

Samarium Doped Ceria Electrolyte (SDC-20)

Catlog Number: FCEM-0019

• Description

High-purity SDC powder used as a solid electrolyte for intermediate temperature SOFCs, providing superior ion transport at 500-700°C.

• Basic Information

Polymer/Material Base: Ce_{0.8}Sm_{0.2}O_{1.9}

Ion Exchange Capacity (IEC): N/A

Ionic Conductivity (S/cm): 0.03 - 0.10 (at 700°C)

Thickness (µm): N/A (Powder)

Tensile Strength (MPa): 160 - 210

Elongation at Break (%): N/A

Max Operating Temp (°C): 800

Chemical Stability (Fenton's Test): Reduction Resistant

Density (g/cm³): 7.15

Ash Content (%): < 0.01

EW (Equivalent Weight): N/A

Glass Transition Temp (T_g): N/A

Storage Humidity (%): 0 - 90

Storage Temp (°C): Any

Solubility in Polar Solvents: Insoluble

Ionic Resistance (Ω·cm²): 0.18

Dimensional Stability (%): < 1

Thermal Stability (TGA): > 1400°C

Flammability Rating: Non-flammable

Surface Roughness (Ra): < 0.3 µm

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