

Bismuth Oxide Electrolyte Powder (ESB-20)

Catlog Number: FCEM-0032

• Description

An erbia-stabilized bismuth oxide (ESB) powder exhibiting one of the highest known oxygen ion conductivities for low-temperature SOFCs.

• Basic Information

Polymer/Material Base: $(\text{Bi}_2\text{O}_3)_{0.8}(\text{Er}_2\text{O}_3)_{0.2}$
Ion Exchange Capacity (IEC): N/A
Ionic Conductivity (S/cm): 0.10 - 0.35 (at 600°C)
Thickness (μm): N/A (Powder)
Tensile Strength (MPa): 120 - 160
Elongation at Break (%): N/A
Max Operating Temp (°C): 750
Chemical Stability (Fenton's Test): Redox Sensitive
Density (g/cm^3): 8.6
Ash Content (%): < 0.01
EW (Equivalent Weight): N/A
Glass Transition Temp (T_g): N/A
Storage Humidity (%): 0 - 80
Storage Temp (°C): Any
Solubility in Polar Solvents: Insoluble
Ionic Resistance ($\Omega \cdot \text{cm}^2$): 0.25
Dimensional Stability (%): < 2
Thermal Stability (TGA): > 850°C
Flammability Rating: Non-flammable
Surface Roughness (Ra): < 0.5 μm

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