

PRODUCT RANGE



PRODUCT RANGE

ENERGY SAVING AND SOLAR CONTROL

PRODUCT		U-value (W/m²K)			Visible light		Solar energy		Sound reduction
		Accordance with EN673-2011			Accordance with EN410-2011				Calculated values
Single glass	Thickness (mm)	Air	Ar 90%	Kr 63%; Ar 27%	LT (%)	LRe (%)	A1	SF	Rw(C;Ctr)dB
SGG PLANICLEAR	4	5,8			91	8	5	0,88	30 (-2;-2)
SGG PLANICLEAR	6	5,7			90	8	7	0,87	32 (-1;-2)
SGG PLANICLEAR	8	5,6			89	8	10	0,85	33 (-1;-2)
SGG PLANICLEAR	10	5,6			89	8	12	0,84	35 (-1;-2)
SGG DIAMANT extra clear	4	5,8			91	8	2	0,90	30 (-2;-2)
SGG DIAMANT extra clear	6	5,7			91	8	3	0,90	32 (-1;-2)
SGG DIAMANT extra clear	8	5,6			91	8	4	0,89	33 (-1;-2)
SGG DIAMANT extra clear	10	5,6			90	8	5	0,88	35 (-1;-2)
Insulating glass without LowE									
SGG CLIMALIT	4-16-4	2,7			83	15	5	0,80	30 (-1;-4)
SGG CLIMALIT	4-12-4-12-4	1,9			76	21	6	0,73	31 (-1;-5)
Thermal insulation									
SGG CLIMAPLUS*	4-16-4PlthXN	1,36	1,12		82	12	7	0,65	30 (-1;-4)
SGG CLIMAPLUS ONE*	4-16-4PlthOne	1,29	1,04		72	22	8	0,52	30 (-1;-4)
SGG CLIMAPLUS RELAX*	4-16-4PlthRelax	1,36	1,12		70	12	8	0,53	30 (-1;-4)
SGG CLIMATOP*	4-12-4-12-4-PlthXN	1,26	1,02		75	29	7	0,60	31 (-1;-5)
SGG CLIMATOP ONE*	4-12-4-12-4PlthOne	1,22	0,97		66	27	7	0,49	31 (-1;-5)
SGG CLIMATOP RELAX*	4-12-4-12-4PlthRelax	1,26	1,02		64	18	7	0,50	31 (-1;-5)
SGG CLIMATOP*	4PlthXN-12-4-12-4PlthXN	0,92	0,70	0,56	66	24	12	0,45	31 (-1;-5)
SGG CLIMATOP ONE*	4PlthOne-12-4-12-4PlthOne	0,90	0,67	0,51	59	32	12	0,38	31 (-1;-5)
SGG CLIMATOP RELAX*	4PlthRelax-12-4-12-4PlthRelax	0,94	0,72	0,56	54	13	26	0,37	31 (-1;-5)
SGG CLIMATOP*	4PlthXN-16-4-16-4PlthXN	0,75	0,58	0,53	75	16	11	0,54	32 (-2;-5)
SGG CLIMATOP ONE*	4PlthOne-16-4-16-4PlthOne	0,71	0,53	0,47	59	32	12	0,38	32 (-2;-5)
SGG CLIMATOP RELAX*	4PlthRelax-16-4-16-4PlthRelax	0,75	0,58	0,53	54	13	26	0,37	32 (-2;-5)
* SWISSPACER improves the Uw-value on average by 0,1 W/m²K									
Thermal insulation with solar control									
SGG COOL-LITE XTREME 60/28 (neutr)	6-16-6PLC	1,29	1,04		60	14	31	0,28	33 (-1;-4)
SGG COOL-LITE SKN 154 (neutr)	6-16-6PLC	1,29	1,04		52	19	36	0,28	33 (-1;-4)
SGG COOL-LITE SKN 165 (neutr)	6-16-6PLC	1,29	1,04		61	17	31	0,34	33 (-1;-4)
SGG COOL-LITE SKN 174 (neutr)	6-16-6PLC	1,36	1,12		69	11	29	0,41	33 (-1;-4)
SGG COOL-LITE SKN 176 (neutr)	6-16-6PLC	1,29	1,04		70	13	27	0,37	33 (-1;-4)
SGG COOL-LITE SKN 145 (neutr)	6-16-6PLC	1,32	1,08		41	19	40	0,22	33 (-1;-4)
SGG COOL-LITE SKN 144 II (neutr)	6-16-6PLC	1,36	1,12		41	20	48	0,23	33 (-1;-4)
Thermal insulation with solar control on extra clear DIAMANT glass									
SGG COOL-LITE XTREME 60/28 DIAMANT (neutr)	6-16-6DIAM	1,29	1,04		61	14	25	0,29	33 (-1;-4)
SGG COOL-LITE SKN 054 (neutr)	6-16-6DIAM	1,29	1,04		53	19	31	0,29	33 (-1;-4)
SGG COOL-LITE SKN 065 (neutr)	6-16-6DIAM	1,29	1,04		62	17	26	0,35	33 (-1;-4)
SGG COOL-LITE SKN 074 (neutr)	6-16-6DIAM	1,36	1,12		70	11	24	0,42	33 (-1;-4)
SGG COOL-LITE SKN 045 (neutr)	6-16-6DIAM	1,32	1,08		42	19	35	0,23	33 (-1;-4)
SGG COOL-LITE SKN 044 II (neutr)	6-16-6DIAM	1,36	1,12		42	20	45	0,24	33 (-1;-4)
Solar control									
SGG COOL-LITE ST 108 (silver)	6-16-6PlthXN	1,34	1,10		8	44	55	0,08	33 (-1;-4)
SGG COOL-LITE ST 120 (silver)	6-16-6PlthXN	1,35	1,12		19	32	56	0,18	33 (-1;-4)
SGG COOL-LITE ST 136 (grey)	6-16-6PlthXN	1,36	1,12		34	23	53	0,28	33 (-1;-4)
SGG COOL-LITE ST 150 (neutr)	6-16-6PlthXN	1,36	1,12		46	19	44	0,38	33 (-1;-4)
SGG COOL-LITE ST 167 (neutr)	6-16-6PlthXN	1,36	1,12		61	21	25	0,49	33 (-1;-4)
SGG COOL-LITE STB 136 (blue)	6-16-6PlthXN	1,36	1,12		33	19	55	0,29	33 (-1;-4)
SGG COOL-LITE STB 120 (blue)	6-16-6PlthXN	1,36	1,12		20	21	63	0,19	33 (-1;-4)
SGG COOL-LITE ST 450 (green)	6-16-6PlthXN	1,36	1,12		37	14	70	0,24	33 (-1;-4)
SGG ANTELIO Clear (neutr) coating #1	6-16-6PlthXN	1,36	1,12		42	33	23	0,39	33 (-1;-4)
SGG ANTELIO Clear (neutr) coating #2	6-16-6PlthXN	1,36	1,12		42	28	27	0,4	33 (-1;-4)
SGG ANTELIO Silver (silver) coating #1	6-16-6PlthXN	1,36	1,12		61	33	9	0,51	33 (-1;-4)

