Eata Battery

Thin Perfluorinated Ionomer for DMFC (PI-120)

Catlog Number: FCEM-0034

Description

A thick 120μm PFSA membrane designed specifically for Direct Methanol Fuel Cells (DMFC) to minimize methanol crossover while maintaining proton flux.

Basic Information

Polymer/Material Base: High-EW PFSA

Ion Exchange Capacity (IEC): 0.90 - 1.00 meq/g

Ionic Conductivity (S/cm): 0.06 - 0.09 (at 60°C)

Thickness (μm): 120 - 130

Tensile Strength (MPa): 25 - 35

Elongation at Break (%): 250 - 350

Water Uptake (%): 15 - 25

Swelling Ratio (%): < 8

Max Operating Temp (°C): 90

Chemical Stability (Fenton's Test): High Durability

Density (g/cm³): 1.95

Ash Content (%): < 0.05

Volatile Content (%): < 1.2

EW (Equivalent Weight): 1100

Glass Transition Temp (Tg): 145

Storage Humidity (%): 45 - 65

Storage Temp (°C): 15 - 30

Solubility in Polar Solvents: Insoluble

Ionic Resistance (Ω·cm²): 0.2

Dimensional Stability (%): < 5

Thermal Stability (TGA): > 280°C

Flammability Rating: UL94 V-0

Surface Roughness (Ra): < 0.5 μm

⚠ For Research or Industrial Raw Materials, Not For Personal Medical Use!

Eata Battery delivers the world's battery makers a single, reliable source for every high-performance raw material—cathode to collector, catalyst to membrane—so you can design, scale and ship next-generation batteries faster.

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