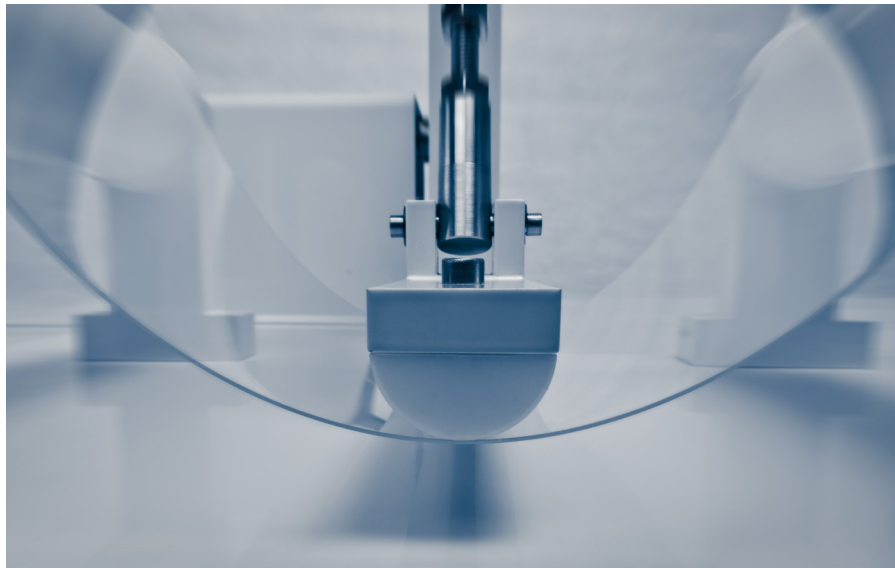


# SCHOTT Xensation®

SCHOTT's chemically strengthened alumino-silicate glass for innovative glazing solutions

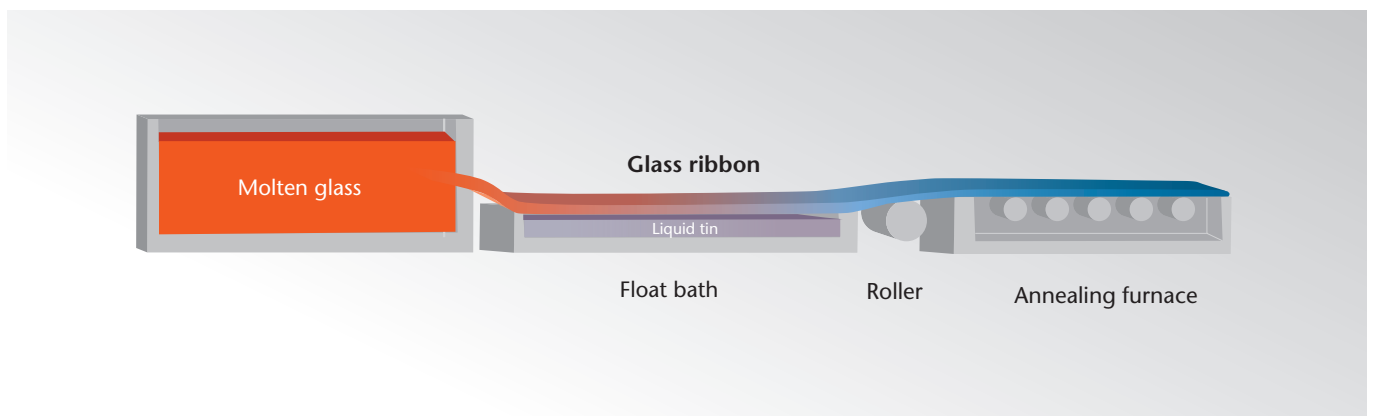
Xensation® Cover is a floated alumino-silicate glass that offers an outstanding level of mechanical impact and bending strength, as well as high resistance to scratches. This specialty glass has been designed for highly efficient chemical strengthening (via an ion exchange treatment) to achieve strength performance levels ideally suited for cover glass protecting touch screen devices, as well as protective and ruggedized light-weight glazing solutions.



Xensation® Cover'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

## Key-Benefits of Xensation® Cover

- Extremely **high impact and bending strength** enables thinner, sleeker and more sensitive devices without compromising on strength
- **High scratch resistance and tolerance** for superior aesthetic appeal and durability
- Pristine, display grade cover glass for a clear, elegant **visual quality**
- Unique glass composition results in the most **robust and reliable** cover glass available
- **Easy to process** according to typical industry standards



Xensation® Cover is produced using SCHOTT's unique microfloat process.



Thermal Properties	
Thermal Conductivity $\lambda_{(25\text{ °C})}$	0.96 W/(m·K)
Specific Heat Capacity $C_{p(20\text{ °C}; 100\text{ °C})}$	0.84 kJ/(kg·K)
Coefficient of Mean Linear Thermal Expansion $\alpha_{(20\text{ °C}; 300\text{ °C})}$	$8.8 \cdot 10^{-6} \text{ K}^{-1}$ *
Transformation Point T <sub>g</sub>	615 °C*
Annealing Point (10 <sup>13</sup> dPas)	635 °C
Softening Point (10 <sup>7.6</sup> dPas)	880 °C
Working Point (10 <sup>4</sup> dPas)	1265 °C

\* cooled according to DIN

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

Optical Properties			
Refractive Index at	588 nm (n <sub>d</sub> )	633 nm	780 nm
Core Glass	1.508	1.506	1.502
Compression Layer			
KNO <sub>3</sub> pure	1.516	1.514	1.510
Transmittance $\tau$ (Glass Thickness 0.7 mm)			
840 nm			> 91.5 %
560 nm			> 91.5 %
380 nm			> 90 %
Photoelastic Constant			29.2 nm/cm/MPa

Electrical Properties *		
Frequency	Dielectric Constant	Loss Tangent
MHz	$\epsilon'$	$\tan \delta$
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 $\rho_D$ for A.C. at 50Hz		
v = 250 °C		$1.5 \cdot 10^6 \text{ } \Omega \cdot \text{cm}$
v = 350 °C		$8.9 \cdot 10^4 \text{ } \Omega \cdot \text{cm}$

Sheet Dimensions	
Sheet Size*:	1150 x 950 mm
	475 x 575 mm
Thickness Range:	0.5 - 3.0 mm

\* other sizes on request

Mechanical Properties	
Density	2.477 g/cm <sup>3</sup> *
Young's Modulus E	74 kN/mm <sup>2</sup>
Poisson's Ratio	0.215
Shear Modulus	30 kN/mm <sup>2</sup>
Knoop Hardness HK <sub>0.1/20</sub>	
Non-strengthened	534
Strengthened	639
Vickers Hardness HV <sub>0.2/20</sub>	
Non-strengthened	617
Strengthened	681

\* cooled according to DIN

Chemical Strengthening	
Compressive Stress	capable > 900 MPa
Depth of Layer	capable > 50 $\mu\text{m}$
4-Point Bending Strength	cap. > 800 MPa

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glass made of ideas