

Appearance

Sealing glass white colored in powder form

Chemical Composition (by weight)

Phosphorus oxide (P ₂ O ₅)	44.37 - 50.37 %
Antimony oxide (Sb ₂ O ₃)	9.83 - 13.83 %
Barium oxide (BaO)	9.06 - 13.06 %
Zinc oxide (ZnO)	8.64 - 12.64 %
Calcium oxide (CaO)	6.08 - 8.08 %
Sodium oxide (Na ₂ O)	3.47 - 6.47 %
Potassium oxide (K ₂ O)	3.25 - 5.25 %
Lithium oxide (Li ₂ O)	0.89 - 2.89 %
Alumina (Al ₂ O ₃)	0.34 - 2.34 %
Boron oxide (B ₂ O ₃)	0.5 - 1.5 %

Physical Properties

Specific Gravity	3.2 (g/cm ³)
Glass Transition Temperature	370 ± 10 °C
Softening Temperature (T _d)	408 ± 10 °C
Crystallization Temperature	620 ± 10 °C
Coefficient of Thermal Expansion	14.5 x 10 ⁻⁶ /°C (40 - 320 °C)

Recommended Firing Conditions

Ramp to between 500°C and 550°C and hold for 1 to 2 hours.
 Heating or cooling rate: 3 to 10 °C/min

Applications

Operational Temperature: up to 550 °C

The typical application of GL1734 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.