



SCHOTT Xensation® Up.

Seriously upgraded!

Up.graded Strength * Up.graded Reliability * Up.graded Flexibility

SCHOTT Xensation® Up. high-performance cover glass is a chemically-strengthened lithium aluminosilicate (LAS) glass with improved strength, flexibility, and reliability. Tests of the cover glass demonstrate superior set-drop performance, meaning premium consumer smartphones can survive drops from twice the height as those protected by common AS cover glasses on the market.

Key benefits

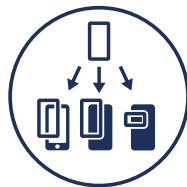
- Outstanding results in set-drop performance for maximum survival likelihood after smartphone drops.
- Superior ion exchange capabilities in order to ensure excellent strength and processing performances.
 - Typical CS and DoL values are well balanced to obtain superior mechanical reliability
 - Wider IOX processing ranges
 - Options for shorter IOX processing time
- Flexible in use for any kind of powerful cover application. Whether as a front or back cover, or as a camera or watch cover.



Outstanding
break resistance



Optimal ion
exchange
capabilities



Flexible in use

SCHOTT
glass made of ideas

SCHOTT Xensation® Up.

Mechanical properties*

Density ρ	2.48 g/cm ³
Young's modulus E	82 kN/mm ²
Poisson's ratio ν	0.22
Shear modulus G	34 kN/mm ²
Vickers hardness HV_{0.2/20}	
unstrengthened	630
strengthened	680

Optical properties*

Refractive index n	365 nm	595 nm	640 nm
Core glass	1.546	1.521	1.520
K-exchanged layer	1.55	1.52	1.52
Photoelastic constant C [nm/(cm*MPa)]	30.2	27.8	27.6
Transmittance T between 400 nm – 800 nm	> 91 %		

Thermal properties*

Coefficient of mean linear thermal expansion $\alpha_{(20^{\circ}\text{C} - 300^{\circ}\text{C})}$	$8.3 \cdot 10^{-6} \text{ K}^{-1}$
Transformation point T_g	525 °C
Annealing point at 10^{13} dPas	540 °C
Softening point at $10^{7.6}$ dPas	760 °C
Working point at 10^4 dPas	1120 °C

Electrical properties*

Frequency (MHz)	Dielectric constant (ϵ)	Loss tangent ($\tan \delta$)
54	7.3	0.007
480	7.1	0.008
825	7.1	0.009
912	7.1	0.009
1977	7.0	0.010
2170	7.0	0.010
2986	7.0	0.011

Chemical properties*

Hydrolytic resistance acc. to DIN ISO 719

Hydrolytic class	HGB 2
Equivalent of alkali Na ₂ O per gram of glass grains [$\mu\text{g/g}$]	38

Acid resistance acc. to DIN 12 116

Acid class	S 4 W
Half surface weight loss after 6 hours [mg/dm^2]	19

Alkali resistance acc. to DIN ISO 695

Class	A1
Surface weight loss after 3 hours [mg/dm^2]	42

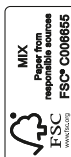
Chemical strengthening**

Compressive stress (K-CS)	capable > 900 MPa
Depth of layer (Na-DoL)	capable > 150 μm
4-Point bending strength	capable > 700 MPa

Forms supplied***

Thickness range	0.55 – 0.80 mm
Sheet size	1150 x 950 mm

* Typical values
 ** Depending on chemical strengthening process
 *** Further thicknesses and sheet sizes are available on request



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