

Commercial glass performance guide

KlymetControl™ Double Glazing – Incorporating Clear Float Backing Glass

Product name	Nominal thickness	Visible light		Solar energy		UV trans	U - value	U - value	SHCG	Shading co.
		Trans.	Refl.	Trans.	Refl.		12mm air	12mm argon		
Float glass										
EnviroClear™	3+12+3	80	14	69	12	56	2.7	2.6	0.76	0.87
	4+12+4	80	14	66	12	52	2.7	2.6	0.74	0.85
	5+12+5	79	14	63	11	45	2.7	2.5	0.72	0.83
	6+12+6	78	14	60	11	45	2.7	2.5	0.70	0.81
	8+12+6	77	13	57	10	42	2.7	2.5	0.67	0.78
	10+12+6	76	13	54	9	39	2.6	2.5	0.64	0.74
	12+12+6	75	13	49	9	37	2.6	2.5	0.60	0.69
EnviroTone™ Grey	4+12+4	49	8	46	29	2.7	2.7	2.6	0.57	0.65
	5+12+5	42	7	39	24	2.7	2.7	2.5	0.52	0.60
	6+12+6	37	7	35	20	2.7	2.7	2.5	0.48	0.55
	10+12+6	24	5	22	10	2.6	2.6	2.5	0.36	0.42
	12+12+6	17	4	18	8	2.6	2.6	2.5	0.33	0.38
EnviroTone™ Green	4+12+4	73	12	46	8	31	2.7	2.6	0.56	0.65
	5+12+5	70	12	38	7	28	2.7	2.5	0.50	0.58
	6+12+5	68	11	37	7	23	2.7	2.5	0.48	0.56
	10+12+6	56	9	24	6	11	2.6	2.5	0.37	0.43
EnviroTone™ Bronze	4+12+4	53	8	48	8	25	2.7	2.6	0.58	0.67
	5+12+5	47	8	41	7	18	2.7	2.5	0.53	0.61
	6+12+5	45	7	3	6	16	2.7	2.5	0.49	0.57
	10+12+6	27	5	48	5	6	2.6	2.5	0.37	0.42
EnviroTone™ Ocean Blue ³	6+12+6	48	8	47	6	15	3.3	3.1	0.47	0.54

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Product name	Nominal thickness	Visible light		Solar energy		UV trans	U - value	U - value	SHCG	Shading co.
		Trans.	Refl.	Trans.	Refl.		12mm air	12mm argon		
Protekta™ laminated glass										
Clear	6.38+12+6	76	13	57	10	<1	2.7	2.5	0.67	0.77
Grey	6.38+12+6	36	6	35	7	<1	2.7	2.5	0.49	0.56
Bronze	6.38+12+6	42	7	37	7	<1	2.7	2.5	0.50	0.58
Translucent	6.38+12+6	48	8	37	7	<1	2.7	2.5	0.50	0.58
Green Plus	6.38+12+6	59	11	28	7	<1	2.7	2.5	0.40	0.46
Reflective										
Stopsol ² Bronze	4+12+4	24	16	32	15	8	2.7	2.6	0.43	0.49
	6+12+6	20	12	25	11	4	2.8	2.7	0.34	0.39
Stopsol ² Grey	4+12+4	22	14	30	14	8	2.7	2.6	0.41	0.47
	6+12+6	17	10	32	10	5	2.8	2.7	0.32	0.37
Solarflex ³ Clear	6+12+6	29	37	39	29	4	2.8	2.6	0.40	0.45
Solarflex ³ Blue	6+12+6	18	17	28	13	2	2.8	2.6	0.28	0.32
EnviroTone™ Plus										
Green	4+12+4	65	12	36	8	13	2.7	2.6	0.47	0.54
	5+12+5	64	12	35	8	15	2.7	2.5	0.46	0.53
	6+12+6	58	11	27	7	11	2.7	2.5	0.39	0.46
Grey	4+12+4	15	4	11	4	3	2.7	2.5	0.26	0.30
	6+12+6	8	4	6	4	1	2.7	2.5	0.21	0.25
Blue	6+12+6	47	8	27	6	17	2.7	2.5	0.39	0.46
	10+12+6	36	7	17	5	10	2.6	2.5	0.31	0.36

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Product name	Nominal thickness	Visible light		Solar energy		UV trans	U - value	U - value	SHCG	Shading co.
		Trans.	Refl.	Trans.	Refl.		12mm air	12mm argon		
KlymetShield™ Low E										
KlymetShield™ Clear (#2)	4+12+4	75	17	57	15	41	1.9	1.6	0.64	0.74
	6+12+6	73	16	52	14	36	1.9	1.6	0.61	0.71
KlymetShield™ Neutral										
	4+12+4	55	12	38	10	34	1.9	1.6	0.46	0.53
	6+12+6	56	12	36	10	30	1.9	1.6	0.45	0.52
KlymetShield™ Grey (#2)										
	4+12+4	45	9	38	9	18	1.9	1.6	0.46	0.53
	6+12+6	35	8	29	8	13	1.9	1.7	0.39	0.45
KlymetShield™ Green (#2)										
	4+12+4	68	15	41	10	25	1.9	1.7	0.49	0.56
	6+12+6	63	13	33	9	19	1.9	1.6	0.41	0.48
KlymetShield™ Green Plus (#2)										
	4+12+4	61	13	32	8	15	1.9	1.6	0.39	0.45
	6+12+6	54	11	24	7	10	1.9	1.6	0.32	0.37

