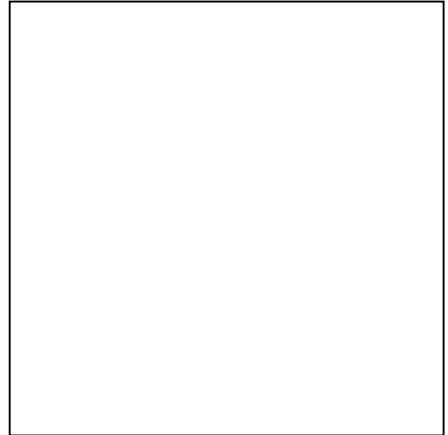


Corning® Glass Material Properties

Glass Type: Soda Borosilicate

Corning Code: 7740



Metric

English

Mechanical

Density	2.23 g/cm ³	139.2 lb/ft ³
Young's Modulus	6.4 x10 ³ kg/mm ²	9.1 x 10 ⁶ psi
Poisson's Ratio	0.20	
Shear Modulus	2.67 x10 ³ kg/mm ²	3.8 x 10 ⁶ psi

Viscosity

Working Point (10 ⁴ poise)	1252 °C	2286 °F
Softening Point (10 ^{7.6} poise)	820 °C	1508 °F
Annealing Point (10 ¹³ poise)	560 °C	1040 °F
Strain Point (10 ¹⁴ poise)	510 °C	950 °F

Thermal

Coefficient of Expansion (0 °C - 300 °C)	32.5 x 10 ⁻⁷ / °C	17.7 x 10 ⁻⁷ / °F
	35.0 x 10 ⁻⁷ / °C	21.7 x 10 ⁻⁷ / °F
	0.18 cal/g °C	0.18 BTU/lb °C
Specific Heat, 25 °C	<u>cal cm</u>	<u>BTU ft</u>
Thermal Conductivity, 25 °C	0.0027 sec cm ² °C	0.63 h ft ² °F
Thermal Conductivity, 25 °C	0.0069 cm ² /sec	0.00107 in ² /sec

Optical

Refractive Index (589.3 nm)	1.474 <u>nm/cm</u>
Birefringence Constant	300 kg/mm ²

Electrical

Log ₁₀ Volume Resistivity @ 250 °C	8.1 ohm-cm
Log ₁₀ Volume Resistivity @ 250 °C	6.6 ohm-cm
Dielectric Constant @ 20 °C, 1 MHz	4.6
Loss Tangent @ 20 °C, 1 MHz	0.4 %

Chemical

Weathering: 1
Acid Durability: 1

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) 10⁻⁴ (4) > 10⁻⁴

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