

# COMMERCIAL PRODUCT PERFORMANCE GUIDE

HIGH PERFORMANCE SOLAR  
CONTROL GLASS

**BUILDING GLASS UK AND IRELAND**

Project: Factory 2050 Product: SSG COOL-LITE SKN 165 II



**SAINT-GOBAIN**

# SGG COOL-LITE® HIGH PERFORMANCE SOLAR CONTROL PRODUCT RANGE

Sealed Unit Configuration (6-14-4)		Visible Light		Energy Factors			Solar Factor	Shading Coefficient	U-Value	Normal Internal Emissivity (Single Outer Pane)	Selectivity
Outer Pane (Coating on Face 2)	Inner Pane	Total Light Transmission %	External Reflection %	Direct Transmission %	External Reflection %	Absorbion %	g-value	SC	Argon (90%) W/m²K		
sgg COOL-LITE XTREME 70/33 II	sgg PLANICLEAR	70	11	31	37	32	0.33	0.38	1.0	0.01	2.12
sgg COOL-LITE XTREME 60/28 II	sgg PLANICLEAR	61	14	26	43	31	0.28	0.32	1.0	0.01	2.18
sgg COOL-LITE XTREME 50/22 II	sgg PLANICLEAR	47	16	19	35	46	0.21	0.24	1.0	0.01	2.24
sgg COOL-LITE SKN 176 II	sgg PLANICLEAR	70	13	35	34	31	0.37	0.43	1.0	0.01	1.89
sgg COOL-LITE SKN 165 II	sgg PLANICLEAR	61	16	32	34	35	0.34	0.39	1.0	0.01	1.79
sgg COOL-LITE SKN 154 II	sgg PLANICLEAR	52	18	26	30	45	0.28	0.32	1.0	0.01	1.86
sgg COOL-LITE SKN 144 II	sgg PLANICLEAR	42	20	20	31	49	0.23	0.26	1.1	0.03	1.83
sgg COOL-LITE ST 150	sgg PLANITHERM ULTRA N II	45	19	32	20	48	0.37	0.42	1.1	0.86	1.22
sgg COOL-LITE ST 150	sgg PLANITHERM ONE T	40	22	27	23	49	0.33	0.37	1.0	0.86	1.21

All the above hold CE marked performance accreditation for the products in their annealed and tempered state.

Sealed Unit Configuration (8.8SS*-16-6)		Visible Light		Energy Factors			Solar Factor	Shading Coefficient	U-Value	BS EN 356 Secure by Design	BS EN 12600 Impact Safety	Acoustic Rw (C;Ctr)
Outer Pane (Coating on Face 2)	Inner Pane	Total Light Transmission %	External Reflection %	Direct Transmission %	External Reflection %	Absorbion %	g-value	SC	Argon (90%) W/m²K			
sgg STADIP SILENCE COOL-LITE XTREME 70/33	sgg PLANICLEAR	69	11	30	29	41	0.32	0.37	1.0	P2A	1B1	42 -(2;7)
sgg STADIP SILENCE COOL-LITE SKN 176	sgg PLANICLEAR	69	13	33	30	37	0.35	0.41	1.0	P2A	1B1	42 -(2;7)
sgg STADIP SILENCE COOL-LITE SKN 165	sgg PLANICLEAR	60	16	30	29	41	0.32	0.37	1.0	P2A	1B1	42 -(2;7)

Please note that all the of the above configurations should be subject to a thermal safety check before specification.

- **sgg COOL-LITE® XTREME** is a range of extremely selective solar control glazing for the commercial market. The low solar factor and high light transmittance make it the ideal product for architects and specifiers looking to achieve the best selectivity.
- **sgg COOL-LITE® SKN** is a range of solar control glazing options for use in commercial & residential buildings. The range is designed to balance high performance solar control with high light transmittance and neutral aesthetics to create light comfortable interiors.
- **sgg COOL-LITE® ST** is a versatile solar control glass which can be curved, enamelled or screen-printed to give greater architectural flexibility and technical capability.
- **sgg STADIP® & sgg STADIP® SILENCE (SS)** are laminated glazing products that provide additional security, safety, UV and acoustic benefits.
- **sgg PLANICLEAR®** All coatings feature on this base substrate as standard.

Availability - Please consult one of our Technical Specification Managers for more information and availability.

