Appearance
Glass-ceramic sealing glass white colored in powder form

Chemical Composition (by weight)
- Strontium oxide (SrO) 32.47 - 36.47 %
- Silica (SiO$_2$) 29.29 - 35.29 %
- Zinc oxide (ZnO) 25.07 - 29.07 %
- Boron oxide (B$_2$O$_3$) 2.56 - 4.56 %
- Alumina (Al$_2$O$_3$) 1.61 - 3.61 %

Physical Properties
- Specific Gravity 3.8 (g/cm$^3$)
- Glass Transition Temperature 660 ± 10 °C
- Softening Temperature (T$_d$) 693 ± 10 °C
- Crystallization Temperature 830 ± 10 °C
- Coefficient of Thermal Expansion (crystallized) 5.5 x 10$^{-6}$/°C (50 - 500 °C)

Recommended Firing Conditions
Ramp to 760 °C and hold for 2 hours, then ramp to 830 °C and hold for 2 hours.
Heating or cooling rate: 3 to 10 °C/min

Applications
Operational Temperature: up to 900 °C

The typical application of GL1742 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.