

## **CREATION THROUGH SEPARATION**



# **An Anion Exchange Membrane for Anion Exchange Membrane Water Electrolysis and Redox Flow Batteries**



### **Features**

- Anion options: AMWE-1091, AMWE-1060
- Available in various polymers and thicknesses
- High selectivity and high handling properties
- Used as an AEM separator

# Comparison between FORBLUE™ SELEMION and Conventional Ion Exchange Resin

Property	FORBLUE SELEMION	Conventional Resin
Feature		
	Film-like membrane	Stack of ionic particles with binder resin
Ion Transport Path	Amorphous phase of film	Connection of the ion exchange particles
Ion Selectivity	High	Low
Thickness	Thin	Thick
Resistance	Low	High
Strength	Tough	Brittle

# Catalyst Layer CATHODE AEM $4H_2O + 4e^{\circ}$ $\rightarrow 2H_2 + 4OH^{\circ}$ Gas Diffusion Layer $H_2O$ (Electrolyte) $H_2O$ (Electrolyte)

# **AEMWE Principle**

Anion Exchange Membrane Water Electrolysis

# **Commercial FORBLUE™ SELEMION Grades**

Property	AMWE-1091	AMWE-1060
Usage	CO <sub>2</sub> reduction, Electrolysis	CO <sub>2</sub> reduction, Electrolysis
Counter Ion	CI	Cl
Thickness	100 μm	95 μm
Burst Strength	250 kPa	150 kPa
Resistance*	0.30 Ωcm²	0.15 Ωcm²

\*at 1N KOH 25°C





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