

Appearance

Glass-ceramic sealing glass white colored in powder form

Chemical Composition

Silica (SiO₂)

Lithium oxide (Li₂O)

Alumina (Al₂O₃)

Potassium oxide (K₂O)

Phosphorus oxide (P₂O₅)

Boron oxide (B₂O₃)

Physical Properties

Specific Gravity	2.4 (g/cm ³)
Glass Transition Temperature	575 ± 10 °C
Softening Temperature (T _d)	682 ± 10 °C
Crystallization Temperature	815 ± 10 °C
Coefficient of Thermal Expansion (as-cast glass)	10.0 x 10 ⁻⁶ /°C (50 - 400 °C)
Coefficient of Thermal Expansion (crystallized)	16.0 x 10 ⁻⁶ /°C (50 - 400 °C)

Recommended Firing Conditions

Ramp to 1000°C and hold for 15 min, then hold for 15 min at 650°C, and then hold for 20 min at 820°C.
Heating or cooling rate: 3 to 10 °C/min

Applications

Operational Temperature: up to 900 °C

The typical application of GL1810 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.