

High-Stability Piperidinium AEM (PIP-AEM)

Catlog Number: FCEM-0058

• Description

An advanced anion exchange membrane utilizing piperidinium cations for superior alkaline stability in 80°C operating environments.

• Basic Information

Polymer/Material Base: Piperidinium Polymer
Ion Exchange Capacity (IEC): 2.0 - 2.5 meq/g
Ionic Conductivity (S/cm): 0.09 - 0.13 (at 80°C)
Thickness (µm): 25 - 30
Tensile Strength (MPa): 40 - 60
Elongation at Break (%): 30 - 55
Water Uptake (%): 40 - 60
Swelling Ratio (%): < 12
Max Operating Temp (°C): 85
Chemical Stability (Fenton's Test): 10M KOH Stable
Density (g/cm³): 1.22
Ash Content (%): < 0.08
Volatile Content (%): < 2.5
EW (Equivalent Weight): 400 - 500
Glass Transition Temp (T_g): 140
Storage Humidity (%): 30 - 50
Storage Temp (°C): 5-15
Solubility in Polar Solvents: Soluble in Methanol
Ionic Resistance (Ω·cm²): 0.11
Dimensional Stability (%): < 7
Thermal Stability (TGA): > 250°C
Flammability Rating: HB
Surface Roughness (Ra): < 0.6 µm

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