

Appearance

Glass-ceramic sealing glass white colored in powder form.

Chemical Composition

Calcium oxide (CaO)

Magnesium oxide (MgO)

Alumina (Al₂O₃)

Silica (SiO₂)

Sodium oxide (Na₂O)

Potassium oxide (K₂O)

Iron oxide (Fe₂O₃)

Physical Properties

Specific gravity	2.6 (g/cm ³)
Glass Transition Temperature	651 ± 10 °C
Crystallization Temperature	827 ± 10 °C
Softening Temperature (T _d)	700 ± 10 °C
Coefficient of Thermal Expansion (annealed glass)	8.3 x 10 ⁻⁶ /°C (50 - 500 °C)
Coefficient of Thermal Expansion (crystallized)	7.6 x 10 ⁻⁶ /°C (50 - 500 °C)
Dielectric Constant (1kHz, RT) (annealed glass)	6.66
Loss Tangent (1kHz, RT) (annealed glass)	0.0276

Recommended Firing Conditions

Ramp to 800 - 820 °C and hold for 0.5 to 1 hour.

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

Applications

Operational Temperature: up to 1000 °C

The typical application of GL1873 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.