

ACOUSTICAL INFORMATION

The acoustic performance of glazing assemblies is expressed in two terms: Sound Transmission Class (STC) is used to measure the sound transmission loss of interior walls, ceilings and floors; and Outdoor-Indoor Transmission Class (OITC), which measures the sound transmission loss of exterior glazing applications. High sound transmission loss – good sound insulation – is desired in many commercial curtain wall applications. Limiting sound transmission through glazing requires review and testing of the entire glazing system. Laminated glass and insulating glass tend to produce higher OITC ratings because the laminate dampens vibration and the air space limits sound transmission. The following chart indicates typical sound transmission losses for various glass configurations.

TYPICAL SOUND TRANSMISSION LOSS (dB)

Glass Configuration	Frequency in Hertz (Hz)																			STC	OITC
	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000			
6mm	23	25	25	24	28	26	29	31	33	34	34	35	34	30	27	32	37	41	31	29	
12mm	26	30	26	30	33	33	34	36	37	35	32	32	36	40	43	46	50	51	36	33	
3mm - 76 PVB - 3mm	25	26	28	27	29	29	30	32	34	35	35	36	36	35	35	38	43	46	35	31	
6mm - 76 PVB - 6mm	28	31	29	31	32	33	32	33	35	36	36	35	36	40	43	46	48	51	37	33	
6mm - 1.52 PVB - 6mm	27	28	27	30	31	31	33	35	36	37	37	37	36	37	41	44	48	51	37	33	
3mm - 10mm as - 3mm	26	23	23	20	23	19	23	27	29	32	35	39	44	47	48	41	36	43	31	26	
6mm - 12mm as - 6mm	29	22	26	18	25	25	31	32	34	36	39	40	39	35	36	46	52	58	35	28	
3mm - 12mm as - 3mm - 76 PVB - 3mm	27	29	25	24	25	27	29	31	35	38	40	41	42	43	46	50	49	53	37	31	
6mm - 12mm as - 3mm - 76 PVB - 3mm	27	27	24	28	26	33	34	35	38	40	42	43	42	40	42	47	51	54	39	32	
6mm - 12mm as - 6mm - 76 PVB - 6mm	30	26	30	30	29	36	37	37	39	39	41	42	43	44	46	51	53	55	41	35	

ACOUSTIC INSULATING GLASS

LamiGlass® Sound Control

Safety and Acoustic Performance

PRODUCT DESCRIPTION

LamiGlass® Sound Control combines excellent acoustic performance with all benefits of traditional laminated safety glass.

Due to the use of an optimised PVB interlayer, an improved product is available, which specifically offers a clearly measurable increase of noise protection, especially in insulating.

ALL BENEFITS IN THE OVERVIEW

- Ideal combination of supreme attributes in one product
- Safety properties of laminated glass combined with acoustic insulation of cast resin
- Sound reduction (R_w) up to 51 dB
- Safe break-behavior even with highest demands of the pendulum impact test
- Safety class up to P2A with ball drop test
- According to requirements on linear jointed glazing and glazing against sudden fall
- Can be processed like conventional laminated glass
- Supreme optical attributes (light stability, clearness, transparency)
- Long lifetime and edge stability through optimal glass-adhesion of PVB-interlayer
- Minimized UV-transmission
- Available as jumbo and leh end size
- Highest light transmittance, neutral colour and optimized thermal insulation in combination with Guardian ClimaGuard® Premium Low-E glass
- Can be combined with all Guardian function glasses



PERFORMANCE DATA - SINGLE GLAZING

Type	Glazing	Inter-layer	Thick-ness mm	R _w dB	C _{tr} dB	U-Value En673 W/(m²K)	Safety level Ball drop EN 356	Safety level Pendulum impact EN 12 600	Light Trans- mission %	Solar Factor EN 410 %
SC 44.2	4/0, 76/4	SC	9	37	-3	5,7	P1A	1(B)1	90	81
SC 44.4	4/1, 52/4	SC	10	37	-3	5,7	P2A	1(B)1	90	79
SLA 44.1	4/0, 50/4	SLA	8	38	-4	5,7	P1A	1(B)1	90	81
SLA 44.2	4/0, 76/4	SLA	9	38	-4	5,7	P2A	1(B)1	90	81
SC 55.2	5/0, 76/5	SC	11	38	-3	5,6	P1A	1(B)1	89	79
SC 66.2	6/0, 76/6	SC	13	40	-3	5,6	P1A	1(B)1	89	78
SC 88.2	8/0, 76/8	SC	17	42	-3	5,4	P1A	1(B)1	87	75

