

Corning® Glass Material Properties

Glass Type: Borosilicate

Corning Code: 7070



Excellent thermal expansion match to silicon, high electrical resistivity, suitable to anodic bonding to silicon

	Metric	English
Mechanical		
Density	2.13 g/cm ³	139.2 lb/ft ³
Young's Modulus	5.2 x 10 ³ kg/mm ²	7.42 x 10 ⁶ psi
Poisson's Ratio	0.22	
Viscosity		
Working Point (10 ⁴ poise)	1968 °C	1954 °F
Annealing Point (10 ¹³ poise)	496 °C	925 °F
Strain Point (10 ¹⁴ poise)	456 °C	853 °F
Thermal		
Coefficient of Expansion (0 °C - 300 °C) (25 °C to set point 679 °C)	32.0 x 10 ⁻⁷ / °C 39.0x 10 ⁻⁷ / °C	17.7 x 10 ⁻⁷ / °F 21.7 x 10 ⁻⁷ / °F
Optical		
Refractive Index (589.3 nm)	1.47	
Electrical		
Log ₁₀ Volume Resistivity @ 250 °C	11.2 ohm-cm	
Log ₁₀ Volume Resistivity @ 250 °C	9.1 ohm-cm	
Dielectric Constant @ 20 °C, 1 MHz	4.1	
Loss Tangent@ 20 °C, 1 MHz	0.06%	

Chemical

Weathering: 2
Acid Durability: 2

Weathering is defined as corrosion by atmospheric-borne gases and vapors such as water and carbon dioxide. Glasses rated 1 will almost never show weathering effects; those rated 2 will occasionally be troublesome, particularly if weathering products cannot be removed; those glasses rated 3 will require more careful consideration.

Acid durability classified glasses according to their behavior in 5% hydrochloric acid at 95 °C (203 °F) for 24 hours.

Classification: Thickness loss (inches) (1) < 10⁻⁶ (2) 10⁻⁶ – 10⁻⁵ (3) 10⁻⁵ – 10⁻⁴ (4) > 10⁻⁴

Available in US Standard Mesh 4 through 325 with a minimum order quantity of 100 lbs.