

EMPOWERING



SOLAR EFFICIENCY

LOW IRON GLASS

SUNMAX™ PREMIUM

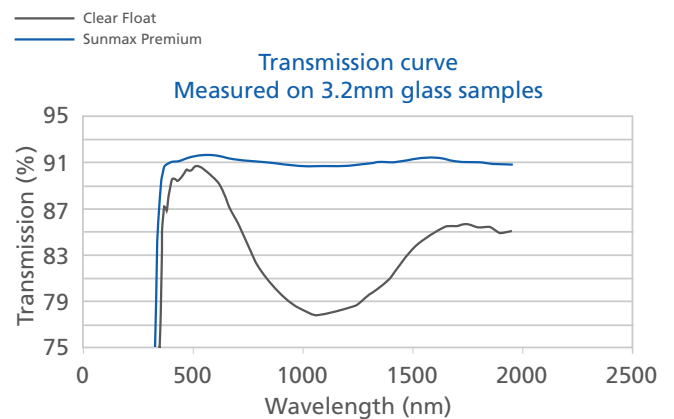
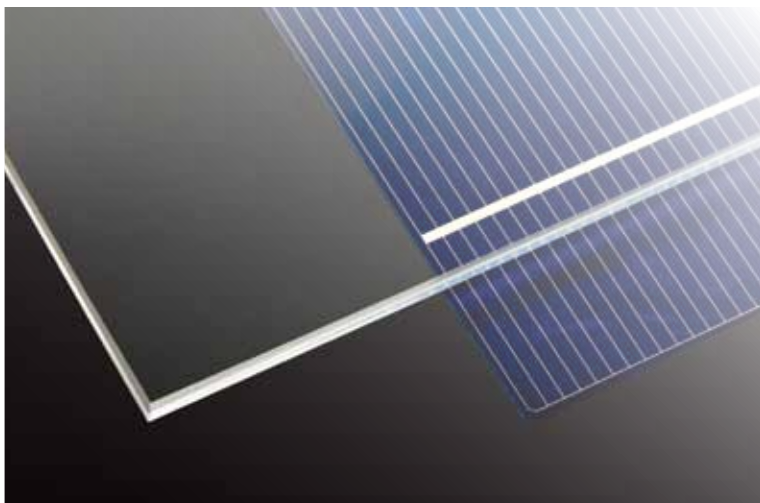
EXTRA CLEAR FLOAT GLASS FOR SOLAR APPLICATIONS

SUNMAX™ PREMIUM is an extra clear float glass especially optimized for solar applications. Combined with the excellent durability of glass, SUNMAX™ PREMIUM is the product of choice for photovoltaic modules and solar mirrors.

SUNMAX™ PREMIUM conforms to EN572 and can be delivered fully tempered as per EN12150.

PRODUCT DESCRIPTION

Type	Extra clear float glass
Applications	Cover glass for photovoltaic modules (crystalline, CIGS) Front glass for thin film Si and CdTe Substrate for solar mirrors



AGC Solar has a long history as a key player in the solar glass business. As part of the world leader in glass production, it benefits from the latest glass technologies to make renewable energy a success. It offers glass solutions for photovoltaic modules, thermal collectors and concentrating solar mirrors. It aims for the highest production standards for increased performance and works through a worldwide network.

MAIN CHARACTERISTICS *

Light Transmission (%)	1mm - 1/25": 91.8	Illuminant D65 at 2° (acc. +/- 0.2%)
	3.2mm - 1/8": 91.7	Illuminant D65 at 2° (acc. +/- 0.2%)
	4mm - 5/32": 91.6	Illuminant D65 at 2° (acc. +/- 0.2%)
Energy Transmission (%)	1mm - 1/25": > 91.7	ISO9050 AM1.5 (acc. +/- 0.2%)
	3.2mm - 1/8": from > 90.9 to 91.3	ISO9050 AM1.5 (acc. +/- 0.2%)
	4mm - 5/32": from > 90.7 to 91.1	ISO9050 AM1.5 (acc. +/- 0.2%)
Specific weight (kg/m ²)	1mm - 1/25": 2.5	
	3.2mm - 1/8": 8	
	4mm - 5/32": 10	

Processing conditions and dimensions depending on the applications.

AGC can help evaluating these values according to other standards and/or to the specificities of the final application.

MECHANICAL CHARACTERISTICS *

Mechanical strength (MPa)	45	Annealed	
	70	Toughened	
	120	Tempered, EN12150	
Young modulus (GPa)	70	EN572	
Poisson ratio	0.2	EN572	
Hardness	Moh (scratch hardness)	6	EN572
	Knoop (indentation hardness)	470	Indenter load 500g
Density (kg/m ³)	2500	EN572, at 18°C	

THERMAL CHARACTERISTICS *

Hemispherical emissivity	0.84	Between -18°C and 66°C
Expansion coefficient (10 ⁻⁶ 1/K)	9	EN572, between 20°C and 300°C
Specific heat (J/kg/K)	720	EN572
Thermal conductivity (W/m/K)	1	EN572
Softening point (°C)	722	
Annealing point (°C)	552	
Strain point (°C)	500	

CHEMICAL COMPOSITION *

Silicon dioxide (SiO ₂ , %)	69 to 74	EN572
Sodium oxide (NaO, %)	12 to 16	EN572
Calcium oxide (CaO, %)	5 to 12	EN572
Magnesium oxide (MgO, %)	0 to 6	EN572
Aluminum oxide (Al ₂ O ₃ , %)	0 to 3	EN572
Trace elements (FeO, etc., %)	< 1	

AGC is committed to environmental stewardship through the use of recyclable materials and sustainable process in the manufacturing and distribution of our state-of-the-art, energy efficient flat glass products.

In North America, the product performs to the appropriate ASTM standards.

*The information contained in this datasheet 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 applications.

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