

### Appearance

Glass-ceramic sealing glass, brown colored in powder form.

### Chemical Composition (by weight)

Strontium oxide (SrO)	32.68 - 36.68 %
Silica (SiO <sub>2</sub> )	30.52 - 36.52 %
Calcium oxide (CaO)	16.77 - 20.77 %
Alumina (Al <sub>2</sub> O <sub>3</sub> )	1.84 - 3.84 %
Boron oxide (B <sub>2</sub> O <sub>3</sub> )	6.77 - 8.77 %
Manganese dioxide (MnO <sub>2</sub> )	1.42 - 3.42 %

### Physical Properties

Specific Gravity	3.3 (g/cm <sup>3</sup> )
Glass Transition Temperature	640 ± 10 °C
Crystallization Temperature	830 ± 10 °C
Softening Temperature (T <sub>d</sub> )	718 ± 10 °C
Coefficient of Thermal Expansion (as-cast glass)	9.6 x 10 <sup>-6</sup> /°C (50 - 500 °C)
Coefficient of Thermal Expansion (crystallized)	10.0 x 10 <sup>-6</sup> /°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

### Applications

Operational Temperature: up to 900 °C

The typical application of GL1497 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.