PRODUCT	Thickness (mm)	U-value (W/m ² K)			Visible light		Solar energy		Sound reduction
		Air	Ar 90%	Kr 63%; Ar 27%	LT (%)	LRe (%)	A1	SF	Calculated values
SGG ANTELIO Silver (silver) coating #2	6-16-6PlthXN	1,36	1,12		61	32	11	0,51	33 (-1;-4)
SGG ANTELIO Emerald (green) coating #1	6-16-6PlthXN	1,36	1,12		48	30	48	0,30	33 (-1;-4)
SGG ANTELIO Emerald (green) coating #2	6-16-6PlthXN	1,36	1,12		48	21	59	0,31	33 (-1;-4)
SGG ANTELIO Bronze (bronze) coating #1	6-16-6PlthXN	1,36	1,12		21	32	50	0,22	33 (-1;-4)
SGG ANTELIO Bronze (bronze) coating #2	6-16-6PlthXN	1,36	1,12		22	12	66	0,24	33 (-1;-4)
SGG MIRASTAR (silver) coating #1	6-16-6PlthXN	1,36	1,12		3	60	38	0,06	33 (-1;-4)
SGG MIRASTAR (silver) coating #2	6-16-6PlthXN	1,36	1,12		3	55	47	0,07	33 (-1;-4)
SGG PARSOL bronze	6-16-6PlthXN	1,36	1,12		44	7	51	0,39	33 (-1;-4)
SGG PARSOL grey	6-16-6PlthXN	1,36	1,12		39	6	55	0,36	33 (-1;-4)
SGG PARSOL green	6-16-6PlthXN	1,36	1,12		66	10	55	0,39	33 (-1;-4)

