

Home Tech
SCHOTT North America, Inc.
5530 Shepherdsville Road
Louisville, KY 40228
USA
Phone +1 (502) 657-4417
Fax +1 (502) 966-4976
info.xensation@us.schott.com
www.us.schott.com/xensation

SCHOTT
glass made of ideas

Xensation®

Chemical strengthened
alumino-silicate glass

SCHOTT Xensation®

Chemical strengthened alumino-silicate glass

Xensation® is a chemically strengthened alumino-silicate glass that offers an outstanding level of mechanical impact and bending strength, as well as high resistance to scratches. This specialty glass has been designed to achieve strength performance levels ideally suited to tough applications – from smartphone to rugged displays to automotive applications to safety glazing. The unique glass composition combined with more than 130 years' experience in making specialty glass results in one of the most robust and reliable cover glasses available today.



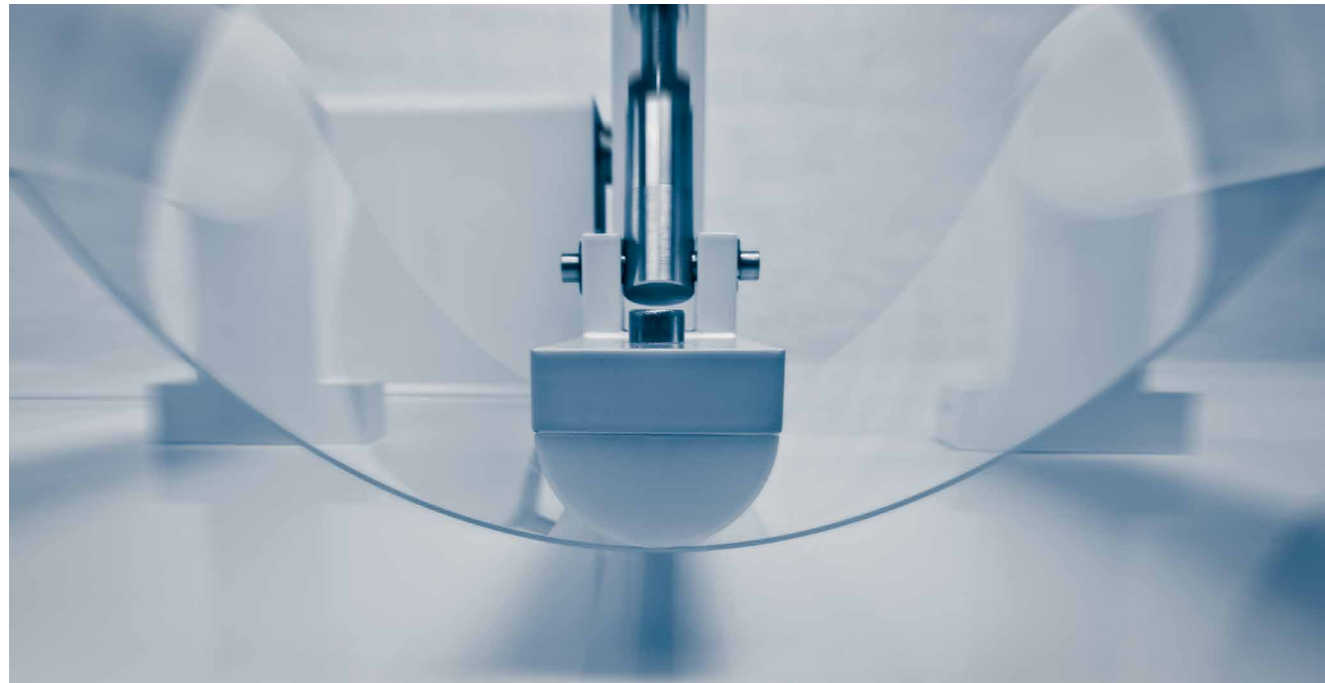
Xensation® stands for a pristine, display grade cover glass with a clear, elegant visual quality.



Xensation® is easy to process and strengthen according to accepted industry standards.

Key-Benefits of Xensation®

- Extremely high impact and bending strength for thinner, sleeker and more touch sensitive solutions
- High scratch resistance and tolerance for superior aesthetic appeal, durability, strength and reliability even after surface damage
- Manifold combinations of CS and DoL at the highest levels
- Easy to process and strengthen according to accepted industry standards



Xensation®'s outstanding bending strength facilitates the development of innovative glazing solutions that are lightweight, rugged and capable of offering an unmatched level of protection across a variety of applications.

Mechanical Properties	
Density	2.477 g/cm ³
Young's Modulus E	74 kN/mm ²
Poisson's Ratio	0.215
Shear Modulus	30 kN/mm ²
Knoop Hardness HK_{0.1/20}	
Non-strengthened	534
Strengthened	639
Vickers hardness HV_{0.2/20}	
Non-strengthened	617
Strengthened	681

Optical Properties			
Refractive Index at	588 nm (n _d)	633 nm	780 nm
Core Glass	1.508	1.506	1.502
Compression Layer KNO ₃ pure	1.516	1.514	1.510
Transmittance (Glass Thickness 0.7mm)			
840 nm			> 91.5 %
560 nm			> 91.5 %
380 nm			> 90 %
Photoelastic Constant	29.2 nm/cm/MPa		
Typical spectral visible light transmittance characteristics* τ_v			
Thickness	τ _v		
0.55	92.5 %		
0.70	92.5 %		
1.10	92.4 %		
2.00	92.3 %		

* Integral transmittance values for the visible range of light are determined according to DIN EN 410 by using standard light type D65

Forms supplied*	
Thickness Range:	0.55 – 2.00 mm
Sheet size:	1,150 x 950 mm; 475 mm x 575 mm

*Further thicknesses and sheet sizes are available on request.

Electrical Properties*		
Frequency (MHz)	Dielectric Constant (ε')	Loss Tangent (tanδ)
1	7.74	0.011
54	7.49	0.008
480	7.40	0.009
825	7.38	0.010
912	7.38	0.010
1977	7.35	0.012
2170	7.35	0.012
2986	7.34	0.012
Electric Volume Resistivity ρ_D for A.C. at 50Hz		
at 250 °C		at 350 °C
1.5 • 10 ⁶ Ω • cm		8.9 • 10 ⁴ Ω • cm

* These values are no guaranteed data – for customer orientation only.

Chemical Properties		
Hydrolytic Resistance	DIN ISO 719	Class HGB 1
Acid Resistance	DIN 12116	Class S 4
Alkali Resistance	DIN ISO 695	Class A 1

Chemical Strengthening	
Compressive Stress	capable > 900 MPa
Depth of Layer	capable > 100 μm
4-Point Bending Strength	capable > 850 MPa

Thermal Properties	
Thermal Conductivity λ _(25 °C)	0.96 W/(m•K)
Specific Heat Capacity c _p (20 °C; 100 °C)	0.84 KJ/(kg•K)
Coefficient of Mean Linear Thermal Expansion α _(20 °C; 300 °C)	8.8 • 10 ⁻⁶ K ⁻¹
Transformation Point τ _g	615 °C
Annealing Point (10 ¹³ dPas)	635 °C
Softening Point (10 ^{7.6} dPas)	880 °C
Working Point (10 ⁴ dPas)	1265 °C