

## Yttrium-Doped Barium Stannate (BYS)

Catlog Number: FCEM-0089

### • Description

A high-purity perovskite electrolyte powder that exhibits excellent protonic conductivity and superior resistance to hydration-induced mechanical stress.

### • Basic Information

Polymer/Material Base: BaSn<sub>0.8</sub>Y<sub>0.2</sub>O<sub>3</sub>

Ion Exchange Capacity (IEC): N/A

Ionic Conductivity (S/cm): 0.008 - 0.02 (at 600°C)

Thickness (µm): N/A (Powder)

Tensile Strength (MPa): 130 - 170

Elongation at Break (%): N/A

Max Operating Temp (°C): 950

Chemical Stability (Fenton's Test): High H<sub>2</sub>O Stability

Density (g/cm<sup>3</sup>): 6.42

Ash Content (%): < 0.01

EW (Equivalent Weight): N/A

Glass Transition Temp (T<sub>g</sub>): N/A

Storage Humidity (%): 0 - 95

Storage Temp (°C): Any

Solubility in Polar Solvents: Insoluble

Ionic Resistance (Ω·cm<sup>2</sup>): 0.32

Dimensional Stability (%): < 1

Thermal Stability (TGA): > 1500°C

Flammability Rating: Non-flammable

Surface Roughness (Ra): < 0.6 µm

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