Corning® Gorilla® Glass 2 is an environmentally friendly alkali-aluminosilicate thin sheet glass that is better able to survive the real-world events that most commonly cause glass failure. Its superior composition allows a deeper layer of chemical strengthening than is possible with most other chemically strengthened glasses — making it both durable and damage resistant.

Product Information

Benefits
- Glass designed for a high degree of chemical strengthening
  - High compressive stress
  - Deep compression layer
- High retained strength after use
- High resistance to scratch damage
- Superior surface quality

Applications
- Ideal protective cover for displays in
  - Smartphones
  - Laptop and tablet computer screens
  - Mobile devices
- Touchscreen devices
- Optical components
- High strength glass articles

Dimensions
Available Thicknesses 0.5 mm – 2.0 mm

Viscosity
Softening Point (10^7.6 poises) 895 °C
Annealing Point (10^13.2 poises) 653 °C
Strain Point (10^14.7 poises) 599 °C

Properties
Density 2.42 g/cm^3
Young’s Modulus 715 GPa
Poisson’s Ratio 0.21
Shear Modulus 29.6 GPa
Vickers Hardness (200g load)
  Unstrengthened 534 kgf/mm^2
  Strengthened 649 kgf/mm^2
Fracture Toughness 0.68 MPa m^0.5
Coefficient of Expansion (0–300°C) 814 x 10^-7 /°C

Chemical Durability
Durability is measured via weight loss per surface area after immersion in the solvents shown below. Values are highly dependent upon actual testing conditions. Data is reported for Gorilla Glass 2.

<table>
<thead>
<tr>
<th>Reagent</th>
<th>Time</th>
<th>Temperature (°C)</th>
<th>Weight Loss (mg/cm^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HCl – 5%</td>
<td>24 hrs.</td>
<td>95</td>
<td>0.12</td>
</tr>
<tr>
<td>NH4:HF – 10%</td>
<td>20 min.</td>
<td>20</td>
<td>2.64</td>
</tr>
<tr>
<td>HF – 10%</td>
<td>20 min.</td>
<td>20</td>
<td>11.88</td>
</tr>
<tr>
<td>NaOH-5%</td>
<td>6 hrs.</td>
<td>95</td>
<td>142</td>
</tr>
</tbody>
</table>

Electrical
Frequency (MHz) Dielectric Constant Loss Tangent
50 7.24 <0.03
175 7.18 <0.03
275 7.21 <0.03
375 7.23 <0.03
500 7.21 <0.03
600 7.23 <0.03
900 7.24 <0.03
1499 7.52 <0.03
1997 7.46 <0.03
2466 7.43 <0.03
2986 7.39 <0.03

Terminated coaxial line similar to that outlined in NIST Technical Note 1520 and NIST Technical Note 1355-R.

Chemical Strengthening
Compression Stress Capability ≥ 1000 MPa @ 40 µm DOL
≥ 950 MPa @ 50 µm DOL
≥ 50 µm Depth of Layer Capability
Putting Corning® Gorilla® Glass 2 to the test.

Greater damage resistance.

Enables use of thinner glass.

Greater retained strength

Scratches are less visible

Corning Gorilla Glass 2 exhibits tighter strength distribution.

Devices benefit from a greater retained strength.

There is less strength degradation after scratching.

Scratches are less visible

For more information:
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