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Product name	Nominal thickness	Visible light		Solar energy		UV trans	U - value	U - value	SHCG	Shading co.
		Trans.	Refl.	Trans.	Refl.		12mm air	12mm argon		
EVantage¹ Low E										
Grey (#2)	6+12+6	29	10	23	9	8	1.9	1.7	0.33	0.39
BlueGreen (#2)	6+12+6	51	21	29	12	13	1.9	1.7	0.38	0.44
Clear (#2)	6+12+6	60	29	46	21	24	1.9	1.7	0.55	0.63
Green (#2)	6+12+6	43	17	20	9	6	1.9	1.7	0.29	0.33
Blue (#2)	6+12+6	35	13	19	9	9	1.9	1.7	0.29	0.33
KlymetShield™ L										
Clear (#4)	6.38+12+6	73	16	51	12	<1	1.9	1.6	0.6	0.69
	8.38+12+6	72	16	49	12	<1	1.9	1.6	0.58	0.67
	10.38+12+6	71	16	47	12	<1	1.8	1.6	0.56	0.64
	12.38+12+6	70	16	45	11	<1	1.8	1.6	0.54	0.62
Neutral (#4)	8.38+12+6	53	11	33	9	<1	1.9	1.6	0.42	0.49
Grey (#4)	8.38+12+6	33	7	22	6	<1	1.9	1.6	0.31	0.36
Green (#4)	8.38+12+6	44	9	20	6	<1	1.9	1.6	0.29	0.33
SolTech¹										
Grey (#2)	6+12+6	27	6	19	6	10	1.9	1.6	0.28	0.33
Sunergy²										
Clear (#2)	4+12+4	61	12	44	12	39	2.1	1.9	0.53	0.61
Clear (#2)	6+12+6	60	12	41	11	34	2.1	1.9	0.51	0.59
Clear (#2)	10+12+6	55	12	40	11	33	2.1	1.9	0.49	0.56
Green (#2)	6+12+6	49	10	23	7	13	2.1	1.9	0.33	0.38
Azur (#2)	6+12+6	49	10	26	7	20	2.1	1.9	0.35	0.41

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KlymetControl™ Double Glazing –
Incorporating KlymetShield™ Clear Low E
Backing Glass (#3)

Product name	Nominal thickness	Visible light		Solar energy		UV trans	U - value	U - value	SHCG	Shading co.
		Trans.	Refl.	Trans.	Refl.		12mm air	12mm argon		
Float glass										
EnviroClear™	3+12+4	74	17	57	16	44	1.9	1.6	0.71	0.81
	4+12+4	74	17	56	15	42	1.9	1.6	0.69	0.78
	5+12+5	72	17	53	14	39	1.9	1.6	0.66	0.76
	6+12+6	73	16	52	14	36	1.9	1.6	0.66	0.76
	8+12+6	72	16	50	13	34	1.9	1.6	0.63	0.73
	10+12+6	70	15	47	12	31	1.9	1.6	0.60	0.69
	12+12+6	70	15	43	10	29	1.9	1.6	0.55	0.64
EnviroTone™ Grey	4+12+4	45	9	38	10	23	1.9	1.6	0.51	0.59
	5+12+5	40	8	34	9	21	1.9	1.6	0.48	0.54
	6+12+6	35	7	30	8	16	1.9	1.6	0.43	0.49
	10+12+6	22	5	18	6	8	1.9	1.6	0.30	0.35
	12+12+6	16	5	15	5	6	1.9	1.6	0.27	0.31
EnviroTone™ Green	4+12+4	67	15	39	10	25	1.9	1.6	0.51	0.58
	5+12+5	65	14	33	8	23	1.9	1.6	0.46	0.53
	6+12+6	63	13	32	8	19	1.9	1.6	0.43	0.50
	10+12+6	52	10	21	6	9	1.9	1.6	0.31	0.36
EnviroTone™ Bronze	4+12+4	49	10	40	10	20	1.9	1.6	0.53	0.61
	5+12+5	45	9	35	9	15	1.9	1.6	0.48	0.55
	6+12+6	41	8	31	8	12	1.9	1.6	0.44	0.51
	10+12+6	25	5	19	6	5	1.9	1.6	0.31	0.36

Commercial glass performance guide

KlymetControl™ Double Glazing –
Incorporating KlymetShield™ Clear Low E
Backing Glass (#3)

