

## High-Purity Alumina Crucibles for SOFC

Catlog Number: FCSM-0047

### • Description

Structural ceramic crucibles and supports made from 99.7% Al<sub>2</sub>O<sub>3</sub>, used for high-temperature sintering and mechanical support in SOFC single-cell testing.

### • Basic Information

Material Composition: 99.7% Alumina (Al<sub>2</sub>O<sub>3</sub>)

Thickness (μm): 2000

Density (g/cm<sup>3</sup>): 3.9

Surface Resistance (mΩ·cm<sup>2</sup>): Insulator

Tensile Strength (MPa): 300

Thermal Conductivity (W/m·K): 30

Porosity (%): < 0.1

Operating Temp Max (°C): 1750

Flexural Strength (MPa): 380

Corrosion Resistance (μA/cm<sup>2</sup>): Excellent

Contact Angle (°): 60

Gas Permeability (cm<sup>3</sup>/cm<sup>2</sup>·s): < 10<sup>-10</sup>

Coefficient of Thermal Expansion (10<sup>-6</sup>/K): 8.1

Shore Hardness: 1800 (HV)

Water Uptake (%): < 0.01

Ash Content (%): 99.7

Mean Pore Size (μm): N/A

Compressive Strength (MPa): 2500

Electrical Conductivity (S/cm): < 10<sup>-12</sup>

Specific Surface Area (m<sup>2</sup>/g): 0.5

Young's Modulus (GPa): 380

Chemical Stability: Chemically Inert

Coating Material: None

Surface Roughness (Ra): 0.4

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