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 (10¹⁷ poises) 895 °C
- Annealing Point (10¹⁴ poises) 653 °C
- Strain Point (10¹¹ poises) 599 °C

#### Properties
- Density 2.42 g/cm³
- Young's Modulus 71.5 GPa
- Poisson's Ratio 0.21
- Shear Modulus 29.6 GPa
- Vickers Hardness (200g load)
  - Unstrengthened 534 kgf/mm²
  - Strengthened 649 kgf/mm²
- Fracture Toughness 0.68 MPa m⁰.⁵
- Coefficient of Expansion 814 x 10⁻⁷ /°C (0–300°C)

#### Chemical Strengthening
- Compressive Stress Capability
  - ≥ 1000 MPa @ 40 µm DOL
  - ≥ 950 MPa @ 50 µm DOL
- Depth of Layer Capability
  - ≥ 50 µm

#### 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/cm²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HCl – 5%</td>
<td>24 hrs.</td>
<td>95</td>
<td>0.12</td>
</tr>
<tr>
<td>NH₄HF – 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

<table>
<thead>
<tr>
<th>Frequency (MHz)</th>
<th>Dielectric Constant</th>
<th>Loss Tangent</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td>7.24</td>
<td>&lt;0.03</td>
</tr>
<tr>
<td>175</td>
<td>7.18</td>
<td>&lt;0.03</td>
</tr>
<tr>
<td>275</td>
<td>7.21</td>
<td>&lt;0.03</td>
</tr>
<tr>
<td>375</td>
<td>7.23</td>
<td>&lt;0.03</td>
</tr>
<tr>
<td>500</td>
<td>7.21</td>
<td>&lt;0.03</td>
</tr>
<tr>
<td>600</td>
<td>7.23</td>
<td>&lt;0.03</td>
</tr>
<tr>
<td>900</td>
<td>7.24</td>
<td>&lt;0.03</td>
</tr>
<tr>
<td>1499</td>
<td>7.52</td>
<td>&lt;0.03</td>
</tr>
<tr>
<td>1977</td>
<td>7.46</td>
<td>&lt;0.03</td>
</tr>
<tr>
<td>2466</td>
<td>7.43</td>
<td>&lt;0.03</td>
</tr>
<tr>
<td>2986</td>
<td>7.39</td>
<td>&lt;0.03</td>
</tr>
</tbody>
</table>

Terminated coaxial line similar to that outlined in NIST Technical Note 1520 and NIST Technical Note 1355-R.
Putting Corning® Gorilla® Glass 2 to the test.

Greater damage resistance.

It takes more load to initiate radial cracks in the glass.

Greater retained strength

There is less strength degradation after scratching.

Enables use of thinner glass.

There is less strength degradation after scratching.

Scratches are less visible

Knoop Visual Scratch Test

Enables greater strength.

There is less strength degradation after scratching.

CORNING

For more information:
Email: specialtiesmaterials@corning.com
Internet: www.corninggorillaglass.com

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