

LINQCELL VRB-AEM50



50- μ m Anion Exchange Membrane for Redox Flow Batteries

- Low ohmic resistance ($<0.5 \Omega \cdot \text{cm}^2$)
- Excellent oxidative stability and chlorine resistance
- Optimized for standard vanadium redox flow battery electrolytes

LINQCELL VRB-AEM50 is a 50- μ m partially fluorinated anion exchange membrane without reinforcement. It has low ohmic resistance, excellent mechanical properties, low water uptake, and minimal dimensional swelling. VRB-AEM50 has high oxidative stability, resists chlorine, and remains stable in acidic environments ($\text{pH} > 4$). The recommended operating temperature is from room temperature to 50 $^{\circ}\text{C}$.

LINQCELL VRB-AEM50 is highly suitable for electrochemical applications that require exceptional oxidative stability and chlorine resistance, such as redox flow batteries operating with very harsh, aqueous acidic solutions. For optimal performance, use **VRB-AEM50** in strongly acidic conditions ($\text{pH} < 3$) or with standard vanadium redox flow battery electrolytes.

Specifications

Property	Value	Unit
General Properties		
Appearance	Transparent film	–
Initial Form	Dry film with no counter-ions	–
Backing Film	Polyethylene terephthalate (PET)	–
Physical Properties		
Thickness	50 (± 6)	μm
Tensile Strength at 23 $^{\circ}\text{C}$, 50% RH	>30	MPa
Elastic Modulus at 23 $^{\circ}\text{C}$, 50% RH	>750	MPa
Other Properties		
Area-specific Resistance in 0.5 M H_2SO_4	0.5	$\Omega \cdot \text{cm}^2$
Ion Selectivity at 25 $^{\circ}\text{C}$ (0.1/0.5 m KCl)	>90	%
Swelling Ratio in 2 M H_2SO_4 , 25 $^{\circ}\text{C}$	<0.16	–

Storage and Handling

Keep the **LINQCELL VRB-AEM50** membrane sealed until ready for use. The membrane requires no pretreatment and should be used immediately after opening. Carefully separate it from the backing layer. Use gloves and handle gently to avoid punctures, creases, or scratches, as these may cause leaks.

Europe

Industrieweg 15E,
1566JN Assendelft
The Netherlands
Phone: +31 (20) 893 2224
Email: info@caplinq.com

Canada

80 Sirocco Crescent
Ottawa ON, K2S 2C9
Canada
Phone: +1 (613) 482-2215
Email: info@caplinq.com



North America

36927 Schoolcraft Rd
Livonia, MI 48150
United States
Phone: +1 (313) 558-8243
Email: info@caplinq.com

South East Asia

S-08-07 Persiaran Triangle
B Lepas, Penang 11900
Malaysia
Phone: +60 (12) 4302223
Email: info@caplinq.com