

**Technical Data Sheet for ePTFE Reinforced AEM
 (20 microns thick, Pt Impregnated) for Alkaline Fuel Cells**

NO.	Item		Results
1	Test Date and Product Lot Number		05/21/2025 and A250516
2	Thickness		20±1.5 micrometers (per proprietary internal method)
3	Aerial Weight		~38.5 g/m ² (per proprietary internal method)
4	Swelling Ratio	MD	~1% (per proprietary internal method)
		TD	~2.5% (per proprietary internal method)
		ZD	~22% (per proprietary internal method)
5	Water Absorption	~15-20% (per proprietary internal method)	
6	Tensile Strength	MD	~30 MPa (per proprietary internal method)
		TD	~26 MPa (per proprietary internal method)
7	Modulus of Elasticity	MD	~56 MPa (per proprietary internal method)
		TD	~40 MPa (per proprietary internal method)
8	Elongation at Break	MD	~81% (per proprietary internal method)
		TD	~84% (per proprietary internal method)
9	Ion Exchange Capacity	~1.7-2.1 mmol/g	
10	Membrane Surface Conductivity ¹	Cl ⁻ (Chloride)	~13.1 mS/cm at 25 deg °C (per proprietary internal method)
		HCO ₃ ⁻ (Bicarbonate)	~9.5 mS/cm at 25 deg °C (per proprietary internal method)
11	Membrane surface resistance ²	1M NaCl	~0.159 Ω.cm ²
		0.5M KOH	~0.097 Ω.cm ²



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Notes: 1) Membrane sample was submerged in 2M NaCl and 2M KHCO₃ at 80 °C for 24 hr before testing. 2) Membrane sample was submerged in 1M NaCl and 0.5M KOH at 80 °C for 24 hr before testing.

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