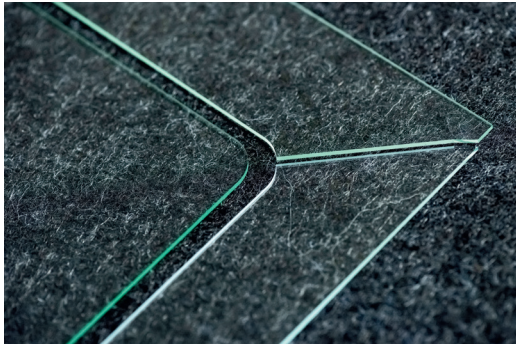


# FALCON GLASS

for thin and lightweight applications



AGC's Falcon glass is a new type of alumino-silicate thin glass suitable for chemical toughening and produced by the very high quality, cost-efficient float process.

From mobile devices to high-performance assemblies in building and transportation, Falcon offers the highest performance at an affordable cost.

## Falcon glass

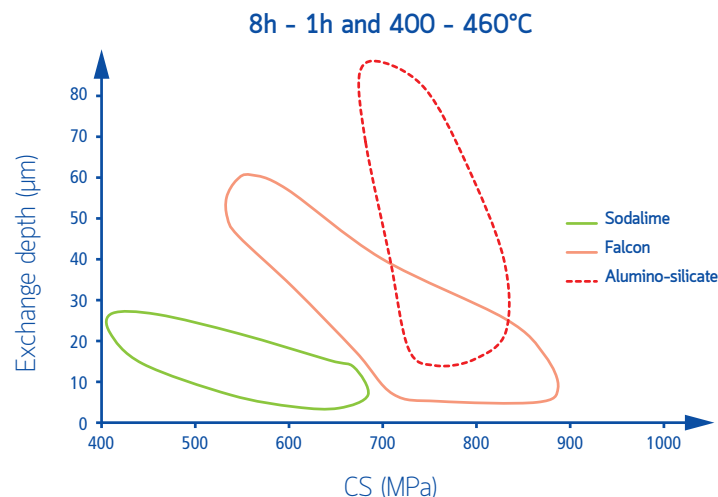
What's so special about it? | What does this mean for you?

- |                                   |  |
|-----------------------------------|--|
| Very strong after toughening      | – Excellent mechanical strength: 5 times stronger than conventional thermally toughened soda-lime glass                                      |
|                                   | – Damage-resistant   |
| High transmission and neutrality  | – High luminance and exceptional colour rendering while ensuring low power consumption   |
| Beautiful surface appearance      | – Beautiful, pristine finish and high scratch resistance compared with resin   |
| Unique anti-warping treatment     | – AGC's unique anti-warping treatment guarantees no deformation of the glass after chemical toughening, allowing it to keep perfect flatness |
| Easy to thermoform                | – Opens up new possibilities in shapes and design  |
| Available in very low thicknesses | – Reduces weight, opening up new possibilities in the design of high-strength, lightweight structures at a reasonable cost                   |
| Available in large dimensions     | – Makes it possible to create large-dimension toughened glass covers for touchscreens or any other large format application                  |

What can you use it for | ... be inspired

- |                |   |
|----------------|---|
| Electronics    | – Smartphones, tablets, laptops, interactive displays, etc.   |
| Transportation | – Trains, aerospace, automotive, etc. (interior and exterior) |
| Building       | – Lightweight assemblies, creative designs, etc.              |

