

## Glass Property Sheet

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Corning Code: 0211

Glass Type: potash, soda, zinc borosilicate

	<u>Metric</u>	<u>English</u>
<b><u>Mechanical</u></b>		
Density	2.53g/cm <sup>3</sup>	157.9 lb/ft <sup>3</sup>
Young's Modulus	7.59 x 10 <sup>3</sup> kg/mm <sup>2</sup>	10.8 x 10 <sup>6</sup> psi
Poisson's Ratio	0.22	
Shear Modulus	3.09 x 10 <sup>3</sup> kg/mm <sup>2</sup>	4.4 x 10 <sup>6</sup> psi
Knoop Hardness (KHN <sub>1-</sub> )	458	
<b><u>Viscosity</u></b>		
Working Pt. (10 <sup>10</sup> poises)	1008 °C	1846 °F
Softening Pt. (10 <sup>7.6</sup> poises)	720 °C	1328 °F
Annealing Pt. (10 <sup>13</sup> poises)	550 °C	1022 °F
Strain Pt. (10 <sup>14</sup> poises)	508 °C	946 °F
<b><u>Thermal</u></b>		
Coefficient of Expansion (0-300°C)	73.8 x 10 <sup>-7</sup> /°C	41.0 x 10 <sup>-7</sup> /°F
(25°C to Set Point 513°C)	84.0 x 10 <sup>-7</sup> /°C	46.7 x 10 <sup>-7</sup> /°F
Thermal Conductivity, °C	$.0023 \frac{\text{cal cm}}{\text{sec cm}^2 \text{ } ^\circ\text{C}}$	$.54 \frac{\text{Btu ft}}{\text{h ft}^2 \text{ } ^\circ\text{F}}$
<b><u>Optical</u></b>		
Refractive Index (589.3nm)	1.523	
Transmission @ 420 nm	92%*	
2200 nm	92%*	
<i>*Through a sample thickness of 1.0 mm</i>		
<b><u>Electrical</u></b>		
Log <sub>10</sub> Volume Resistivity @ 250°C	8.3 ohm-cm	
@350°C	6.7 ohm-cm	
Dielectric Constant @ 20 °C; 1MHz	6.7	
Loss Tangent @ 20 °C; 1MHz	.46%	

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 Technical Materials