

Appearance

Glass-ceramic sealing glass is white colored in powder form.

Chemical Composition (by weight)

Strontium oxide (SrO)	31.09 - 37.99 %
Silica (SiO ₂)	30.52 - 37.30 %
Zinc oxide (ZnO)	24.43 - 29.85 %
Alumina (Al ₂ O ₃)	2.08 - 3.16 %
Boron oxide (B ₂ O ₃)	0.79 - 2.79 %

Physical Properties

Specific Gravity	3.5 (g/cm ³)
Glass Transition Temperature	670 ± 10 °C
Crystallization Temperature	880 ± 10 °C
Softening Temperature (T _d)	697 ± 10 °C
Coefficient of Thermal Expansion (as-cast glass)	7.9 x 10 ⁻⁶ /°C (50 - 500 °C)
Coefficient of Thermal Expansion (crystallized)	8.0 x 10 ⁻⁶ /°C (200 - 900 °C)

Recommended Firing Conditions

Ramp to 800 °C and hold for 2 hours, then ramp to 900 °C and hold for 2 hours.
Heating/cooling rate: 3 to 10 °C/min

Applications

Operational Temperature: up to 1200 °C

The typical application of GL1702 sealing glass is to seal ceramics 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.