FIRE PROTECTION

PRODUCT	Class	Thickness/type (mm)	Thickness tolerance (mm)	Size tolerance (mm)	Weight (kg/m ²)	U-value (W/m ² K) EN673	LT (%) EN410	Sound reduction Rw (dB)	Temperature range (°C)
E=Integrity									
Glass with the E classification provides a physical barrier against flames, smoke and hot, toxic gases. Glass remains transparent in the event of a fire.									
PYROSWISS	E30	6 PY	±0,2	±2	15	5,7	89	32	is not sensitive
PYROSWISS	E30	8 PY	±0,3	±2	20	5,7	88	34	is not sensitive
PYROSWISS	E30	10 PY	±0,3	±2	25	5,6	88	36	is not sensitive
PYROSWISS	E30	12 PY	±0,3	±2	30	5,5	87	37	is not sensitive
PYROSWISS SATINOVO	E30	6 PY SAT	±0,2	±2	15	5,7	DNA	32	is not sensitive
PYROSWISS STADIP	E30	66.2 (12.76)	±1	±2	31	5,5	85	38	is not sensitive
PYROSWISS CLIMALITE	E30	6PY-14Ar-6PY	±1	±3	31	2,6	79	33	is not sensitive
EW=Integrity+radiation reduction									
Glass with the EW classification provides the same protection as category E glass, but it also keeps the level of radiated heat below 15kW/m ² .									
VETROFLAM	EW60	6 VF	±0,2	±2	15	3,9	80	32	is not sensitive
VETROFLAM STADIP	EW60	66.2 (12,76)	±0,4	±3/-2	31	5,5	78	35	is not sensitive
VETROFLAM CLIMAPLUS	EW60	6kirgas-14Ar-6VF	±1	±3	31	1,5	73	33	is not sensitive
CONTRAFLAM LITE	EW30	13 CFL	±2-1	±2	30	5,2	87	37	+45/-10
CONTRAFLAM LITE CLIMAPLUS	EW30	6PlthUN-14Ar-13CFL	±3-2	±2	45	1,1	76	DNA	+60/-40*
CONTRAFLAM LITE	EW60	14 CFL	±2-1	±2	31	5,1	85	38	+45/-10
CONTRAFLAM LITE CLIMAPLUS	EW60	6PlthUN-14Ar-13CFL	±2	±2	47/46	1,1	76	DNA	+60/-40*
EI=Integrity+insulation									
Glass with the EI classification offers the highest level of heat insulation. At a distance of one meter from the glass, the temperature will not exceed 25°C during the specified time frame. EI glass contains an intumescent interlayer that expands and becomes opaque layer in the event of a fire.									
CONTRAFLAM 30	EI30	16 CF	±2-1	±2	34	4,8	86	38	+45/-10
CONTRAFLAM CLIMAPLUS 30	EI30	6PlthUN-14Ar-16CF	±3-2	±2	49	1,1	75	42	+60/-40*
CONTRAFLAM 60	EI60	25 CF	±3-2	±2	52	4,3	82	41	+45/-10
CONTRAFLAM CLIMAPLUS 60	EI60	6PlthUN-14Ar-25CF	±3-2	±2	67	1,1	73	44	+60/-40*
CONTRAFLAM 90	EI90	36 CF	±3-2	±2	72	3,7	80	45	+45/-10
CONTRAFLAM 120	EI120	58 CF	±5-3	±2	108	2,2	67	46	+45/-10
CONTRAFLAM STRUCTURE is frameless for flush-glazed interiors and exteriors, allowing it to blend into the surrounding architecture.									
CONTRAFLAM STRUCTURE LITE 30	EW30	20 CFS LITE	±2-1	±2	42	4,8	83	DNA	+45/-10
CONTRAFLAM STRUCTURE LITE 60	EW60	20 CFS LITE	±2-1	±2	42	4,8	83	DNA	+45/-10
CONTRAFLAM STRUCTURE 30	EI30	23 CFS	±2-1	±2	52	4,8	81	DNA	+45/-10
CONTRAFLAM STRUCTURE 60	EI60	31 CFS	±3-2	±2	69	4,3	78	DNA	+45/-10

* After installation in unheated buildings keep storage temperature max +45/-10 °C

DNA - data not available. Other products and classifications upon request. Fire protection glass must be installed in an approved installation solution. Use in a non-approved solution may mean that the product does not have the fire-protection properties stated.

