

Sulfonated Polysulfone Membrane (S-PSU)

Catlog Number: FCEM-0016

• Description

A hydrocarbon-based ion exchange membrane used for research in direct methanol fuel cells (DMFC) to reduce fuel crossover.

• Basic Information

Polymer/Material Base: Sulfonated Polysulfone

Ion Exchange Capacity (IEC): 1.3 - 1.6 meq/g

Ionic Conductivity (S/cm): 0.03 - 0.06 (at 80°C)

Thickness (µm): 30 - 40

Tensile Strength (MPa): 40 - 55

Elongation at Break (%): 60 - 100

Water Uptake (%): 35 - 50

Swelling Ratio (%): < 18

Max Operating Temp (°C): 130

Chemical Stability (Fenton's Test): Moderate

Density (g/cm³): 1.38

Ash Content (%): < 0.10

Volatile Content (%): < 1.5

EW (Equivalent Weight): 650 - 800

Glass Transition Temp (T_g): 195

Storage Humidity (%): 40 - 55

Storage Temp (°C): 15 - 25

Solubility in Polar Solvents: Soluble in DMF

Ionic Resistance (Ω·cm²): 0.15

Dimensional Stability (%): < 10

Thermal Stability (TGA): > 280°C

Flammability Rating: V-1

Surface Roughness (Ra): < 0.5 µm

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