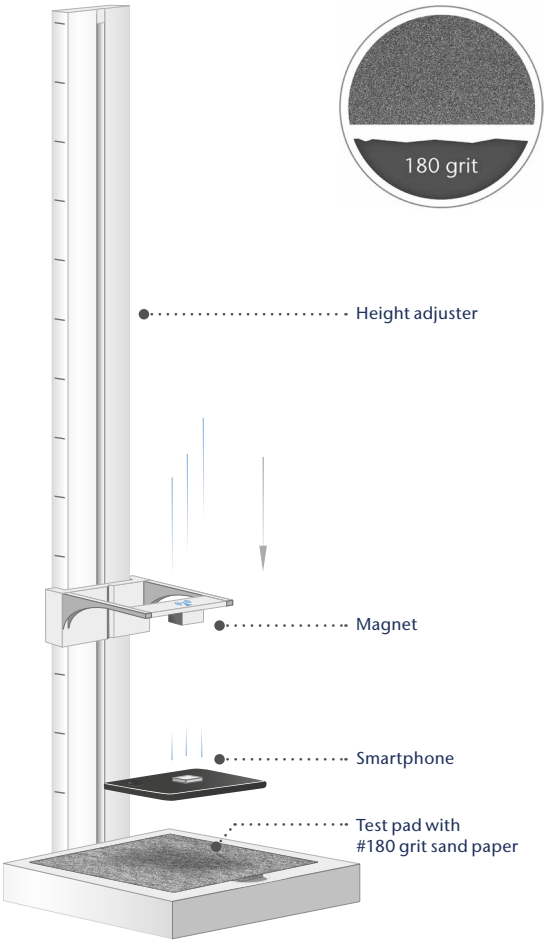
SCHOTT Xensation® Up.

The chemically strengthened lithium-aluminum-silicate (LAS) cover glass Xensation® Up. redefines the standards for reliability and durability of modern mobile devices. With its exceptional drop resistance and excellent processing properties, Xensation® Up. opens up new possibilities for a wide range of applications.



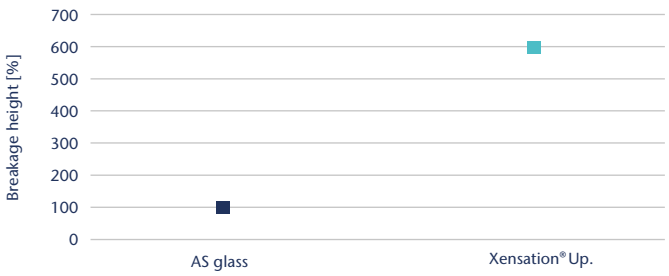
Features

The outstanding features of Xensation® Up. are based on an extremely efficient ion exchange during the chemical strengthening process. The salt bath-assisted process ensures reliable and fast processing of raw glass with unique mechanical durability and stability.

Key Benefits

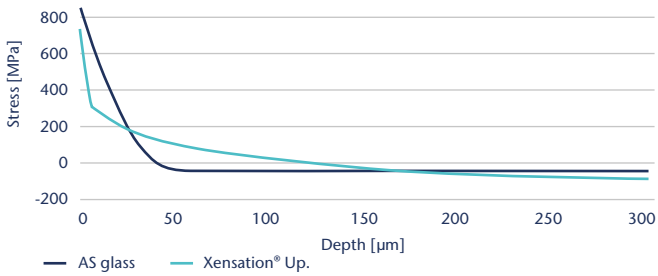
- Maximum survival chances after drops, evidenced by extraor dinary drop test performance
- Top-notch strength and shaping versatility thanks to the highly effective ion exchange
- Versatile use for high-performance covers and proven millions of times as front and back covers, camera, and smartwatch covers

Results of set-drop test with #180 grit sandpaper



Mean values of dummy test series with 0.8 mm thickness, compared to standard AS glass; results may vary depending on test set-up

Typical stress profiles in comparison



Xensation® Up. enables a deeper ion exchange compared to standard AS glass in order to ensure excellent strength performance

SCHOTT
glass made of ideas

SCHOTT Xensation® Up.

Mechanical properties	
Density ρ	2.48 g/cm³
Young's modulus E	82 kN/mm²
Poisson's ratio ν	0.22
Shear modulus G	34 kN/mm²
Vickers hardness HV	
unstrengthened	630
strengthened*	680

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

Optical properties					
Wavelength λ [nm]	365	405	518	595	640
Measurement method	FSM-UV	SLP-2000	SLP-2000	FSM-LE	SLP-1000
Refractive index n of core glass	1.546	1.537	1.525	1.521	1.520
Refractive index n of K-exchanged layer*	1.554	1.542	1.528	1.523	1.522
Photoelastic constant C [nm/(cm*MPa)]	30.2	29.0	28.2	27.8	27.6
Transmittance T [%] (t = 0.78 mm)	89	90	90	91	92

Chemical properties	
Hydrolytic resistance acc. to DIN ISO 719	
Hydrolytic class	HGB 2
Equivalent of alkali Na_2O per gram of glass grains [µg/g]	38
Acid resistance acc. to DIN 12 116	
Acid class	S4
Half surface weight loss after 6 hours [mg/dm²]	19
Alkali resistance acc. to ISO 695	
Alkali class	A1
Surface weight loss after 3 hours [mg/dm²]	42

Electrical properties (extrapolated)		
Frequency f_0 [MHz]	**Dielectric constant ε**	**Loss tangent tan δ**
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 strengthening*	
Compressive stress CS	capable > 900 MPa
Depth of compressive layer DoCL	capable >150 µm
4-Point bending strength	capable > 700 MPa

Forms supplied**	
Thickness range	0.55 – 0.80 mm
Sheet size	1150 mm x 950 mm

All values are typical measured values and refer to unstrengthened glass.
* Values that can be achieved after chemical strengthening process
** Further thicknesses and sheet sizes are available on request

ENGLISH 07/2022 kn/nino Printed in Germany

schott.com/xensation

SCHOTT Technical Glass Solutions GmbH, Otto-Schott-Strasse 13, 07745 Jena, Germany
info.xensation@schott.com

SCHOTT
glass made of ideas