PRODUCT RANGE

SOUND REDUCTION

PRODUCT		U-value (W/m ² K)		Visible light		Solar energy		Sound reduction	
		Accordance with EN673-2011		Accordance with EN410-2011		Tested values			
Single glass	Thickness (mm)	Air	Ar 90%	LT (%)	LRe (%)	A1	SF	Report	RW(C;Ctr) dB
SGG STADIP SILENCE 33.1	6,38	5,7		90	8	14	0,82	CSl2006027	35 (0;-3)
SGG STADIP SILENCE 44.1	8,38	5,6		89	8	16	0,81	IGU 6887	37 (-1;-3)
SGG STADIP SILENCE 44.2	8,76	5,6		89	8	18	0,79	CSl2006025	37 (0;-3)
SGG STADIP SILENCE 55.1	10,38	5,6		89	8	18	0,80	CSl2006015	38 (0;-2)
SGG STADIP SILENCE 55.2	10,76	5,6		88	8	20	0,78	CSl2006024	38 (0;-2)
SGG STADIP SILENCE 64.1	10,38	5,6		89	8	18	0,80	CSl2006014	38 (-1;-3)
SGG STADIP SILENCE 64.2	10,76	5,6		88	8	20	0,78	CSl2006023	38 (0;-2)
SGG STADIP SILENCE 66.1	12,38	5,5		88	8	19	0,78	CSl2006013	39 (0;-2)
SGG STADIP SILENCE 66.2	12,76	5,5		88	8	22	0,77	CSl2006022	39 (0;-2)
SGG STADIP SILENCE 68.2	14,76	5,4		87	8	23	0,76	TNO2003213	40 (-1;-3)
SGG STADIP SILENCE 88.2	16,76	5,4		87	8	25	0,74	TNO2003214	41 (0;-3)
Double glazed unit									
SGG CLIMAPLUS ACOUSTIC	4-16-6PlthXN	1,4	1,1	82	12	7	0,65	CSl2006054	35 (-2;-5)
SGG CLIMAPLUS ACOUSTIC	8-16-4PlthXN	1,4	1,1	81	12	12	0,63	CSl2006052	36 (-2;-5)
SGG CLIMAPLUS ACOUSTIC	4-16-44.2PlthXN	1,4	1,1	81	12	7	0,65	CSl2006033	37 (-2;-6)
SGG CLIMAPLUS ACOUSTIC	44.1-16Ar-4PlthXN	1,4	1,1	81	12	18	0,60	CSl(Cz)16811	38 (-2;-6)
SGG CLIMAPLUS ACOUSTIC	8-16-44.2PlthXN	1,4	1,1	80	12	12	0,62	CSl2006046	37 (-1;-5)
SGG CLIMAPLUS ACOUSTIC	44.1-16Ar-6PlthXN	1,4	1,1	80	12	18	0,60	CZl150/11	39 (-1;-4)
SGG CLIMAPLUS SILENCE	6-16-44.1PlthXN(A)	1,4	1,1	80	12	10	0,63	CSl2006048	40 (-2;-6)
SGG CLIMAPLUS ACOUSTIC	8-15-55.2PlthXN	1,4	1,1	79	12	12	0,62	CSTC2002255	41 (-2;-5)
SGG CLIMAPLUS SILENCE	44.2(A)-16Ar-6PlthXN	1,4	1,1	80	12	22	0,59	IFT15215	42 (-2;-7)
SGG CLIMAPLUS ACOUSTIC	66.1-15-8PlthXN	1,4	1,1	79	12	18	0,60	CSTC2002256	43 (-2;-6)
