

GLASS NAME: S-8061

GLASS TYPE: Alkali Barium Silicate

APPLICATIONS: Compression sealing glass.

AVAILABLE FORMS: Cast Block, Rolled Ribbon, Water Quenched, Air Quenched

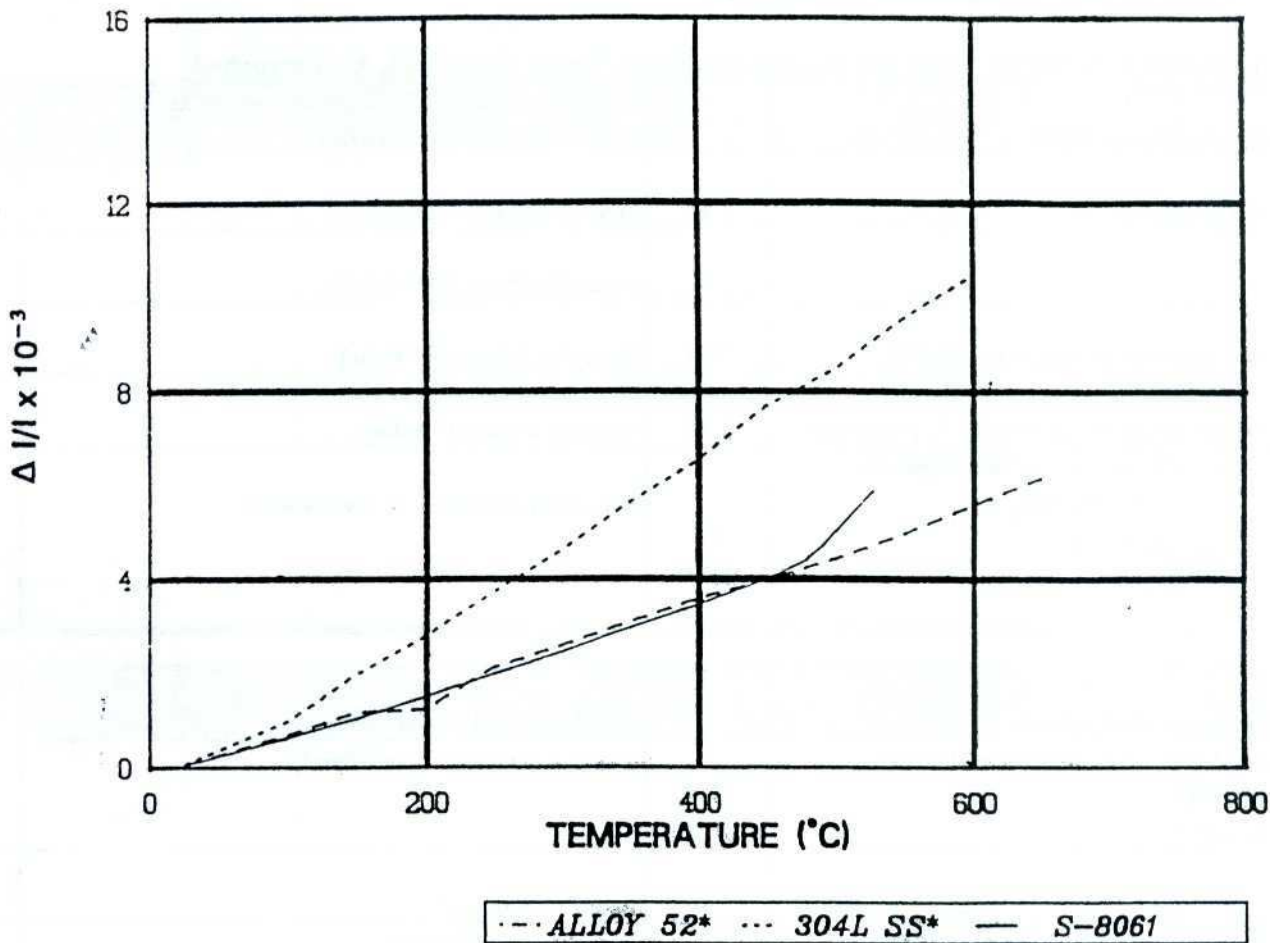
Physical Properties		Temperatures (°C) Corresponding to Characteristic Viscosities	
Density (g/cm ³)	2.60	Strain Point (10 ^{14.5} Poise):	450
		Annealing Point (10 ¹³ Poise):	480
Transformation Temperature, T _g (°C):	467	Softening Point (10 ^{7.6} Poise):	677
Thermal Conductivity at 90°C, λ [W/(m·K)]:	1.06	Working Point (10 ⁴ Poise):	1035
Linear Coefficient of Thermal Expansion, α (x10 ⁻⁷ /K)		See expansion curves on reverse side:	
α 20° to 300°C	93		
α 20°C to T _g :	104		

Electrical Properties		Mechanical Properties	
Log of Volume Resistivity in ohm·cm at 250°C:	8.8	Young's Modulus, E (10 ³ N/mm ²):	69
at 350°C:	7.0		
		Poisson's Ratio, μ:	0.22
Dielectric Properties for 1MHz at 25°C		Specific Thermal Stress, $\varphi = \frac{\alpha \cdot E}{1 - \mu}$ [N/(mm ² K)]	0.83
Dielectric Constant, ε _r :	6.7		
Dissipation Factor, tan δ (x10 ⁻⁴):	21		
		Knoop Hardness (N/mm ²) corresponding to 1.9613 N load:	4310

Optical Properties	
Index of Refraction at 587nm, n _d :	1.514
Stress Optical Coefficient at 546 nm, K = 10 ⁻⁶ mm ² /N	

SCHOTT

EXPANSION CURVE OF COMPONENTS OF A SEAL



An example of S-8061 application is the formation of compression seals with Alloy 52 feed throughs and 304L Stainless Steel housings.

*Expansion values for the metal components have been provided by Sandia National Laboratories.