

# SGG SECURIT ALBARINO® P

# SGG SECURIT ALBARINO® G

*Deeply textured extra-clear glasses for photovoltaic modules*

SGG SECURIT ALBARINO P and SGG SECURIT ALBARINO G have been specially developed for use in photovoltaic modules.

The shape of the surface structures produces an increase in efficiency of 3% in the laminated module.

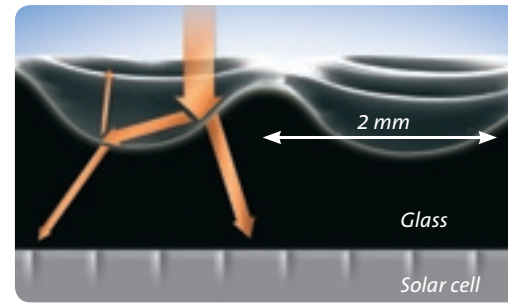


## Application

### Increased efficiency

Under standard test conditions with non-textured polycrystalline solar cells, the light-trapping effect produces an increase of 3% in the relative efficiency of the module and an increase of 2% with textured cells (according to IEC61215).

With incident light inclined at 80° to the vertical, efficiency rises by up to 20% in comparison with non-textured reference glass. There is a 4% to 5% gain in yield resulting from this inclined incident light, measured over a year and at the optimum installation angle, and up to 7% for an installation angle of 45°.



Surface of sGG ALBARINO P  
Reduction of reflection at air-glass interface

## Products

### Optimised surface structure

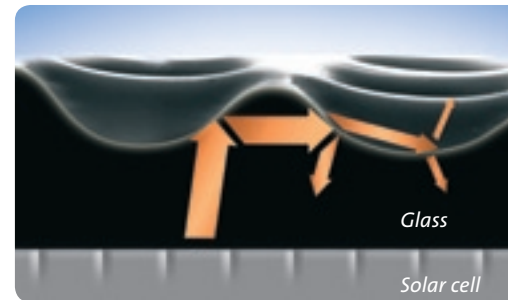
The surface structures of sGG SECURIT ALBARINO P and sGG SECURIT ALBARINO G are laminated to the outside of the module and create two effects: the reduction of the light reflected from the outside (air-glass interface) and the internal trapping of the light reflected from the solar cells in the module (light-trapping). These two effects combine to make sGG SECURIT ALBARINO P and sGG SECURIT ALBARINO G the most efficient glasses available for PV-modules.

### Extra-clear glass and extraordinary design

Due to the low percentage of iron oxide in all glasses of the sGG SECURIT ALBARINO product series, the energy absorption in the glass is almost zero. In addition to the outstanding technical performance, the unusual surface structures present a special aesthetic appearance.

### Low dirt accumulation

The rounded structures for the surface allow the free flow of rainwater from the module surface, thereby reducing the deposit of dirt and dust.



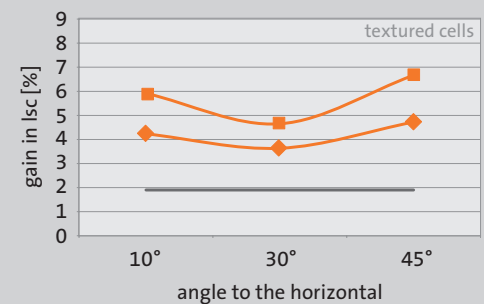
The light-trapping effect

## Processing

The raw glass sGG ALBARINO P and sGG ALBARINO G are cut on customer requirements. The edges are grinded with a C-shape well known from the automotive industry. The corner shape

is done respecting safety of handling operations during the module production. sGG ALBARINO P and sGG ALBARINO G are fully tempered according to DIN EN 12150.

### sGG ALBARINO P/G annual gains in outdoor test without cleaning



—■— sGG ALBARINO P 2008  
—◆— sGG ALBARINO P 2007  
— sGG ALBARINO P (STC results)

## Characteristic values

sGG SECURIT ALBARINO P/G

Thickness

4.0 mm

Sizes available on request

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