

# SGG DIAMANT®

*Extra clear, low-iron glass*

## Description



SGG DIAMANT is a unique colourless ("extra-white") float glass with a very low iron oxide content. As a result the glass has a very high light transmittance level and is significantly less green in appearance when compared to ordinary float glass. It is therefore the only clear glass which allows a natural and true reproduction of white and pastel colours when enamelled, lacquered or screen printed.

## Applications

### Wide range of applications

SGG DIAMANT is suited for numerous applications that require high transparency, clear aesthetics and optical brilliance.

### Interior design or decorating:

SGG DIAMANT is an excellent base glass when applying white or coloured decoration by screen print, SGG SERALIT EVOLUTION, for use in partition walls, doors, shower cabins and insulating glass. As a non-transparent cladding element, SGG DIAMANT can also be coated (SGG PLANILAQUE EVOLUTION and SGG EMALIT EVOLUTION).

### Furniture:

SGG DIAMANT is particularly stunning in table tops, office desks or shop counters requiring thick glass with colourless edges.

### Shop windows and display cabinets:

SGG DIAMANT can be used to produce a laminated safety glass (SGG STADIP PROTECT) with very little colour difference - even in extreme thicknesses. SGG DIAMANT can also be used to produce anti-reflective safety glazing (SGG VISION-LITE), which allows the objects to be displayed with the added security of laminated glass and viewed with reduced reflection.

### Special applications:

due to its higher level of UV transmittance compared to that of clear float glass SGG DIAMANT is perfectly suited to applications requiring this property such as solar panels, photovoltaics, glass casing for medical measuring equipment and horticulture.

### Window Energy Ratings:

the higher solar transmittance of SGG DIAMANT has more recently been valued for its use in IGUs, particularly in the context of Window Energy Ratings.

## Advantages

**Optimum transparency:** due to its perfect clarity SGG DIAMANT allows the true colour of display items to be seen and excellent vision quality when viewing through the glass.

**Unfiltered natural light** enters the interior of a building. The full impact of a room, its decor and objects can be achieved with optimum light and undistorted colours.

**High energy transmittance** for applications requiring the use of solar energy or high solar heat gain.

## Window Energy Ratings

### Improving Window Energy Ratings

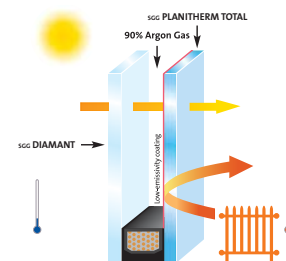
The overall Window Energy Rating performance of a window is dependent on the combined effect of the frame and glazing components and the air-tightness of the finished window.

Ratings may be improved by decreasing thermal losses and/or by increasing solar gains.

Simulations have proved that thanks to its increased solar gain value, using a low-iron glass such as SGG DIAMANT can improve the resulting energy index of a window by up to 6kwh/m<sup>2</sup>/year.\*

\*When used on the outer pane of a double-glazed unit compared with float glass of the same thickness and a standard GGF window configuration with a 30% frame factor.

SGG PLANITHERM® TOTAL				
Normal g = 0.04	U-value* (W/m <sup>2</sup> °C)		Solar Factor** (g)	
	Air	Argon (0%)	SGG PLANILUX clear float	SGG DIAMANT low-iron
4 (16/20) 4	1.4	1.2	0.66	0.71



## Physical Properties

- SGG DIAMANT can be further processed as easily as normal float glass
- Mechanical and sound absorption properties are identical to those of SGG PLANILUX
- Higher level of light transmittance compared to SGG PLANILUX
- SGG DIAMANT can be coated with high performance thermal insulation and solar control coatings
- Available in a wide range of thicknesses from 3-19 mm
- SGG DIAMANT conforms to standard EN 572-2 and carries the relevant CE mark as required.



## Processing

SGG DIAMANT can be used as the base product for a wide range of processed products:

- Laminated Safety glass SGG STADIP or SGG STADIP PROTECT, available also in the anti-reflective product SGG VISION-LITE. Due to the low amount of body colour and high level of light transmittance, SGG DIAMANT is extremely well suited for the production of very thick laminated safety glass because it provides a high level of transparency.
- Monolithic toughened safety glass SGG SECURIT, heat strengthened glass SGG PLANIDUR, as well as high performance safety glass for structural glazing systems SGG SECURIPOINT.
- Screen printed glass, SGG SERALIT EVOLUTION.
- Enamelled glass SGG EMALIT CLASSIC EXTRA WHITE, or enamelled glass with very bright colours.
- Lacquered glass SGG PLANILAQUE EVOLUTION extra-white, ivory and light blue for a completely homogenous finish with shine and depth of colour.
- SGG DIAMANT can be used as the base glass for certain SGG COOL-LITE high performance solar control coatings.



Performance

SGG DIAMANT										
Thickness	mm	3	4	5	6	8	10	12	15	19
Weight	kg/m <sup>2</sup>	7.5	10	12.5	15	20	25	30	37.5	47.5
Light Transmission	%	91	91	91	91	91	90	90	90	90
UV	%	86	85	83	82	80	78	76	73	70
Absorption	%	2	2	3	3	4	5	6	7	9
Solar Factor										
g EN 410		0.91	0.90	0.90	0.90	0.89	0.88	0.88	0.87	0.86
Shading Coefficient	SC	1.04	1.04	1.04	1.03	1.02	1.02	1.01	1.00	0.99



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Distributor

SGG DIAMANT, SGG EMALIT EVOLUTION, SGG PLANIDUR, SGG PLANILAQUE EVOLUTION, SGG PLANILUX, SGG PLANITHERM, SGG SECURIT, SGG SECURIPPOINT, SGG SERALIT EVOLUTION, SGG STADIP, SGG STADIP PROTECT, SGG VISION-LITE and all other devices and logos are registered trademarks of Saint-Gobain.

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