PERFORMANCE DATA - INSULATING GLASS*

Type	Glazing	Inter-layer	Thick-ness mm	R _w dB	C _{tr} dB	U-Value En673 W/(m²K)	Safety level Ball drop EN 356	Safety level Pendulum impacat EN 12 600	Light Trans- mission %	Solar Factor EN 410 %
25/36	44.2 / 12 / 4	PVB	25	36	-5	1,3 (Ar)	P2A	1(B)1	79	58
27/37	33.4 / 16 / 4	PVB	27	37	-6	1,1 (Ar)	P4A	1(B)1	80	58
48/37	6 / 14 / 44.1 / 14 / 6	SLA	48	37	-5	0,6 (Ar)	P1A	1(B)1	69	48
32/39	44.4 / 16 / 6	PVB	32	39	-6	1,1 (Ar)	P4A	1(B)1	79	57
29/39	44.2 / 16 / 4	SC	29	39	-5	1,1 (Ar)	P1A	1(B)1	79	58
31/41	44.2 / 16 / 6	SC	31	41	-6	1,1 (Ar)	P1A	1(B)1	79	58
33/41	44.2 / 18 / 6	SC	33	41	-7	1,1 (Ar)	P2A	1(B)1	79	58
32/41	44.4 / 16 / 6	SC	32	41	-6	1,1 (Ar)	P1A	1(B)1	79	57
30/42	44.1 / 16 / 6	SLA	30	42	-6	1,1 (Ar)	P1A	1(B)1	79	58
35/42	55.2 / 16 / 8	SC	35	42	-6	1,1 (Ar)	P1A	1(B)1	78	57
45/42	44.2 / 12 / 4 / 12 / 8	SC	45	42	-6	0,7 (Ar)	P1A	1(B)1	69	46
33/42	44.2 / 16 / 8	SC	33	42	-7	1,1 (Ar)	P2A	1(B)1	78	58
34/42	44.4 / 18 / 6	SC	34	42	-6	1,1 (Ar)	P1A	1(B)1	79	57
29/43	44.1 / 14 / 6	SLA	29	43	-8	1,1 (Kr)	P1A	1(B)1	79	58
34/43	44.1 / 20 / 6	SLA	34	43	-7	1,1 (Ar)	P1A	1(B)1	79	58
37/43a	55.2 / 18 / 8	SC	37	43	-6	1,1 (Ar)	P1A	1(B)1	78	57
37/43b	66.2 / 16 / 8	SC	37	43	-6	1,1 (Ar)	P1A	1(B)1	78	56
37/43c	66.3 / 16 / 8	SC	37	43	-6	1,1 (Ar)	P1A	1(B)1	77	55
46/43	44.2 / 12 / 5 / 12 / 8	SC	46	43	-7	0,7 (Ar)	P1A	1(B)1	69	46
47/43	44.1 / 14 / 4 / 14 / 6	SLA	47	43	-7	0,6 (Ar)	P1A	1(B)1	70	47
34/44	44.1 / 16 / 10	SLA	34	44	-6	1,1 (Ar)	P1A	1(B)1	78	58
35/44b	44.2 / 16 / 10	SC	35	44	-6	1,1 (Ar)	P1A	1(B)1	78	58
36/44	44.1 / 20 / 8	SLA	36	44	-7	1,1 (Ar)	P1A	1(B)1	78	58
47/44	44.1 / 12 / 6 / 12 / 8	SLA	47	44	-7	0,7 (Ar)	P1A	1(B)1	69	46
39/45a	44.2 / 20 / 10	SC	39	45	-6	1,1 (Ar)	P1A	1(B)1	78	58
39/45b	66.3 / 16 / 10	SC	39	45	-4	1,1 (Ar)	P1A	1(B)1	77	55
37/45	55.2 / 16 / 10	SC	37	45	-7	1,1 (Ar)	P1A	1(B)1	78	57
36/45a	44.4 / 16 / 10	SC	36	45	-7	1,1 (Ar)	P2A	1(B)1	78	56
36/45b	44.1 / 18 / 10	SLA	36	45	-6	1,1 (Ar)	P1A	1(B)1	78	58
34/46	55.1 / 16 / 44.1	SLA/SLA	34	46	-7	1,1 (Ar)	P1A	1(B)1	78	57
36/46a	44.4 / 16 / 55.2	PVB/SC	36	46	-8	1,1 (Ar)	P4A	1(B)1	78	56
48/46	44.1 / 12 / 6 / 12 / 10	SLA	48	46	-7	0,7 (Ar)	P1A	1(B)1	69	46
38/47	44.2 / 16 / 66.2	SC/SC	38	47	-6	1,1 (Ar)	P1A	1(B)1	78	57
48/47	44.1 / 12 / 6 / 12 / 10	SLA	48	47	-7	0,5 (Kr)	P1A	1(B)1	69	46
38/48	44.2 / 16 / 66.3	SC/SC	38	48	-8	1,1 (Ar)	P1A	1(B)1	78	57
46/49	88.2 / 20 / 44.2	SC/SC	46	49	-5	1,4 (Ar)	P1A	1(B)1	76	53
41/49	44.2 / 20 / 66.2	SC/SC	41	49	-7	1,1 (Ar)	P1A	1(B)1	78	57
38/49	44.3 / 16 / 66.3	SC/SC	38	49	-7	1,1 (Ar)	P1A	1(B)1	77	56
42/50	44.3 / 20 / 66.3	SC/SC	42	50	-7	1,1 (Ar)	P1A	1(B)1	77	56
46/50	88.2 / 20 / 44.2	SC/SC	46	50	-6	1,1 (Ar)	P1A	1(B)1	76	53
46/51	88.2 / 16 / 66.2	SC/SC	46	51	-5	1,1 (Ar)	P1A	1(B)1	75	53

PVB Polyvinyl-Butyral-Interlayer (Ar)Argon
SC Sound-Control-PVB-Interlayer
SLA Acoustic-PVB-Interlayer

(Ar) Argon gas filling
(Kr) Krypton gas filling
R_{w,P}-value according to EN ISO 140-3 and 717

with ClimaGuard® Premium - coating on face 3 (triple glazing; face 2+5)

Notes: • Guardian reserves the right to change product performance characteristics without notice or obligation. • The performance values shown are nominal and subject to variations due to manufacturing tolerances. • Guardian performance data are calculated in accordance with the LBNL Window 5.2 computer analysis using an air mass of 1.5. • May require heat strengthening or tempering to resist potential thermal stresses. Please contact Guardian for assistance. • A slight shift in visible light refractance may be noticed after heat-treatment.