Soda-Lime

Soda Lime Float Glass (Clear & Tinted)

Description
Soda lime glass is the most prevalent type of glass. Soda lime glass is prepared by melting the raw materials, such as soda, lime, silica, alumina, and small quantities of fining agents in a glass furnace at temperatures locally up to 1675°C. Soda lime sheet glass is made by floating molten glass on a bed of molten tin. This method gives the sheet uniform thickness and very flat surfaces. Soda lime glass is the base material for most clear, colored and patterned glass types.

Features
- Can be chemically strengthened to increase mechanical strength
- Can be heat strengthened or heat tempered to increase thermal shock resistance and mechanical strength
- Can be machined, optically coated, chemically etched, sandblasted, colored, or laminated
- Good flatness and surface quality due to float process
- Economically priced

Physical Properties
- Modulus of Elasticity (Young’s) \(7.2 \times 10^{10} \text{ Pa} \) \((10.4 \times 10^6 \text{ psi})\)
- Modulus of Rigidity (Shear) \(3.0 \times 10^{10} \text{ Pa} \) \((4.3 \times 10^6 \text{ psi})\)
- Bulk Modulus \(4.3 \times 10^{10} \text{ Pa} \) \((6.18 \times 10^6 \text{ psi})\)
- Poisson’s Ratio 0.23
- Specific Gravity 2.53
- Density \(2530 \text{ kg/m}^3 \) \((158 \text{ lb/ft}^3)\)
- Coefficient of Thermal Stress \(0.62 \text{ mPa/°C} \) \((50 \text{ psi/°F})\)
- Thermal Conductivity \(0.937 \text{ W.m/m}^2\text{°C} \) \((6.5 \text{ btu.in/hr.°F.ft}^2)\)
- Specific Heat 0.21
- Coefficient of Linear Expansion \(8.9 \times 10^{-6} \text{ strain/°C} \) \((4.9 \times 10^{-6} \text{ strain/°F})\)
- Hardness (Moh’s Scale) 5 to 6
- Refractive Index (Sodium D line) 1.523
- (1 μm) 1.511
- (2 μm) 1.499
- Softening Point 340°F \((726°C)\)
- Annealing Point 1015°F \((546°C)\)
- Strain Point 957°F \((514°C)\)
- Emissivity (Hemispherical) at 75°F 0.84

Dimensions
- Thicknesses: 0.02” - 1” (0.55mm - 25.4mm)
- Sizes: Up to 96” x 72” (2440mm x 1830mm)