Eata Battery

Sulfonated Polyimide Membrane (SPI-40)

Catlog Number: FCEM-0070

Description

A 40μm hydrocarbon membrane with rigid imide backbones, offering high mechanical strength and thermal stability for stationary fuel cells.

Basic Information

Polymer/Material Base: Sulfonated Polyimide

Ion Exchange Capacity (IEC): 1.5 - 2.0 meq/g

Ionic Conductivity (S/cm): 0.05 - 0.09 (at 80°C)

Thickness (μm): 40 - 45

Tensile Strength (MPa): 70 - 110

Elongation at Break (%): 15 - 40

Water Uptake (%): 30 - 50

Swelling Ratio (%): < 15

Max Operating Temp (°C): 150

Chemical Stability (Fenton's Test): Moderate

Density (g/cm³): 1.45

Ash Content (%): < 0.08

Volatile Content (%): < 1.0

EW (Equivalent Weight): 500 - 700

Glass Transition Temp (Tg): 250

Storage Humidity (%): 40 - 60

Storage Temp (°C): 15 - 30

Solubility in Polar Solvents: Soluble in NMP

Ionic Resistance (Ω·cm²): 0.13

Dimensional Stability (%): < 12

Thermal Stability (TGA): > 350°C

Flammability Rating: V-0

Surface Roughness (Ra): < 0.4 μm

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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