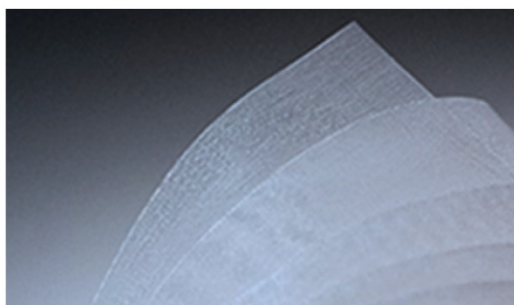


A Cation Exchange Membrane for Proton Exchange Membrane Water Electrolysis

Features

- Sulfonic fluoropolymer single-layer membrane
- High chemical resistance
- High mechanical strength
- Can be reinforced by special PTFE fabric
- Easy to handle
- High ion exchange capacity
- Very low resistance with high ion selectivity

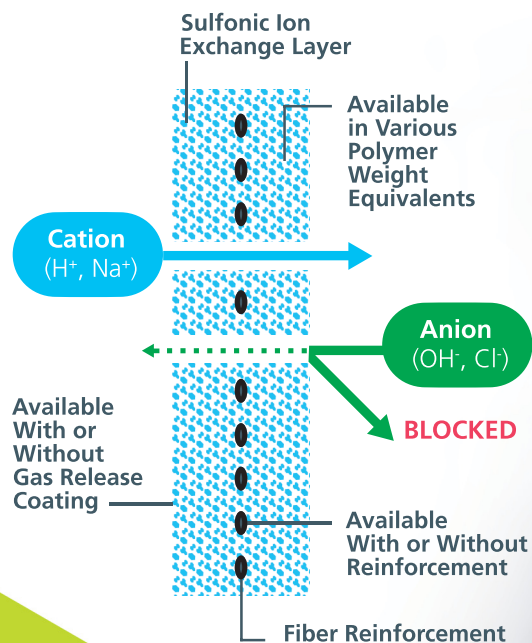


FORBLUE™ S-SERIES Grades

Property	Unit	Sx-1235DH	Sx-0935DH
Counter Ion		H ⁺	H ⁺
Dry / wet		Dry	Dry
Thickness ^{*1}	μm	140	90
Ion Exchange Capacity	meq/g	1.25	1.25
Characteristics		Reinforcement	Reinforcement

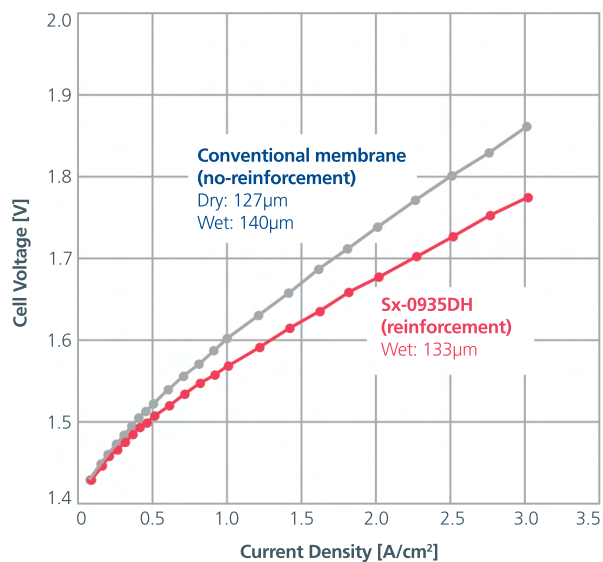
*1 Thickness = Values are test data, without guarantee. DH data shows dry state thickness and WN data show wet state thickness.

*2 Moisture content of polymer item = Evaluated the value after replacing the counter ion to H⁺ and immersion in water, 100°C, 1 hr.



Performance of Sx-0935DH

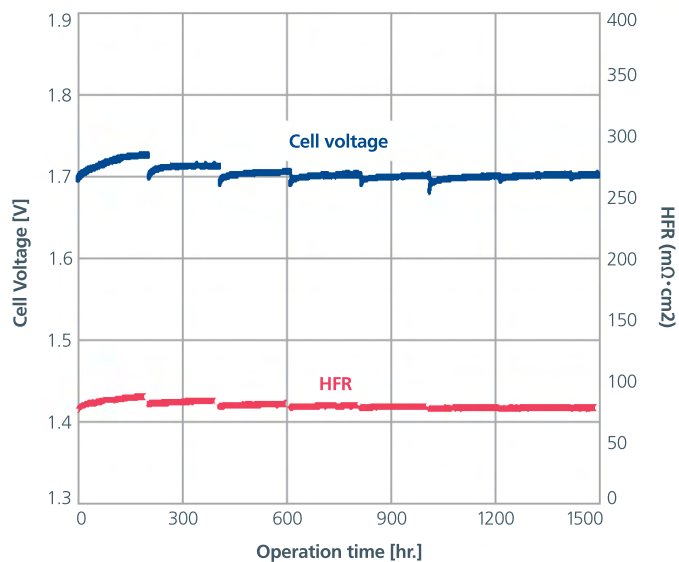
Lower cell voltage compared to conventional membrane



Anode: 1 mg_{Ir}/cm², Cathode: 0.4 mg_{Pt}/cm²,
Active area: 25 cm², Temperature: 80°C

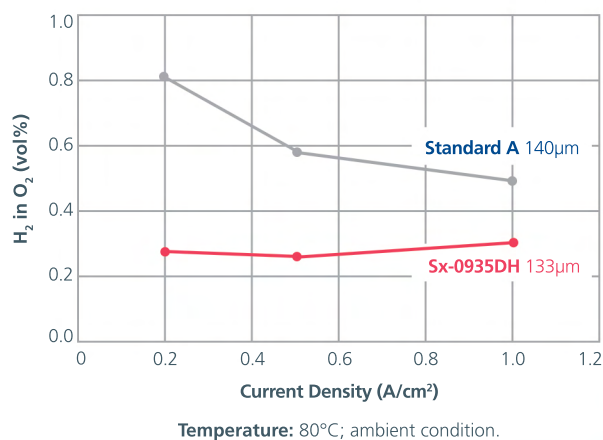
Performance Stability

Stable performance in 1500 hrs of operation



Anode: 1 mg_{Ir}/cm², Cathode: 0.4 mg_{Pt}/cm²,
Active area: 25 cm², Temp.: 60°C, Current Density: 2A/cm²

Gas Crossover Comparison



Temperature: 80°C; ambient condition.

The data are presented without any guarantee or warranty, express or implied.



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