# SGG PLANITHERM® HIGH PERFORMANCE LOW-E PRODUCT RANGE

Sealed Unit Configuration (6-16-6)		Visible Light		Energy Factors			Solar Factor	Shading Coefficient	U-Value
Outer Pane (Coating on Face 2)	Inner Pane	Total Light Transmission %	External Reflection %	Direct Transmission %	External Reflection %	Absorbtion %	g-value	SC	Argon (90%) W/m²K
sgg PLANITHERM ONE T	sgg PLANICLEAR	67	21	45	35	19	0.54	0.62	1.0
sgg PLANITHERM ULTRA N II	sgg PLANICLEAR	79	12	55	27	18	0.63	0.72	1.1
sgg PLANITHERM TOTAL+	sgg PLANICLEAR	80	12	62	19	19	0.71	0.82	1.2

SEALED UNIT CONFIGURATION (6-16-6.8SS)		Visible Light		Energy Factors			Solar Factor	Shading Coefficient	U-Value
Outer Pane (Coating on Face 2)	Inner Pane	Total Light Transmission %	External Reflection %	Direct Transmission %	External Reflection %	Absorbtion %	g-value	SC	Argon (90%) W/m²K
sgg PLANITHERM ONE T	sgg STADIP SILENCE	68	23	43	35	23	0.48	0.55	1.0
sgg PLANITHERM ULTRA N II	sgg STADIP SILENCE	79	12	52	26	22	0.58	0.67	1.1
sgg PLANITHERM TOTAL+	sgg STADIP SILENCE	79	12	58	19	23	0.66	0.75	1.2

- **sgg PLANITHERM®** is a range of high performance low-emissivity (low-E) glass coatings that provide a good level of solar control for a variety of applications.
- **sgg PLANITHERM® ONE T** is a high performing low-E glass developed for specifications where the best thermal insulation is needed, with a centre pane U-value of 1.0W/m²k when used in a 16mm 90% argon cavity.
- **sgg PLANITHERM® ULTRA N** is a high performance low-E glass developed for specifications where a high level of thermal insulation is required, with a centre pane U-value of 1.1W/m²k in a 16mm 90% argon cavity.
- **sgg PLANITHERM® TOTAL+** is a market leading high performance low-E glass developed specifically for the UK market, and it is optimised for Window Energy Ratings (WERs), which makes it one of the most energy efficient low-E glass products available.
- **sgg PLANICLEAR** All coatings feature on this base substrate as standard.

# SGG PARSOL/ANTELIO BODY TINTS SOLAR CONTROL RANGE

Sealed Unit Configuration (6-16-6)		Visible Light		Energy Factors			Solar Factor	Shading Coefficient	U-Value
Outer Pane	Inner Pane (Coating on Face 3)	Total Light Transmission %	External Reflection %	Direct Transmission %	External Reflection %	Absorption %	g-value	SC	Argon (90%) W/m <sup>2</sup> K
SGG PARSOL GREY	SGG PLANITHERM ONE T	33	8	23	14	63	0.30	0.34	1.0
SGG PARSOL GREY	SGG PLANITHERM ULTRA N II	38	6	29	12	59	0.35	0.40	1.1
SGG PARSOL BRONZE	SGG PLANITHERM ONE T	37	9	25	16	59	0.32	0.37	1.0
SGG PARSOL BRONZE	SGG PLANITHERM ULTRA N II	43	7	31	13	56	0.37	0.43	1.1
SGG PARSOL GREEN	SGG PLANITHERM ONE T	56	16	27	11	61	0.33	0.38	1.0
SGG PARSOL GREEN	SGG PLANITHERM ULTRA N II	64	10	32	8	60	0.38	0.44	1.1
SGG ANTELIO CLEAR	SGG PLANITHERM ONE T	36	35	27	42	31	0.33	0.38	1.0
SGG ANTELIO CLEAR	SGG PLANITHERM ULTRA N II	41	33	32	39	29	0.38	0.44	1.1
SGG ANTELIO SILVER	SGG PLANITHERM ONE T	53	38	36	46	18	0.43	0.5	1.0
SGG ANTELIO SILVER	SGG PLANITHERM ULTRA N II	60	33	43	41	16	0.49	0.57	1.1

- SGG **PARSOL**<sup>®</sup> is a range of body-tinted glass to give both tinted aesthetics and solar control properties.
- SGG **ANTELIO**<sup>®</sup> is a range of solar control glass with a reflective appearance that can be curved, enamelled or screen-printed to give greater architectural flexibility and technical capability.

