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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 ± 1 x 10 ⁻⁶ /°C (50 - 500 °C)
Coefficient of Thermal Expansion (crystallized)	7.6 x ± 1 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.

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