



573-364-2338



mo-sci@mo-sci.com



MO-SCI CORPORATION

### Appearance

Glass-ceramic sealing glass white colored in powder form.

### Chemical Composition

Calcium oxide (CaO)

Alumina (Al<sub>2</sub>O<sub>3</sub>)

Silica (SiO<sub>2</sub>)

Barium oxide (BaO)

### Physical Properties

Specific Gravity	3.2 (g/cm <sup>3</sup> )
Softening Temperature (T <sub>d</sub> )	754 ± 10 °C
Glass Transition Temperature	724 ± 10 °C
Crystallization Temperature (DSC)	1037 ± 10 °C
Coefficient of Thermal Expansion (annealed glass)	9.6 x 10 <sup>-6</sup> /°C (50 - 600 °C)
Coefficient of Thermal Expansion (crystallized)	9.1 x 10 <sup>-6</sup> /°C (50 - 900 °C)
Dielectric Constant (1kHz, RT) (annealed glass)	8.44
Loss Tangent (1kHz, RT) (annealed glass)	0.0262

### Recommended Firing Conditions

Ramp to 1020 °C and hold for 0.5 to 1 hour.

Heating or cooling rate: 3 to 10 °C/min.

### Applications

Operational Temperature: up to 910 °C

The typical application of GL1870 sealing glass is to seal ceramics and metals at high temperatures. Common applications of sealing glass include: solid oxide fuel cells (SOFCs), solar cells, sodium ion batteries, high-temperature sensors, and other sealing, bonding, or coating applications.