SGG CLIMAPLUS SILENCE	8-16Ar-55.2PlthXN(A)	1,4	1,1	79	12	12	0,62	IFT15218	44 (-2;-6)
SGG CLIMAPLUS SILENCE	10-16-66.1PlthXN(A)	1,3	1,1	78	12	15	0,61	CSTC2002244	45 (-1;-5)
SGG CLIMAPLUS SILENCE	44.2(A)-20-64.2PlthXN	1,4	1,1	79	12	21	0,59	CSl2006042	46 (-1;-5)
SGG CLIMAPLUS SILENCE	44.2(A)-20-66.2PlthXN(A)	1,4	1,1	78	12	22	0,58	CSl2006041	49 (-2;-6)
SGG CLIMAPLUS SILENCE	44.2(A)-24-66.2PlthXN(A)	1,4	1,1	78	12	22	0,58	CSl2006040	50 (-2;-7)
SGG CLIMAPLUS SILENCE	64.2(A)-24-86.2PlthXN(A)	1,4	1,1	77	12	24	0,57	CSl2006039	51 (-1;-4)
Triple glazed unit									
SGG CLIMATOP ACOUSTIC	6-12-4-12-4PlthXN	1,3	1,0	75	20	8	0,71	CSl2007061	35 (-1;-5)
SGG CLIMATOP ACOUSTIC	8-12-4-12-4PlthXN	1,2	1,0	75	20	11	0,70	CSl2007060	36 (-1;-5)
SGG CLIMATOP SILENCE	44.2(A)-12-4-12-4PlthXN	1,2	1,0	74	20	19	0,64	CSl2007058	37 (-2;-6)
SGG CLIMATOP ACOUSTIC	44.1-12-4-12-4PlthXN	1,2	1,0	75	20	16	0,66	CSl2007059	38 (-1;-5)
SGG CLIMATOP ACOUSTIC	8-12Ar-4-12Ar-6PlthXN	1,2	1,0	74	20	11	0,69	IFT2006304	39 (-1;-5)
SGG CLIMATOP ACOUSTIC	10-12Ar-4-12Ar-6PlthXN	1,2	1,0	74	20	13	0,68	IFT2006302	40 (-1;-3)
SGG CLIMATOP ACOUSTIC	44.2-12Ar-4-15Ar-6PlthXN	1,1	0,9	74	20	18	0,64	IFT13_001521_11_35	41 (-2;-6)
SGG CLIMATOP SILENCE	6-12Ar-4-12Ar-44.1PlthXN(A)	1,2	1,0	74	20	8	0,70	IFT2006300	42 (-1;-5)
SGG CLIMATOP ACOUSTIC	44.1-14Ar-4-14Ar-6PlthXN	1,1	0,9	74	20	16	0,66	CSl2009352	42 (-2;-7)
SGG CLIMATOP SILENCE	6-12Ar-44.1-12Ar-44.1PlthXN(A)	1,2	1,0	73	20	8	0,67	IFT2006301	44 (-2;-6)
SGG CLIMATOP SILENCE	8-12Ar-4-12Ar-44.1PlthXN(A)	1,2	1,0	74	20	11	0,68	IFT2006305	45 (-2;-6)
SGG CLIMATOP ACOUSTIC	10-12Ar-6-12Ar-44.1PlthXN	1,2	1,0	73	20	13	0,66	IFT2006299	46 (-2;-6)
SGG CLIMATOP ACOUSTIC	44.2-12Ar-6-12Ar-33.1PlthXN	1,2	1,0	73	20	18	0,63	IFT152110	46 (-2;-6)
SGG CLIMATOP SILENCE	44.1(A)-12Ar-4-12Ar-44.1PlthXN(A)	1,2	1,0	73	20	17	0,65	IFT2006307	47 (-2;-6)
SGG CLIMATOP SILENCE	66.1(A)-12Ar-6-12Ar-44.1PlthXN(A)	1,2	1,0	72	20	21	0,62	IFT2006306	50 (-2;-6)

