



## **PEMION® FUEL CELL OFFERINGS:** **Catalyst Coated Membranes / Membrane Electrode Assemblies**

**2386 East Mall - Suite 111  
Vancouver, BC Canada  
V6T 1Z3**

# CCMs / MEAs

## Catalyst Coated Membranes / Membrane Electrode Assemblies

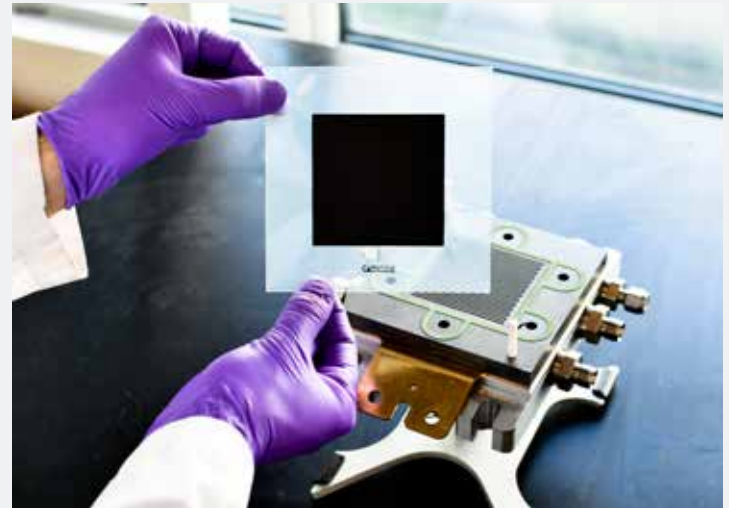
Ionomr Innovations provides ion-exchange materials and core components for polymer electrolyte membrane fuel cells as a convenient assessment tool for evaluation and integration of its proton exchange membrane and ionomer technologies:

### Catalyst coated membranes

In standard and custom sizes coated with standardized catalyst layers

### Membrane electrode assemblies

In standard and custom sizes in multi-layer configurations comprising standardized catalyst layers, framing materials, and gas diffusion layers.



### Hydrogen Fuel Cell CCMs

- Active area:** 5, 25, 50 cm<sup>2</sup>  
Custom configurations up to 450 cm<sup>2</sup>
- Membranes:** PF1-HLF8-15-X
- Ionomers:** SSC PFSA  
Pemion PP1-HNN8-00-X  
**(coming soon)**
- Catalysts:** 0.4 mg/cm<sup>2</sup> total Pt/C  
0.3 | 0.1 mg/cm<sup>2</sup>  
Cathode | Anode
- H<sub>2</sub> Crossover:** < 2 mA/cm<sup>2</sup> (ambient)  
< 6 mA/cm<sup>2</sup> (150 kPag)

### Hydrogen Fuel Cell MEAs

- 3-layer:** A Pemion® membrane coated with standard anode and cathode catalyst layers
- 5-layer:** The aforementioned CCM, with framing materials affixed to both sides
- 7-layer:** A CCM with frames, as well as gas diffusion layers (GDLs) affixed to both sides

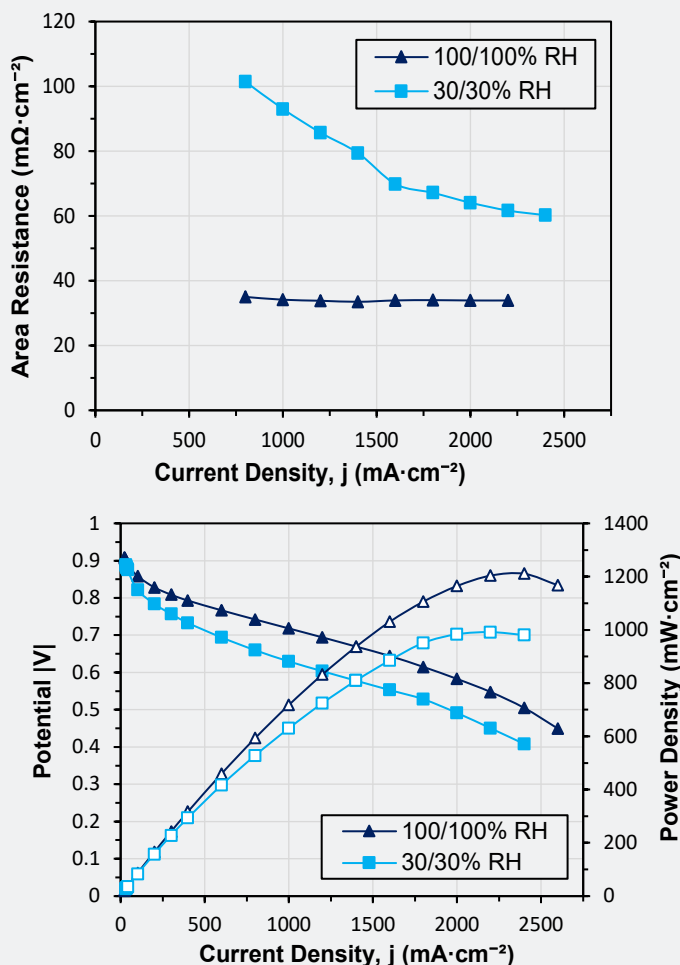


Figure 1. Performance and area resistance reference data for a 5-layer PF1-HLF8-15-X MEA, 150 kPag, under H<sub>2</sub>/Air at 80 °C

# DOCUMENT CHANGE HISTORY

Document ID	Document ID		
FM-7041-A	Pemion Catalyst Coated Membranes and Membrane Electrode Assemblies		
Revision	Prepared By	Approved By	Effective Date
A	Omid Toussi	Ben Britton	<b>Nov 30, 2021</b>

This document is reviewed to ensure its continuing relevance to the systems and process that it describes.

## REVISION HISTORY:

Revision	Date	Description of Changes	Approved By
A	Nov 30, 2021	Initial Draft	Bill Haberlin