

### Appearance

Sealing glass white colored in powder form

### Chemical Composition (by weight)

Phosphorus oxide (P <sub>2</sub> O <sub>5</sub> )	66.52 - 72.52 %
Zinc oxide (ZnO)	9.28 - 13.25 %
Potassium oxide (K <sub>2</sub> O)	5.96 - 7.96 %
Sodium oxide (Na <sub>2</sub> O)	3.58 - 5.58 %
Boron oxide (B <sub>2</sub> O <sub>3</sub> )	3.5 - 5.5 %
Lithium oxide (Li <sub>2</sub> O)	1.21 - 3.21 %
Alumina (Al <sub>2</sub> O <sub>3</sub> )	0 - 2 %

### Physical Properties

Specific Gravity	2.6 (g/cm <sup>3</sup> )
Glass Transition Temperature	330 ± 10 °C
Softening Temperature (T <sub>d</sub> )	370 ± 10 °C
Coefficient of Thermal Expansion	16.0 x 10 <sup>-6</sup> /°C (40 - 320 °C)

### Recommended Firing Conditions

Ramp to between 450°C and 500°C and hold for 1 to 2 hours.  
Heating or cooling rate: 3 to 10 °C/min

### Applications

Operational Temperature: up to 500 °C

The typical application of GL1732 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.