

SGG CLIMAPLUS® SILENCE

*Enhanced acoustically insulating  
and low-emissivity double-glazed  
units*

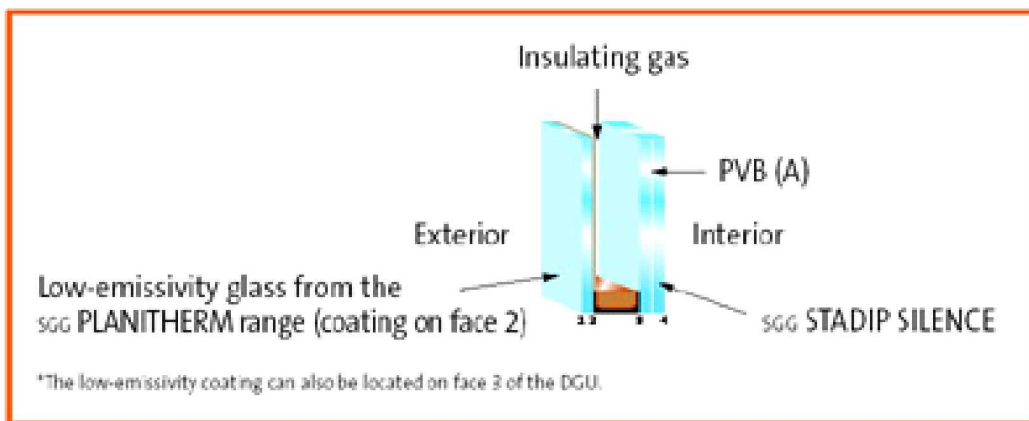
Technical Sheet  
United Kingdom

# SGG CLIMAPLUS® SILENCE

## *Enhanced acoustically insulating and low-emissivity double-glazed units*

### Description

SGG CLIMAPLUS SILENCE is a double-glazed unit with enhanced thermal insulation and excellent acoustic insulation performance. The inner pane of SGG CLIMAPLUS SILENCE is a laminated safety glass. It consists of two sheets of glass bonded together with an acoustic polyvinyl butyral interlayer, otherwise known as PVB(A). This laminated glass provides maximum acoustic attenuation coupled with adhesion of glass fragments in the event of breakage. If the double-glazed unit does not incorporate a low-emissivity glass, it is known as SGG CLIMALIT SILENCE.



### Applications

SGG CLIMAPLUS SILENCE is suitable for the many applications:

- external façades (including spandrel panels and floor to ceiling glazing) and windows in commercial and residential buildings in areas subject to high levels of noise (near to main roads, motorways, railways, airports etc.) and where there is a need for security or safety glazing.
- glass roofs and overhead glazing.

### Advantages

- Enhanced acoustic insulation: SGG CLIMAPLUS SILENCE provides maximum protection against airborne noise and significantly reduces impact noise from rain and hail.
- Protection of persons and property: SGG CLIMAPLUS SILENCE protects against the risk of injury in the event of accidental breakage and security against vandalism and break-in.
- Enhanced thermal insulation: for reduced heating costs and energy consumption (more environmentally friendly).
- Protection against UV rays: significantly reduced the transmittance of harmful UV radiation.
- SGG CLIMAPLUS SILENCE has the same appearance as standard SGG CLIMAPLUS double-glazed units.

## Range

Numerous sGG CLIMAPLUS SILENCE compositions have been tested by different European laboratories. A selection of performances are shown in the following tables. For further information, please contact SAINT-GOBAIN GLASS.

Insulation against airbourne noise			
sGG CLIMAPLUS SILENCE Composition	Total thickness (mm)	Weight (kg/m <sup>2</sup> )	Rw(C;Ctr)
6 (12) 8.8A	23	41	39 (-1;-5)
12.8A (20) 8.8A	40	47	49 (-2;-6)
10 (12) 8.8A	31	46	40(-1;-4)

Comparison of residual noise from rain on overhead glazing		
Type of glazing	Composition (mm)	Residual noise level (1)
Polycarbonate (cellular)	20	71 dB (A)
Double-glazing with sGG STADIP PROTECT	6 (12) 8.8	52 dB (A)
Double-glazing sGG CLIMALIT SILENCE	6 (12) 8.8A	46 dB (A)
	8.8 A (12) 6.8A	39 dB (A)

(1) Test simulated in a reverberation chamber, where water is poured onto test samples at a gradients of 10°, at a rate of 50 litres / m<sup>2</sup> / hour, from a height of 3m.