What acoustic configuration should I use?

There are many different configurations of SGG STADIP SILENCE that can be used, and which is the most effective solution for you will depend on many factors including where in your home the glass will be used, whether it is being used to prevent air-borne or impact noise and the intensity and frequency of the noise.

Will using an acoustic glass stop all noise from entering my house?

No, it will however reduce the amount of noise that both enters and leaves your home by approximately 3-4dB over standard double-glazing, which is an audible difference. The noise reduction gained will be dependent upon the quality of your window frames and the type and level of noise you are trying to cut out.

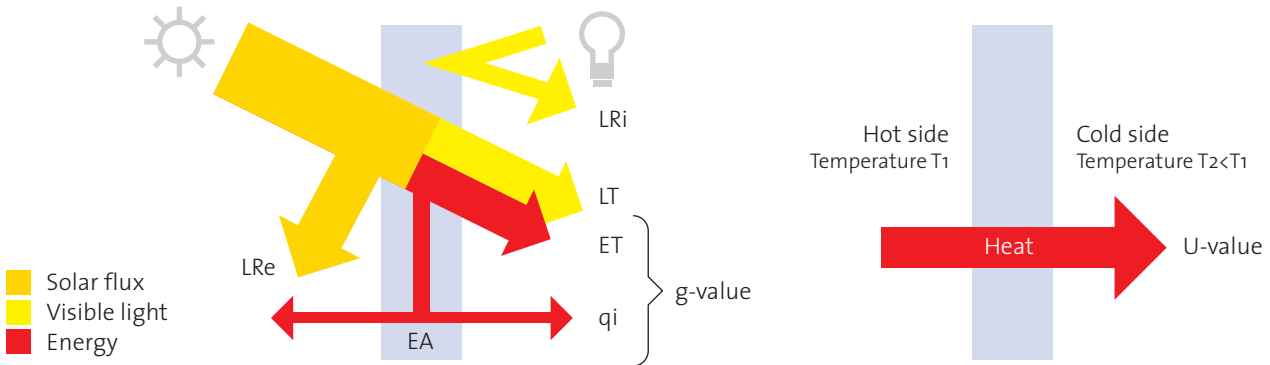
SAFETY AND SECURITY

PRODUCT	Thickness (mm)	Kg/m ²	Class	Sound reduction Rw(C;Ctr)dB	Remarks:
Personal safety EN 12600					
SGG SECURIT	4	10	1C3	30 (-2;-2)	Is used to minimize the risk of injuries in case of glass breakage.
SGG SECURIT	5	12,5	1C3	31 (-2;-2)	
SGG SECURIT	6	15	1C2	32 (-1;-2)	
SGG SECURIT	8	20	1C2	33 (-1;-2)	
SGG SECURIT	10	25	1C1	35 (-1;-2)	
SGG SECURIT	12	30	1C1	36 (-1;-2)	
SGG STADIP 33.1	6,38	15	2B2	33 (-1; -2)	
SGG STADIP 33.2	6,76	16	1B1	33 (-1;-2)	
SGG STADIP 44.1	8,38	20	2B2	34 (-1; -3)	
SGG STADIP 44.2	8,76	21	1B1	34 (-1;-2)	
SGG STADIP 55.1	10,38	25	2B2	35 (-1; -2)	
SGG STADIP 66.1	12,38	30	2B2	36 (0; -2)	
Protection against vandalism EN 356					
SGG STADIP PROTECT P1A 33.2	7	16	P2A	33 (-1; -2)	Protection against manual attack
SGG STADIP PROTECT P2A 44.2	9	21	P2A	34 (-1; -2)	
SGG STADIP PROTECT P3A 44.3	9	21	P3A	34 (-1; -2)	
SGG STADIP PROTECT P4A 44.4	9,5	22	P4A	34 (0; -2)	
SGG STADIP PROTECT P5A 44.6	10	22	P5A	35 (-1; -2)	
Protection against burglary EN 356					
SGG STADIP PROTECT P6B 66.8	15	33	P6B	NPD	Homes, pharmacy shops, shopping centers, boutiques
SGG STADIP PROTECT P7B 66.66	23	50	P7B	NPD	Museums, galleries, police stations, antique shops
SGG STADIP PROTECT P8B 55.5.666	27	57	P8B	NPD	Jewellery and pelt shops, prisons
Protection against firearm attack (acc EN 1063) S=splinters NS= no splinters					Weapon type
SGG STADIP PROTECT HN 112-S	12	32	BR1-S	NPD	Rifle, 0.22 LR
SGG STADIP PROTECT HN 222-S	22	49	BR2-S	NPD	Handgun, 9 mm Luger
SGG STADIP PROTECT HN 231-NS	31	73	BR2-NS	NPD	Handgun, 9 mm Luger
SGG STADIP PROTECT HN 323-S	23	54	BR3-S	NPD	Handgun, 0.357 Magnum
SGG STADIP PROTECT HN 344-NS	44	104	BR3-NS	NPD	Handgun, 0.357 Magnum
SGG STADIP PROTECT HN 432-S	32	75	BR4-S	NPD	Handgun, 0.44 Magnum
SGG STADIP PROTECT HN 454-NS	54	129	BR4-NS	NPD	Handgun, 0.44 Magnum
SGG STADIP PROTECT HN 536-S	37	85	BR5-S	NPD	Rifle, 5,56 x 45
SGG STADIP PROTECT HN 558-NS	58	139	BR5-NS	NPD	Rifle, 5,56 x 45
SGG STADIP PROTECT HN 650-S	50	116	BR6-S	NPD	Rifle, 7,62 x 51
SGG STADIP PROTECT HN 673-NS	73	175	BR6-NS	NPD	Rifle, 7,62 x 51
SGG STADIP PROTECT HN 781-NS	81	195	BR7-NS	NPD	Rifle, 7,62 x 51
Protection against explosive attack EN 13541					Pressure loading Pr (kPa)
SGG STADIP PROTECT BS110-S	10	22	ER1-S	NPD	>50 <100
SGG STADIP PROTECT BS118-NS	18	40	ER1-NS	NPD	>50 <100
SGG STADIP PROTECT BS218-S	18	40	ER2-S	NPD	>100 <150
SGG STADIP PROTECT BS226-NS	26	63	ER2-NS	NPD	>100 <150
SGG STADIP PROTECT BS331-S	31	73	ER3-S	NPD	>150 <200
SGG STADIP PROTECT BS427-S	27	68	ER4-S	NPD	>200 <250
SGG STADIP PROTECT BS433-NS	33	83	ER4-NS	NPD	>200 <250

What is a Nickel sulphide breakage and how does it happen?

