantages



Particle Shielding

Increase yields and control costs with reliable particle and contamination protection in SMT process and during end-use.



Ingress Protection

Enable ingress protection up to IP68 lifetime component-level protection, depending upon materials set.



Superior Gas Diffusion

Maintain fast and reliable sensor response time with consistent, high-quality membranes in compact designs.



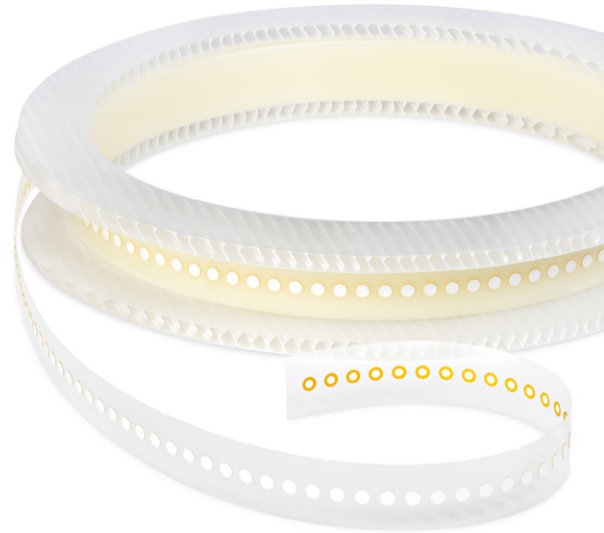
Excellent Reflow Capability

Stand up to high temperature soldering (according to JEDEC) without compromising material integrity or sensor function.



Manufacturing efficiency

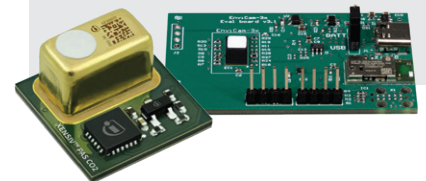
Supports high-volume production with proven durability and flexible form factors for seamless integration into diverse designs.



Applications

For MEMS open-port sensors including:

- Gas sensors
- Humidity sensors
- Pressure sensors
- Ultrasonic sensors
- Lidar sensors



A Customizable Portfolio

Tailor membrane and adhesive selection to your design-and-build requirements. Choose from six membranes and three adhesives according to your reflow, diffusion, protection or other technical requirements.

Product Number	Membrane Type/ Characteristic	Membrane Color	Diffusion (Response Time)	Ingress Protection	Mechanical Stability
Reflow-capable (according to JEDEC)					
MSM311	Oleophobic	Black	●	● ● ●	● ● ●
MSM321	Oleophobic	White	● ●	● ● ●	● ● ●
MSM331	Oleophobic	White	● ● ●	● ● ●	● ●
MSM341*	Oleophobic	White	● ● ●	● ●	●
MSM381**	Hydrophobic	White	●	● ●	●
Non-reflow					
MSM221	Oleophobic	White	● ●	● ●	● ●
MSM231	Oleophobic	White	● ● ●	● ●	● ●

* Highest relative diffusion rate material

** Ideal for photoacoustic sensor (PAS) applications

Product Number	Adhesive Material	Bond Strength
Reflow-capable (according to JEDEC)		
MA321	Silicone	●
Non-reflow		
MA223	Silicone	● ● ●
MA212	Acrylic	● ●

KEY

Good



Better



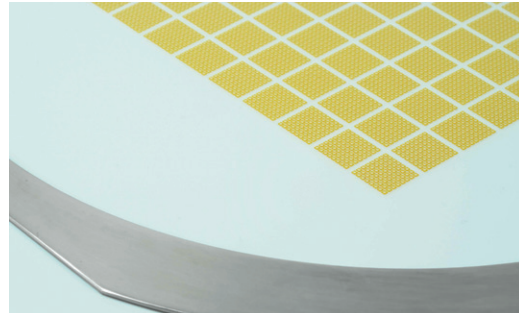
Best



Product Characteristics and Configurations

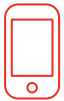
This product is available in a wide range of customizable shapes and dimensions, with a minimum outer diameter (O.D.) of 1.0 mm. Its characteristics—such as temperature resistance and thickness—vary depending on the selected material, offering flexibility to meet diverse application requirements. Users can combine membrane properties and adhesive types to create tailored configurations that suit your specific application requirements.

For high-volume manufacturing, the product is offered in reel packaging compatible with pick-and-place equipment, or on wafers for alternative processing methods. Contact us to explore how we can support your unique design and performance goals.



Why Gore?

We can work in partnership with you to simplify and accelerate your sensor development processes.



Application Leadership

Gore is a pioneer in MEMS protection, based on our market, material and manufacturing expertise.



Reliable Product Performance

OEMs and their suppliers worldwide know they can rely on our highly consistent, high-quality membrane material sets.



Supply Chain Security

With global R&D and manufacturing resources, we can customize to your specs, and scale to meet the demands and deadlines of high-volume, fast-ramp programs.



Global Support

Our local sales and global technical support enable fast and customized sampling, and effective consultations on materials selection, sensor design and manufacturing integration.

Contact Us

Our knowledgeable team of sensor application experts is standing by to assist you throughout the product selection and integration process. Whether you're evaluating materials, configuring dimensions, or optimizing performance for your specific application, we provide personalized guidance to help you make informed decisions.

Contact us to discuss your requirements and learn how we can support your project with expert technical insight.

Gore Performance Solutions Division

Gore's Performance Solutions Division address complex product and process challenges in a variety of markets, including aerospace & defense, automotive, industrial, electronics, semiconductor and more. By focusing on collaboration and innovation, Gore partners with customers to design their products and processes to be safer, cleaner, more productive, reliable, durable and efficient across a wide range of demanding environments.

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GORE® MEMS Sensor Membranes are manufactured under the generic industrial ISO 9001 quality system and the ISO 14001 environmental management system. No other certifications can be provided by Gore for these products.

Gore monitors and strives to comply with all regulations applicable to our products. We have worked with our suppliers to eliminate PFOA from our supply chain. Our products meet EU REACH regulations EU 1907/2006 and EU 2019/2021.

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INTERNATIONAL CONTACTS

Europe / Middle East / Africa

**W. L. Gore & Associates GmbH
(Germany)**

T +49 89 4612 2211

E protectivevents@wlgore.com

Asia Pacific

**W. L. Gore & Associates
(Korea) Ltd.**

T +82 2 393 3411

E performancesolutions@wlgore.com

China

**W. L. Gore & Associates
(Shenzhen) Co., Ltd.**

T +86 21 5172 8299

E info_china@wlgore.com

Americas

W. L. Gore & Associates, Inc.

401 Airport Road, Elkton, MD 21914, U.S.

T +1 410 506 7812 (USA) **E** protectivevents@wlgore.com

gore.com