Combining these solar control glazing options with either SGG **PLANITHERM ONE T** or SGG **PLANITHERM ULTRA N II** creates an insulating sealed unit with exceptionally low centre pane U-values as well as an element of solar control.

## sgg STADIP® & STADIP SILENCE® LAMINATED GLASS RANGE

Configuration of Unit*	Frequency						Rw (C;Ctr)	RW	Rw,Ct	Rw,Ctr
	125	250	500	1000	2000	4000				
6mm / 16mm / 6mm	22	22	30	38	34	38	33 (-1;-4)	33	32	29
6mm / 16mm / 6.4mm	24	23	35	44	37	49	37 (-2;-5)	37	35	32
6mm / 16mm / 6.8mm SS	23	25	36	46	49	56	39 (-2;-6)	39	37	33
6mm / 16mm / 8.8mm SS	25	28	39	49	48	52	42 (-2;-7)	42	40	-
10mm / 16mm / 8.8mm	27	32	42	43	37	51	38 (-1;-4)	38	37	34
10mm / 12mm / 10.8mm	28	35	43	47	44	55	43 (-2;-6)	43	41	37
10mm / 16mm / 12.8mm	23	36	43	37	41	53	40 (-2;-6)	40	38	34
6mm / 16mm / 8.8mm SS	21	27	39	50	45	50	39 (-2;-6)	39	37	33
6mm / 12mm / 9.5mm SS	24	27	37	42	36	45	37 (-3;-6)	37	34	31
8mm / 15mm / 8.8mm SS	25	30	41	49	44	52	42 (-3;-8)	42	39	34
8mm / 16mm / 10.8mm SS	26	31	42	49	42	55	42 (-3;-7)	42	39	35
8mm / 20mm / 12.8mm SS	24	34	44	49	43	58	44 (-2;-7)	44	42	37
10mm / 15mm / 8.8mm SS	23	35	42	48	47	55	44 (-3;-7)	44	41	37
10mm / 16mm / 12.4mm SS	26	39	44	46	45	60	44 (-2;-5)	44	42	39
12mm / 15mm / 8.8mm SS	28	35	43	48	49	56	45 (-2;-6)	45	43	39
12mm / 20mm / 12.8mm SS	34	40	48	47	48	63	48 (-1;-4)	48	47	44
10.8mm SS / 24mm / 14.8mm SS	34	43	51	54	57	72	53 (-2;-7)	53	51	46

- sgg **STADIP**\* is a laminated product that provides additional security, safety & UV benefits over and above annealed, heat strengthened or tempered glass.
- sgg **STADIP SILENCE (SS)** is a laminated product that provides all the benefits of sgg **STADIP**\* and with additional high acoustic performance.

\*SS denotes the use of sgg **STADIP SILENCE**\* acoustic laminate interlayer.

All acoustic performances are tested and certified in accordance with CE marking. Acoustic test reports can be requested through Saint Gobain Glass.



## Building Glass UK and Ireland

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# SAINT-GOBAIN BUILDING GLASS UK & IRELAND GLOSSARY OF TERMS

## LIGHT TRANSMITTANCE (LT)

The proportion of the visible spectrum that is transmitted through the glass.

## U-VALUE

This is a measure of the rate of heat loss of a building component. It is expressed as Watts per square metre, per degree Kelvin,  $W/m^2K$ .

## SHADING COEFFICIENT (SC)

The solar factor (total transmittance) of a glass relative to that of 3mm clear float glass (0.87) and is used as a performance comparison. The lower the shading coefficient number, the lower the amount of solar heat transmitted.

## LIGHT REFLECTANCE (LRE)

The proportion of the visible spectrum that is reflected by the glass.

## SOLAR FACTOR (G)

The percentage of total solar radiant heat energy transmitted through glazing (the sum of energy transmitted directly and energy absorbed and re-emitted to the interior).

## WEIGHTED NOISE REDUCTION (RW)

A single figure rating for the sound insulation of building elements. Includes a weighting for the human ear and measures actual sound transmittance.

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