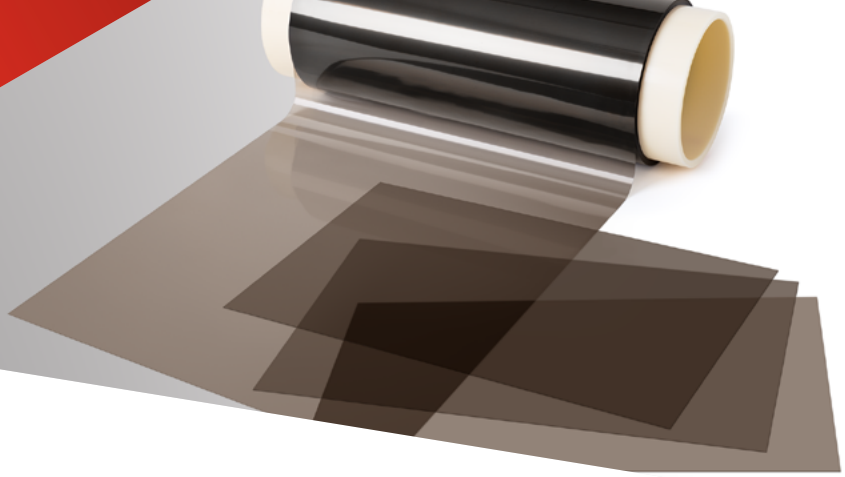
Gore Electrolysis Technologies



GORE® PEM FOR WATER ELECTROLYSIS

The global clean energy transition requires scaling up water electrolysis to meet commercial demand. However, electrolysis requires a lot of energy to run, which can make it expensive. Therefore, one of the key challenges in achieving a lower Levelized Cost of Hydrogen (LCOH) is to design reliable and scalable electrolyzers while cutting hydrogen production costs.

PEM electrolysis cells:

- Can operate effectively and adapt quickly to variable power levels, making them suitable for intermittent, renewable energy sources.
- Have low gas cross-over even at low current densities, allowing a wide operating range and enabling continuous, safe hydrogen production.
- Are more compact, enabling higher overall system design flexibility through pressurized operation and higher hydrogen purity.

Gore's world-leading fuel cell legacy

- 25+ years' PEM experience, producing millions of square meters of ePTFE-reinforced PEM powering a wide variety of applications.
- Established quality consistency and process stability greatly reduces the risk of random failure, low process yields, and quality defects.
- Multiple global production lines ensure supply security and minimize risk.
- PEM production capacity to support up to 20 GW water electrolysis systems.
- Vertical integration with our R&D facilities and enterprise-wide analytical and testing capabilities.
- Strategic partnerships assuring priority access to critical raw materials.

GORE PEM M275.80

Physical Characteristics	
Thickness[1] [µm]	80
Tensile strength[1] in Machine Direction [MPa]	55
Tensile strength[1] in Transverse Direction [MPa]	55
Proton resistance[2] [mOhcm²]	57
H_2 permeance[3] [mA/cm²/MPa]	7
Roll Properties	
Standard roll widths [mm]	320, 400, 580
Length [m]	100
Orientation	Product in roll form is shipped with the membrane anode side facing outwards
Quality Assurance	
Product visual inspection for defects	100% automated
Clean room standard ISO 14644-1	Class 7 (Class 10,000)

1. Measurements taken with membrane conditioned to 23 °C, 50% relative humidity (RH).
2. Proton resistance measurements taken by high frequency resistance method. Membrane impedance taken at zero imaginary impedance, at 80 °C and 100% RH.
3. Hydrogen permeance measurements taken by cyclic voltammetry (CV), at 80 °C and 100% RH.

Together, improving life

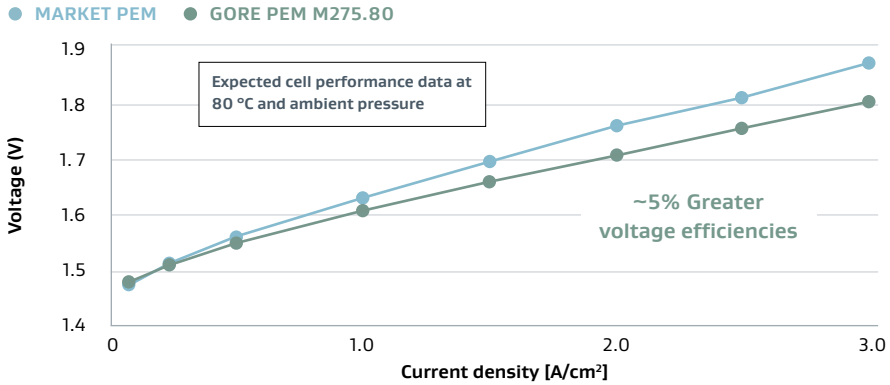
Samples

Type	Part Number	Dimension	Quantity
Sample in sheet form	GFCA0113	450 mm (L) x 280 mm (W)	5 sheets per box
Sample in roll form	GFCB0374	10-45 m (L) x 580 mm (W)	1 roll

Please contact Gore if you require samples in a customized dimension.

