

## Zirconia-Based Structural Paper

Catlog Number: FCSM-0099

### • Description

Flexible ceramic paper made from YSZ fibers, used as a high-temperature structural separator and thermal gasket in SOFC stack assembly.

### • Basic Information

Material Composition: 8mol% YSZ Fiber

Thickness ( $\mu\text{m}$ ): 500

Density ( $\text{g}/\text{cm}^3$ ): 0.45

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

Tensile Strength (MPa): 2.5

Thermal Conductivity ( $\text{W}/\text{m}\cdot\text{K}$ ): 0.08

Porosity (%): 85

Operating Temp Max ( $^{\circ}\text{C}$ ): 1600

Flexural Strength (MPa): N/A

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

Contact Angle ( $^{\circ}$ ): 60

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

Coefficient of Thermal Expansion ( $10^{-6}/\text{K}$ ): 10.5

Shore Hardness: N/A

Water Uptake (%): < 0.1

Ash Content (%): 99.9

Mean Pore Size ( $\mu\text{m}$ ): 15

Compressive Strength (MPa): 0.8

Electrical Conductivity (S/cm): <  $10^{-12}$

Specific Surface Area ( $\text{m}^2/\text{g}$ ): 12

Young's Modulus (GPa): 0.5

Chemical Stability: Chemically Inert

Coating Material: None

Surface Roughness (Ra): 12

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