



# Mo-Sci Specialty Products, L.L.C.

A Subsidiary of MO-SCI Corporation

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## GL1739 DATA SHEET

### Appearance

Glass-ceramic sealing glass gray colored in powder form

### Chemical Composition by Weight Percent (wt %)

Bismuth oxide (Bi <sub>2</sub> O <sub>3</sub> ).....	47.39 - 53.39
Silica (SiO <sub>2</sub> ).....	15.6 - 21.6
Boron oxide (B <sub>2</sub> O <sub>3</sub> ).....	15.44 - 19.44
Sodium oxide (Na <sub>2</sub> O).....	1.91 - 3.91
Aluminum oxide (Al <sub>2</sub> O <sub>3</sub> ).....	1.91 - 3.91
Titanium oxide (TiO <sub>2</sub> ).....	1.91 - 3.91
Potassium oxide (K <sub>2</sub> O).....	1.9 - 3.9
Lithium oxide (Li <sub>2</sub> O <sub>3</sub> ).....	0.47 - 1.47

### Physical Properties

Density.....	3.9 g/cm <sup>3</sup>
T <sub>g</sub> .....	446 ± 10°C
T <sub>c</sub> .....	620 ± 10°C
T <sub>d</sub> .....	509 ± 10°C
CTE <sub>50-400°C</sub> ....	9.6 x 10 <sup>-6</sup> /°C (crystallized)

### Recommended Firing Conditions

Ramp to between 700°C to 850°C and hold for 2 to 4 hours

Heating/cooling rate: 3 to 10°C/minute

### Applications

To seal ceramics and metals

Resistant to alkali