The cause of spontaneous breakage lies in the glass itself. It is generally on thermally tempered or Fully Tempered glass that is affected. NiS comes in two types: at high temperatures above 379 C it is stable. Under this, also at room temperature, it slowly changes its state. The change is even slower the lower the temperature is. The unusual with NiS is that the inclusion expands. It subsequently pushes against the surrounding glass with increasing force. After a certain time it creates a fissure inside the glass and the glass shatters "spontaneously" with loud crack falling into thousands of small pieces. Until a spontaneous breakage occurs, a long time at normal ambient temperature can pass. When a piece of glass has a NiS inclusion, the length of time until a breakage occurs depends on the temperature to which the glass is subject. Without any better method, a "test" was established which destroyed such infected glass at the very end of the production sequence. This is the so-called Heat Soak Test (HST). The remaining breakage risk after HST is minimal, but it is not zero. An annual remaining breakage risk is 1%. This means that from 100 buildings each with 10 000 m2 of fully tempered HST only one single spontaneous breakage will occur in the year.

DAYLIGHT AND SOLAR ENERGY FACTORS



TECHNICAL INFORMATION ABOUT GLASS




LT – light transmittance:	% of visible light passing through the glazing
LRe – external light reflectance:	% of visible light, reflected outside the glazing
LRi – internal light reflectance:	% of visible light, reflected to the inside of the building
ET – energy transmittance:	% of solar energy directly transmitted through the glazing
EA – energy absorbance:	% of solar energy absorbed by the glazing
qi – energy:	% of absorbed energy, reflected to the inside of the building
SF / g-value:	total solar energy entering into the building. Figure between 0 and 1. The lower the g value, the more efficient is the glazing in blocking the entry of solar energy
SC – shading coefficient:	$SC = g / 0,87$
S – selectivity:	ratio between the light transmittance (LT) and the solar factor (g-value). The higher the selectivity value, the better is the glazing to cut more solar energy than visible light
U-value:	thermal transfer coefficient. Quantity of heat transferred through the glazing due to the temperature difference between inside and outside. The lower the U-value, the better the thermal insulation performance
Rw:	Weighted noise reduction. A single figure rating for the sound insulation of building elements. Includes a weighting for the human ear and measures actual sound transmittance
Rw; C:	The abbreviation for the sound reduction index when the spectrum adaptation term C is applied to the single number weighted sound reduction index (RW) using pink noise as a sound source
Rw; Ctr:	The abbreviation for the sound reduction index when the spectrum adaptation term Ctr is applied to the single number weighted sound reduction index (RW) using traffic noise as a sound source

SAINT-GOBAIN TRADEMARKS

SGG PLANICLEAR	clear float glass
SGG DIAMANT	extra clear low-iron glass
SGG CLIMALIT	double- or triple-glazed IGU
SGG CLIMAPLUS	double-glazed LowE IGU
SGG CLIMATOP	triple-glazed LowE IGU
SGG PLANITHERM	LowE glass with advanced thermal insulation properties
SGG SECURIT	thermally-toughened safety glass
SGG STADIP	laminated safety and security glass
SGG STADIP SILENCE	acoustic PVB laminated safety glass
SGG PLANIDUR	heat-strengthened glass which has undergone a special heat treatment in order to increase its strength against mechanical and thermal loading
SGG SERALIT	an opaque or translucent glass, patterned or fully coated with coloured ceramic enamel. The colour is applied using a textile screen
SGG COOL-LITE	Cool-Lite SKN and Cool-Lite Xtreme combining high performance with excellent neutrality, for optimal solar control and thermal efficiency Cool-Lite ST and Cool-Lite KN gives the glass its solar control properties and its distinctive appearance

