

### Appearance

Glass-ceramic sealing glass light grey colored in powder form

### Chemical Composition

Bismuth oxide ( $\text{Bi}_2\text{O}_3$ )

Zinc oxide ( $\text{ZnO}$ )

Boron oxide ( $\text{B}_2\text{O}_3$ )

Sodium oxide ( $\text{Na}_2\text{O}$ )

### Physical Properties

Specific Gravity	5.6 ( $\text{g}/\text{cm}^3$ )
Glass Transition Temperature	$400 \pm 10$ °C
Softening Temperature ( $T_d$ )	$424 \pm 10$ °C
Coefficient of Thermal Expansion	$9.4 \times 10^{-6}$ /°C (50 - 300 °C)

### Recommended Firing Conditions

Ramp to 510°C and hold for 0.5 to 1 hr.  
Heating or cooling rate: 3 to 10 °C/min

### Applications

Operational Temperature: up to 350 °C

The typical application of GL1846 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.