

Cross-linked Sulfonated PEEK (C-SPEEK)

Catlog Number: FCEM-0062

• Description

A cross-linked hydrocarbon membrane that significantly reduces swelling and methanol crossover compared to standard SPEEK electrolytes.

• Basic Information

Polymer/Material Base: Cross-linked S-PEEK

Ion Exchange Capacity (IEC): 1.4 - 1.8 meq/g

Ionic Conductivity (S/cm): 0.06 - 0.09 (at 80°C)

Thickness (µm): 40 - 45

Tensile Strength (MPa): 65 - 85

Elongation at Break (%): 20 - 45

Water Uptake (%): 25 - 40

Swelling Ratio (%): < 8

Max Operating Temp (°C): 140

Chemical Stability (Fenton's Test): Enhanced

Density (g/cm³): 1.48

Ash Content (%): < 0.10

Volatile Content (%): < 1.2

EW (Equivalent Weight): 600 - 750

Glass Transition Temp (T_g): 205

Storage Humidity (%): 40 - 55

Storage Temp (°C): 15 - 25

Solubility in Polar Solvents: Insoluble

Ionic Resistance (Ω·cm²): 0.12

Dimensional Stability (%): < 5

Thermal Stability (TGA): > 290°C

Flammability Rating: V-0

Surface Roughness (Ra): < 0.7 µm

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