SGG ANTELIO	solar control properties and a reflective appearance Antelio Clear, Antelio Silver, Antelio Emerald and Antelio Bronze
SGG MIRASTAR	chromium mirror
SGG PARSOL	body-tinted glass for solar control Parsol grey, Parsol bronze and Parsol green
SGG SATINOVO	matt finished translucent glass, uniformly smooth and satin-like appearance
SGG BIOCLEAN	dual-action self-cleaning glass but should never be considered as a glass which requires no maintenance
SWISSPACER	warm edge spacer bar
CHROMATECH ULTRA	warm edge spacer bar
CE-MARKING	
All Saint-Gobain basic products, coated glass units, thermally toughened glass units, laminated glass units and insulated glass units declarations of performance can be found: http://www.saint-gobain-glass.com/ce/	

MOBILE APPS


	<p>Glass Compass</p> <p>Thanks to the Saint-Gobain Glass Compass, you can easily determine the best performing glazing for your windows based on the geographical location of your home and its orientation. Test our Savings & Economies module to determine the best glazing according to your personal parameters and needs such as winter and summer comfort, acoustic, safety and security, self-cleaning. The Energy Calculator shows the savings you can achieve by using the best performing windows for your home.</p>
	<p>dB Station</p> <p>Thanks to the acoustic simulator of Saint-Gobain Glass, you can easily determine the best performing glazing for your windows according to the noise pollution of your exterior environment. Different noisy situations commonly encountered were identified and for each of these situations, the application restores the sound insulation provided by various compositions of insulating glazings.</p>
	<p>Glass Vision</p> <p>A virtual world that helps you choose the right interior glass for your home, office or other needs. This application not only gives you the aesthetics of the glass in terms of pattern and color but also privacy (transparency and translucency of the glass). Using this application you will be able to visualize how this glass will look in its environment.</p>


	<p>Glass Design</p> <p>A visual showcase of some of the Better Interior projects featuring Saint-Gobain Glass products. This App is our portfolio of creative interior design with SGG Interior Glass. Browse either by Building Types or by Applications or by Products. Or better still, try the in-built Project Locator Map to find the project in your city.</p>
	<p>Glass Façade</p> <p>Glass Façade is a portfolio of all our projects from world over incorporating our finest range of exterior glass products. Browse either by Building Types or by External Appearance or by Products or by Country. Or better still, try the in-built Project Locator Map to find the projects in your city.</p>
	<p>Glass Pro</p> <p>GlassPro is an interactive software which simulates a realistic image synthesis of different glazing products on facades of buildings. GlassPro enables the user to visualize the rendering of a glazing product under a variety of lighting condition (overcast or sunny) and several interior design settings (with or without white/gray binds).</p>



Discover the Mobile Applications from our brands available on AppStore (IOS) and Google Play (Android).

SOFTWARE

	<p>Caluwin</p> <p>Caluwin is an energy calculating app that lets users change window materials, styles, glass, spacer bars and other components to compare the performance and energy savings of different windows. Caluwin shows architects, technicians and engineers as well as designers and developers how much energy and money they will save with their new windows. It also calculates the reduction in CO₂ emissions.</p>
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	<p>Calumen</p> <p>CALUMEN is a calculation tool enabling you to produce performance reports for numerous combinations of Saint-Gobain Glass products in single, double or triple glazing.</p>
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ABOUT OUR COMPANY

GLASSOLUTIONS Baltiklaas is the largest manufacturer in Estonia producing insulated glass, laminated glass and tempered glass. Baltiklaas was founded in 1994 and soon became a part of SAINT-GOBAIN group. Belonging to SAINT-GOBAIN will ensure continuous innovation and ability to use management knowledge at the international level.

2009 was joined under **SAINT GOBAIN GLASS ESTONIA** previously separately operated companies Saint-Gobain Glassolutions Baltiklaas, Saint-Gobain Sekurit Eesti and Saint-Gobain Autover-Autoklaas.

ABOUT SAINT-GOBAIN

Saint-Gobain is a leading global supplier for the home and business to business markets.

The company develops, produces and sells a wide range of construction materials. The focus is on developing innovative products and solutions that contribute in particular to saving energy and environmental protection as well as increasing quality of life. To achieve this Saint-Gobain works closely with well-known universities and scientific institutions.

Saint-Gobain was founded in France in 1665 and is one of the world's top 100 industrial companies. The Group employs 191 500 people and is represented in 64 countries.



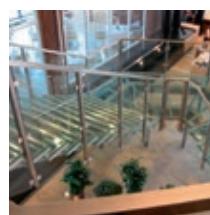
Science Center Ahhaa and Tigutorn, Tartu



Shopping center Tasku, Tartu



Estonian Forensic Institute, Tallinn



Hotel Euroopa, Tallinn



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