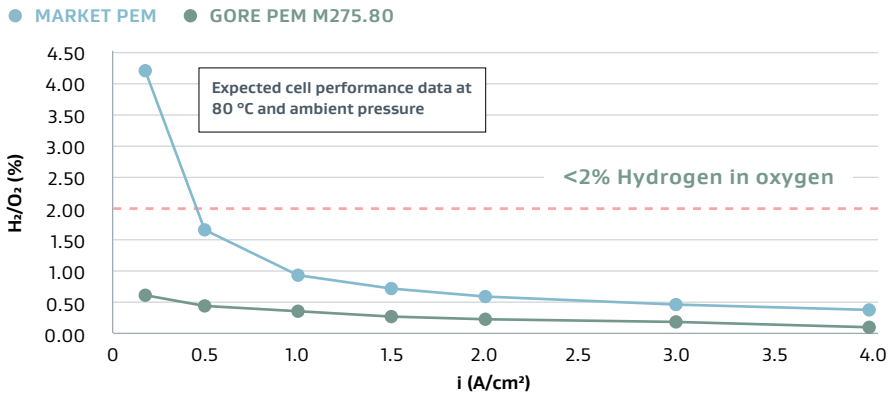
Optimizing performance, safety & durability — without compromising output

Increased performance



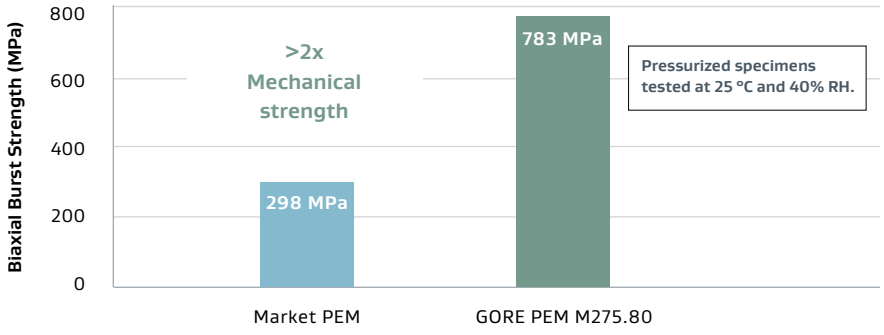
Gore's PEM offers **~5% greater MEA voltage efficiencies** over other PEM while meeting safety & durability requirements.

Improved safety



Gore's additive technology enables **<2% hydrogen in oxygen concentrations** over a wide operating range — even at low ampere/current densities.

Longer system life



Gore's reinforced membrane offers **>2x higher mechanical stability** than non-reinforced membranes for extended system durability and reduced service intervals.

Breaking performance barriers with our advanced PEM technology

Unique perfluorinated ionomer

High proton conductance + high voltage efficiency for **increased performance**

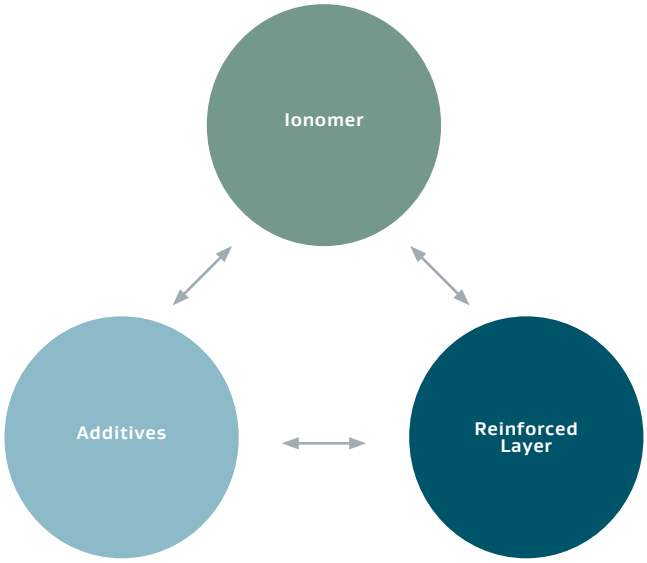
Advanced additive technology

Greater chemical durability + reduced H_2 crossover for **increased durability and safety**

Proprietary ePTFE-reinforced layer

Enabling thin, highly conductive, mechanically + chemically durable membranes for **increased durability and performance**

In case of questions, **please contact a Gore representative.**



Gore's Sustainability Commitment

Gore emphasizes eco-friendly and safe manufacturing processes, guided by ISO 14001, avoiding PFOS/PFOA, and incorporating waste management practices like precious-metal recovery, ePTFE recycling, and multiple waste-reduction streams. Our products comply with REACH and RoHS standards, and do not emit PFOS/PFOA during use.

For more information, please visit **gore.com/about/responsible-enterprise**

About Gore

W. L. Gore & Associates is a global material science company dedicated to transforming industries and improving lives. The organization is committed to accelerating the world's transition to clean energy by leveraging the potential of hydrogen. As the market leader in Proton Exchange Membranes (PEM) and through successful collaborations with key fuel cell OEMs including Hyundai and Toyota, W. L. Gore & Associates possesses the technical and production capabilities to drive PEM Water Electrolysis into the commercial mainstream.

For more information, please visit **gore.com/alt-energy**

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