## Performance achievable with chemical tempering

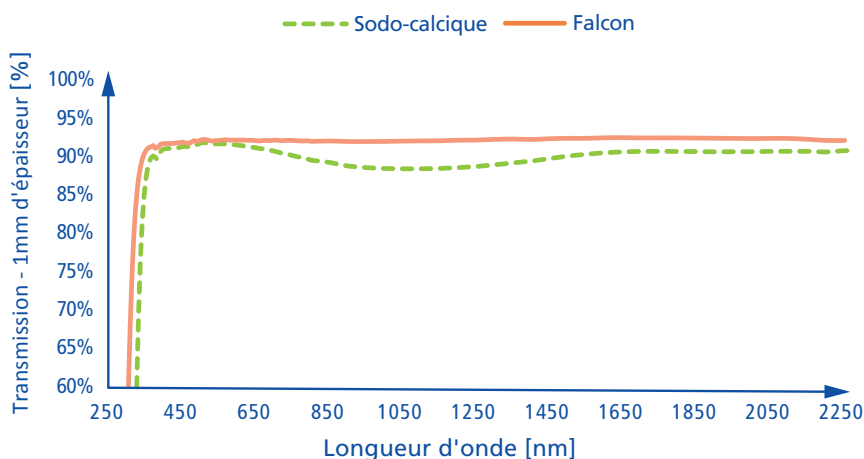


## Performance

<b>Chemical strengthening properties</b>	Compressive stress (@ 20µm DoL)	> 800 MPa
	Depth of Layer (in 8h)	> 40 µm
	Reinforcement (for 15µm defect)	> 500 MPa
	Warpage (in 0.7mm – 420°C/4h)	< 0.05%
<b>Mechanical properties</b>	Density	~ 2.48 g/cm³
	Young's Modulus*	~70 GPa
	Poisson's ratio*	~ 0.21
	Shear Modulus*	~ 30 GPa
	Knoop hardness HK <sub>0.1,20</sub>	450 (before chemical tempering) – 546 (after chemical tempering)
<b>Thermal properties</b>	Softening point	~ 665 °C
	Tg	~ 575 °C
	Coefficient of thermal expansion	~ 9.10 <sup>-6</sup> (25-300°C)
	Thermal conductivity*	~ 1.19 W/(m.K)

\* Computed values

## Transmission comparison



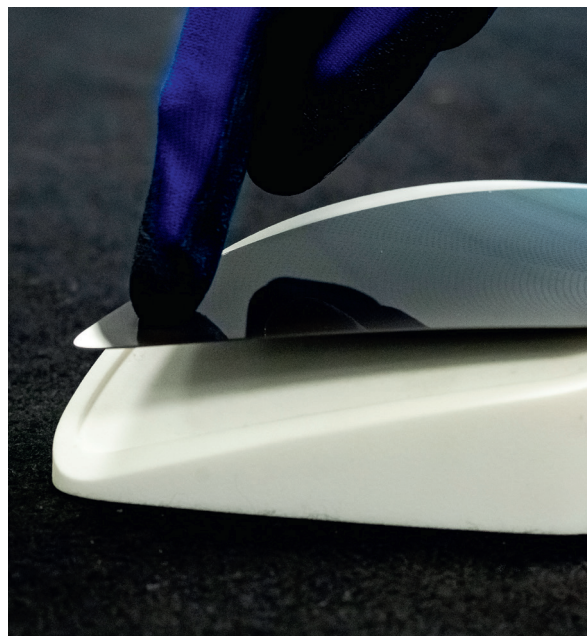
## Processing options

<b>Safety</b>	Toughening (chemical)
	Safe foil application
<b>Cutting</b>	Straight, circular or free shape
<b>Shaping and edge finishing</b>	Edge grinding, drilling, laser finish
	Bending (thermo-forming and cold-bending)
<b>Special treatments</b>	Anti-warpage
	Silkscreen printing
	Acid etching (single or double)
	Anti-reflective coating
	Wet coating application (anti-fingerprint/hydrophobic coating)
	UV adhesive bonding

## Availability

Thickness	Size
0.5 mm	Up to 1.245 x 3.21 m
0.7 mm	Up to 1.35 x 3.21 m
1.1 mm	Up to 1.35 x 3.21 m
2.1 mm	Up to 1.60 x 3.21 m
3 mm	Up to 1.60 x 3.21 m
4 mm	Up to 1.60 x 3.21 m

Other thicknesses and dimensions are available upon request.



The information contained in this data sheet is intended to assist you in designing with AGC materials. It is not intended to and does not create any warranties, express or implied, including any warranty of merchantability or fitness for a particular purpose. The user is responsible for determining the suitability of AGC materials for each application.

### AGC GLASS EUROPE, A LEADER IN FLAT GLASS

Based in Louvain-la-Neuve (Belgium), AGC Glass Europe produces, processes and markets flat glass for the construction industry (external glazing and interior decoration), car manufacture and solar power applications. It is the European branch of AGC, the world's leading producer of flat glass. It has over 100 sites throughout Europe, from Spain to Russia. AGC Glass Europe has representatives worldwide - See [www.agc-yourglass.com](http://www.agc-yourglass.com) for further addresses.

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