Soda-Lime-Silica Float Glass Selected Properties

Typical Mechanical Properties		
Density	ρ	2.53 g/cm^3
Young's Modulus	E	72 GPa
Poisson's Ratio	μ	0.23
Hardness	Moh's	5-6
Typical Mean MOR	50% Probability of Breakage	Annealed 6,000 Psi (41 MPa) Heat-Strengthened 12,000 Psi (83 MPa) Fully Tempered 24,000 Psi (165 MPa)
Typical Design Stress	0.8% Probability of Breakage	Annealed 2,800 Psi (19 MPa) Heat-Strengthened 5,600 Psi (39 MPa) Fully Tempered 11,200 Psi (77 MPa)

Typical Thermal Properties		
Coefficient of Linear Thermal Expansion (CTE)	α 25…275° C	8.3 x 10^{-6} K^{-1}
Specific Heat Capacity (@25° C)	C_P	0.88 KJ x (kg x K)$^{-1}$
Thermal Conductivity @ 25° C	λ	0.937 W x (m x K)$^{-1}$
Softening Point	ASTM C 338	715° C
Annealing Point	ASTM C 336	548° C
Strain Point	ASTM C 336	511° C
Coefficient of Thermal Stress		0.62 MPa / °C
Maximum Recommended Operating Temperature (RTG)		Fully Tempered T_{max} 250° C
Resistance to Thermal Shock (RTS)	Thickness 6mm	Annealed 38° C Heat Strengthened 121° C Fully Tempered 204° C

Typical Chemical Properties		
Typical Composition		72.6% SiO_2 13.9% Na_2O 0.6% K_2O 1.1% Al_2O_3 8.4% CaO 3.9% MgO 0.2% SO_3 0.11% Fe_2O_3
Hydrolytic Resistance		Class 3

Typical Optical Properties		
Refractive Index	Sodium D line (λ 5893 nm)	1.523
Emissivity	Hemispherical @ 25° C	0.84
Stress-Optical Coefficient	Stress Psi	22.18 x Retardation (μm) / thickness (inches)

Typical Electrical Properties		
Dielectric Constant	E	7.75 @ 20° C
Specific Resistivity	log R Ω/cm	11 @ 60 Hz, 25° C 9.7 @ 1000 Hz, 25° C 9.1 @ 1000 Hz, 100° C 6.5 @ 1000 Hz, 250° C

Tinted Colors are produced by the addition of metal oxides (typically <1%). Physical properties of the glass are not changed significantly by these small additions and affect primarily the color and transmission/reflection.