

Appearance

Borosilicate sealing glass white colored in powder form.

Chemical Composition (by weight)

Silica (SiO ₂)	65 - 75 %
Boron oxide (B ₂ O ₃)	22 - 31 %
Alumina (Al ₂ O ₃)	0.8 - 1.2 %
Sodium oxide (Na ₂ O)	1.6 - 2.3 %
Lithium oxide (Li ₂ O)	0.4 - 1.0 %

Physical Properties

Specific Gravity	2.08 (g/cm ³)
Glass Transition Temperature	462 ± 10 °C
Softening Temperature (T _d)	599 ± 10 °C
Coefficient of Thermal Expansion	3.49 x 10 ⁻⁶ /°C (30 - 300 °C)
Index of Refraction	1.47 (Becke line)

Recommended Firing Conditions

Ramp to 950 - 970 °C and hold for 0.5 to 1 hour.

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

Applications

Operational Temperature: up to 900 °C

The typical application of GL1883 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.