



# Corning® Gorilla® Glass Ceramic

Introducing Corning® Gorilla® Glass Ceramic, an innovative, transparent, and strengthenable glass ceramic material to help bring advanced toughness to more mobile devices. Gorilla Glass Ceramic significantly improves drop performance on rough surfaces compared to competitive aluminosilicate glasses.

## Product Information

### Benefits

- Improved drop resistance, survived 10 repeated drops from one meter on surfaces replicating asphalt
- High resistance to sharp contact damage
- High retained strength after use
- Rolled sheet enables near net thickness to final part dimensions

### Applications

Ideal protective cover material for the front and back of electronic displays:

- Smartphones
- Cameras
- Smartwatches and wearables

### Thickness

Standard as Formed Sheet  
Other

0.80 mm – 0.90 mm  
Available upon request

### Viscosity

Annealing Point ( $10^{13.2}$  poises) 750 °C  
Strain Point ( $10^{14.7}$  poises) 720 °C

### Properties

Density 2.47 g/cm<sup>3</sup>  
Young's Modulus 102 GPa  
Poisson's Ratio 0.19  
Shear Modulus 42.8 GPa  
Knoop Hardness (200g load)  
Unstrengthened 630 kgf/mm<sup>2</sup>  
Strengthened 650 kgf/mm<sup>2</sup>  
Fracture Toughness 1.12 MPa m<sup>0.5</sup>  
Coefficient of Expansion (0-300°C)  $71.5 \times 10^{-7}/^{\circ}\text{C}$

### Chemical Strengthening

Please contact a Corning Account Manager for chemical strengthening capability based on thickness and application.

### Optical

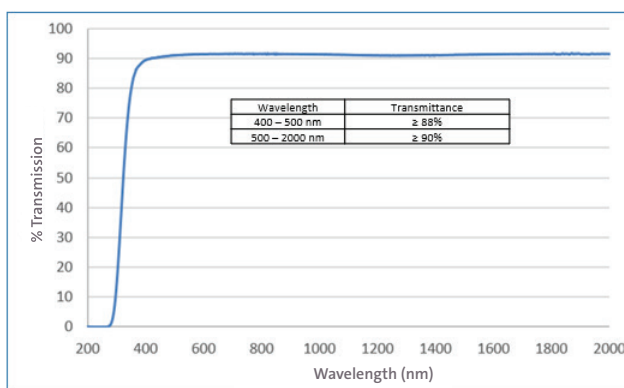
Refractive Index (590 nm)

Core Glass\* 1.54

Compression Layer 1.54

Photo-elastic constant 28.3 nm/cm/MPa

Haze @ 0.6 mm thickness  $\leq 0.20\%$



\*Core index is used for IOX metrology since it is unaffected by ion-exchanged conditions.

### Chemical Durability

Chemical durability is measured via weight loss per surface area after immersion in the solvents shown below. Values are highly dependent upon actual testing conditions.

Reagent	Time	Temperature (°C)	Weight Loss (mg/cm <sup>2</sup> )
HCl – 5%	24 hrs.	95	0.02
NH <sub>4</sub> F: HF – 10%	20 min.	20	2.5
HF – 10%	20 min.	20	6.8
NaOH – 5%	6 hrs.	95	0.4

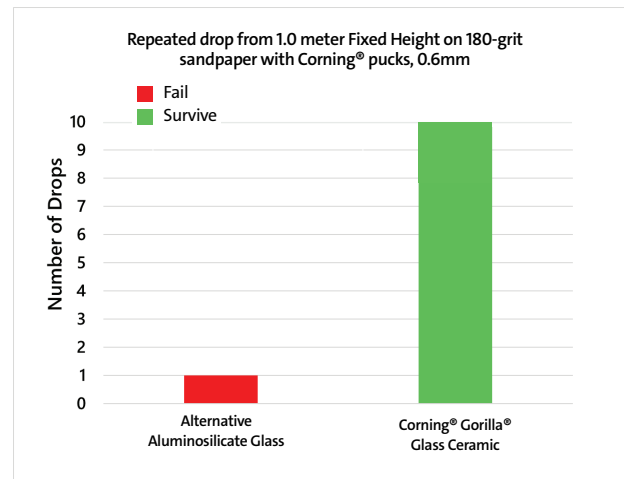
### Electrical

Frequency (MHz)	Dielectric Constant	Loss Tangent
54	5.66	0.002
163	5.65	0.002
272	5.65	0.002
381	5.65	0.002
490	5.65	0.002
599	5.65	0.002
912	5.55	0.003
1499	5.56	0.005
1977	5.57	0.003
2466	5.57	0.003
2986	5.57	0.004

## Drop Test Performance

In Corning lab tests, Corning® Gorilla® Glass Ceramic survived 10 repeated drops from one meter on surfaces replicating asphalt.

An alternative aluminosilicate glass typically failed on the first drop.



## Corning® Gorilla® Glass Ceramic

Always Tough. Always Innovating.

Contact us  
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