Appearance
Ultra-low temperature sealing glass is white in color and is in powder form.

Chemical Composition
Tin fluoride (SnF$_2$)
Tin oxide (SnO)
Phosphorus oxide (P$_2$O$_5$)

Physical Properties
Specific Gravity 3.68 (g/cm$^3$)
Glass Transition Temperature 97 ± 10 °C
(measured by dilatometry)
Softening Temperature (T$_d$) 119 ± 10 °C
Coefficient of Thermal Expansion 20 x 10$^{-6}$ /°C (25 - 90 °C)

Recommended Firing Conditions
Ramp to 250 °C and hold for 1 to 2 hours.
Heating or cooling rate: 3 to 10 °C/min

Applications
Operational Temperature: up to 80 °C

The typical application of GL1648 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.