

### Appearance

Compliant (viscous) sealing glass white colored in powder form

### Chemical Composition (by weight)

Boron oxide (B <sub>2</sub> O <sub>3</sub> )	42.02 - 50.02%
Barium oxide (BaO)	31.78 - 35.78 %
Alumina (Al <sub>2</sub> O <sub>3</sub> )	9.23 - 13.23 %
Zinc oxide (ZnO)	6.97 - 11.97 %

### Physical Properties

Specific Gravity	3.2 (g/cm <sup>3</sup> )
Glass Transition Temperature	550 ± 10 °C
Softening Temperature (T <sub>d</sub> )	577 ± 10 °C
Coefficient of Thermal Expansion	7.0 x 10 <sup>-6</sup> /°C (50 - 500 °C)

### Recommended Firing Conditions

Ramp to between 700°C and 750°C and hold for 2 to 4 hours.  
Heating or cooling rate: 3 to 10 °C/min

### Applications

Operational Temperature: up to 700 °C

The typical application of GL1745 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.