Corning® Gorilla™ Glass
Technical Materials

Benefits

• Glass designed for a high degree of chemical strengthening
  - High compressive stress AND
  - Deep depth of compression layer
• High retained strength after use
• High resistance to scratch damage
• Pristine surface

Applications

Ideal for protective covers for electronic displays in:
  - Cellular phones
  - Laptop and tablet computer screens
  - GPS and other mobile devices

Corning Gorilla™ Glass, an alumino silicate thin sheet glass, produced by Corning’s proprietary Fusion forming technology, is designed to provide users with a durable glass substrate ideal for use in applications where high strength and damage resistance is required.
Dimensions
Standard sheet size:  405 mm x 460 mm
Available thicknesses:  0.7mm – 2.0mm

Viscosity
Softening Point (10^{7.6} poises)  837°C
Annealing Point (10^{13.2} poises)  602°C
Strain Point (10^{14.7} poises)  553°C

Properties
Density  2.45 g/cm³
Young’s Modulus  73.3 GPa
Poisson’s Ratio  0.21
Shear Modulus  30.1 GPa
Vickers Hardness (200g load)
  Un-strengthened  622 kgf/mm²
  Strengthened  701 kgf/mm²
Fracture Toughness MPa m^{1/2}  0.7

Thermal
Coefficient of Expansion (0-300°C)  91 x 10^{-7}/°C

Optical
Refractive Index (633 nm)
  Core glass  1.5031
  Compression layer  1.5114
Photo-elastic constant  31.8 nm/cm/MPa

Chemical Strengthening*
  Compressive stress  Capable > 800 MPa
  Depth of layer  Capable > 100 μm

Optical Transmission

*A key aspect of the design of the strengthened glass article includes proper selection of the magnitude of compressive stress and the depth of compression layer appropriate for the application.