## Performance

### Acoustic insulation

The sound reduction indices are measured in accordance with standard BS EN ISO 140-3 and form a measurement report which is issued by the approved laboratory.

### Safety

sGG STADIP SILENCE meets the same safety levels as sGG STADIP and sGG STADIP PROTECT of identical composition (same glass thickness and same overall thickness of PVB(A) and PVB).

SGG CLIMALIT SILENCE									
Double glazing									
External pane		SGG PLANILUX				SGG PLANILUX			SGG STADIP
Internal pane		SGG STADIP SILENCE				SGG STADIP SILENCE			
Composition (1)	mm	4 (12) 6.4A	6 (12) 6.4A	6 (12) 8.4A	8 (12) 8.4A	10 (12) 8.4A	6 (16) 8.8A	10 (12) 8.8A	8.8A (20) 12.8A
Thickness	mm	22	24	26	28	30	31	31	42
Weight	kg/m <sup>2</sup>	25,5	30,5	35,5	40,5	45,5	36	46	52
Light factor									
LT	%	80	79	78	77	76	77	76	74
LRe	%	15	14	14	14	14	14	14	14
LRI	%	14	14	14	14	14	14	14	13
uv	%	2	2	2	2	2	<1	<1	<1
Energy factor									
T	%	63	60	58	56	54	57	53	49
Re	%	12	12	12	11	11	12	11	10
A1	%	10	15	15	18	22	15	22	24
A2	%	14	13	16	15	14	17	15	16
Solar factor g		0,73	0,71	0,70	0,68	0,65	0,70	0,65	0,63
Shading Coefficient SC		0,84	0,81	0,80	0,78	0,75	0,80	0,75	0,72
U-value	W/(m <sup>2</sup> .K)								
Air		2,8	2,8	2,8	2,8	2,8	2,7	2,8	2,7
Sound reduction indices									
R <sub>w</sub>	dB	34	37	38	40	42	39	42	49
C	dB	-1	-1	-1	-1	-1	-2	-2	-2
C <sub>tr</sub>	dB	-4	-5	-4	-5	-5	-6	-5	-6
R <sub>A</sub>	dB	33	36	37	39	41	37	40	47
R <sub>A,tr</sub>	dB	30	32	34	35	37	33	37	43

(1) The letter A signifies an acoustic PVB interlayer.

Double-glazing			
External pane		SGG PLANILUX	
Internal pane		SGG STADIP SILENCE PLANITHERM TOTAL	
Composition (2)		6 (12) 8.4A	10 (12) 8.4A
Low-E coating position	face	3	3
Thickness	mm	26.5	31
Weight	kg/m <sup>2</sup>	35.5	46
Light factor			
LT	%	76	74
LRe	%	12	11
LRI	%	12	12
UV	%	1	<1
Solar radiant heat factors			
T	%	46	43
Re	%	20	17
A1	%	17	25
A2	%	16	15
Solar factor g		0.61	0.57
Shading coefficient		0.70	0.65
U-value	W/(m <sup>2</sup> .K)		
Air		1.6	1.6
Argon 90%		1.3	1.3
Sound reduction indices			
R <sub>w</sub>	dB	38	42
C	dB	-1	-1
C <sub>tr</sub>	dB	-5	-5
R <sub>A</sub>	dB	37	40
R <sub>A,tr</sub>	dB	33	37

(2) External pane

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## Installation Guidelines

See DOUBLE-GLAZING.



*Private residence*

## Standards and Regulations

SGG CLIMAPLUS SILENCE double-glazed units meet the requirements of standard BS EN 1279 and will receive the relevant CE marking when it is officially in force.

In the context of marking, the acoustic insulation values may be subject to modification. Please consult our website [www.saint-gobain-glass.com](http://www.saint-gobain-glass.com) to find the final values once it is officially in force.