

Zirconium Phosphate (ZrP) Binder

Catlog Number: FCSM-0073

• Description

An inorganic structural binder used to enhance the mechanical integrity and proton conductivity of composite membranes in high-temperature PEMFCs.

• Basic Information

Material Composition: Zirconium Phosphate

Thickness (μm): N/A

Density (g/cm^3): 3.3

Surface Resistance ($\text{m}\Omega\cdot\text{cm}^2$): N/A

Tensile Strength (MPa): 40 (as Film)

Thermal Conductivity ($\text{W}/\text{m}\cdot\text{K}$): 0.25

Porosity (%): N/A

Operating Temp Max ($^{\circ}\text{C}$): 300

Flexural Strength (MPa): N/A

Corrosion Resistance ($\mu\text{A}/\text{cm}^2$): High

Contact Angle ($^{\circ}$): 45

Gas Permeability ($\text{cm}^3/\text{cm}^2\cdot\text{s}$): N/A

Coefficient of Thermal Expansion ($10^{-6}/\text{K}$): 7.5

Shore Hardness: N/A

Water Uptake (%): 15

Ash Content (%): 100

Mean Pore Size (μm): N/A

Compressive Strength (MPa): N/A

Electrical Conductivity (S/cm): 0.08 (Ionic)

Specific Surface Area (m^2/g): 45

Young's Modulus (GPa): 12

Chemical Stability: Acid Stable

Coating Material: Liquid/Powder

Surface Roughness (Ra): N/A

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