

Expanded Graphite-Polymer BPP

Catlog Number: FCSM-0086

• Description

High-performance composite bipolar plate reinforced with expanded graphite and specialized thermoplastic resin for high-power PEMFC stacks.

• Basic Information

Material Composition: Expanded Graphite / Resin

Thickness (μm): 1800

Density (g/cm^3): 1.88

Surface Resistance ($\text{m}\Omega\cdot\text{cm}^2$): < 8

Tensile Strength (MPa): 42

Thermal Conductivity ($\text{W}/\text{m}\cdot\text{K}$): 22

Porosity (%): < 0.2

Operating Temp Max ($^{\circ}\text{C}$): 160

Flexural Strength (MPa): 58

Corrosion Resistance ($\mu\text{A}/\text{cm}^2$): < 1.2

Contact Angle ($^{\circ}$): 92

Gas Permeability ($\text{cm}^3/\text{cm}^2\cdot\text{s}$): $< 10^{-8}$

Coefficient of Thermal Expansion ($10^{-6}/\text{K}$): 6.5

Shore Hardness: 82 (Shore D)

Water Uptake (%): < 0.4

Ash Content (%): < 0.1

Mean Pore Size (μm): N/A

Compressive Strength (MPa): 120

Electrical Conductivity (S/cm): 220

Specific Surface Area (m^2/g): N/A

Young's Modulus (GPa): 12

Chemical Stability: Acid Stable

Coating Material: None

Surface Roughness (Ra): 0.8

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