Product name	Nominal thickness	Visible light		Solar energy		UV trans	U - value	U - value	SHCG	Shading co.
		Trans.	Refl.	Trans.	Refl.		12mm air	12mm argon		
Protekta™ laminated glass										
Clear	6.38+12+6	71	19	50	12	<1	1.9	1.6	0.64	0.73
Grey	6.38+12+6	34	7	31	8	<1	1.9	1.6	0.44	0.51
Bronze	6.38+12+6	40	8	32	8	<1	1.9	1.6	0.46	0.53
Green	6.38+12+6	58	12	42	10	<1	1.9	1.6	0.56	0.65
Translucent	6.38+12+6	45	9	33	8	<1	1.9	1.6	0.46	0.53
Green Plus	6.38+12+6	55	12	24	8	<1	1.9	1.9	0.35	0.40
EnviroTone™ Plus										
Green	4+12+4	60	14	31	9	11	1.9	1.6	0.41	0.47
	5+12+5	61	14	31	9	13	1.9	1.6	0.41	0.48
	6+12+6	54	13	24	8	9	1.9	1.6	0.34	0.39
Grey	4+12+4	14	4	10	4	2	1.9	1.6	0.20	0.24
	6+12+6	7	4	5	4	1	1.9	1.6	0.15	0.18
Blue	6+12+6	43	9	23	7	13	1.9	1.6	0.34	0.39
	10+12+6	34	7	16	6	8	1.9	1.6	0.26	0.30
Reflective										
Stopsol ² Bronze	4+12+4	23	16	25	16	6	1.9	1.6	0.37	0.43
	6+12+6	18	12	25	13	4	1.9	1.6	0.29	0.34
Stopsol ² Grey	4+12+4	21	14	23	15	7	1.9	1.6	0.36	0.41
	6+12+6	16	10	28	11	4	1.9	1.6	0.37	0.32

Commercial glass performance guide

KlymetControl™ Double Glazing – Incorporating KlymetShield™ Clear Low E Backing Glass (#3)

Product name	Nominal thickness	Visible light		Solar energy		UV trans	U - value	U - value	SHCG	Shading co.
		Trans.	Refl.	Trans.	Refl.		12mm air	12mm argon		
KlymetShield™ Low E										
KlymetShield™ Clear (#2)	4+12+4	69	19	51	16	34	1.8	1.5	0.61	0.71
	6+12+6	67	19	47	15	29	1.8	1.5	0.59	0.68
KlymetShield™ Neutral	4+12+4	51	13	34	11	28	1.8	1.5	0.44	0.51
	6+12+6	52	13	32	11	24	1.7	1.5	0.43	0.50
KlymetShield™ Grey (#2)	4+12+4	42	10	33	10	15	1.8	1.5	0.43	0.50
	6+12+6	33	8	26	8	10	1.8	1.5	0.37	0.43
KlymetShield™ Green (#2)	4+12+4	63	17	37	11	20	1.8	1.5	0.46	0.53
	6+12+6	59	15	29	9	15	1.8	1.5	0.39	0.45
KlymetShield™ Green Plus (#2)	4+12+4	57	14	28	9	12	1.8	1.5	0.37	0.43
	6+12+6	50	13	22	8	8	1.8	1.5	0.31	0.35
EVantage¹ Low E										
Grey (#2)	6+12+6	27	11	20	9	7	1.8	1.5	0.31	0.36
BlueGreen (#2)	6+12+6	48	22	26	13	10	1.8	1.5	0.36	0.41
Clear (#2)	6+12+6	56	30	41	22	19	1.8	1.5	0.53	0.61
Green (#2)	6+12+6	40	18	18	9	5	1.8	1.5	0.27	0.31
Blue (#2)	6+12+6	33	14	17	9	7	1.8	1.5	0.27	0.31
SolTech¹										
Grey (#2)	6+12+6	25	6	17	7	8	1.8	1.5	0.27	0.31
Sunergy²										
Clear (#2)	4+12+4	57	14	40	13	31	1.8	1.5	0.50	0.58
Clear (#2)	6+12+6	56	14	38	12	27	1.8	1.5	0.49	0.56
Clear (#2)	10+12+6	55	13	35	11	25	1.8	1.5	0.46	0.53
Green (#2)	6+12+6	46	11	21	7	10	1.8	1.5	0.31	0.36
Azur (#2)	6+12+6	46	11	24	7	16	1.8	1.5	0.33	0.38

Commercial glass performance guide

Single Glass – Monolithic and Laminated

Product name	Nominal thickness	Visible light		Solar energy		UV trans	U - value	SHCG	Shading co.
		Trans.	Refl.	Trans.	Refl.				
Toughened and annealed									
EnviroClear™	4	89	8	81	7	67	5.9	0.84	0.97
	5	88	8	79	7	63	5.9	0.83	0.95
	6	87	7	77	7	61	5.8	0.81	0.94
	8	86	8	71	7	56	5.7	0.77	0.89
	10	85	8	67	7	52	5.7	0.75	0.86
	12	84	8	64	7	48	5.6	0.72	0.84
	15	82	7	59	6	45	5.5	0.70	0.81
	19	80	7	55	6	41	5.4	0.67	0.78
EnviroTone™ Grey	4	56	6	57	5	35	5.9	0.68	0.78
	5	48	5	51	5	31	5.8	0.64	0.74
	6	41	5	44	5	17	5.7	0.6	0.66
	8	33	5	31	5	14	5.7	0.51	0.59
	10	27	5	31	5	11	5.7	0.51	0.59
	12	21	4	25	5	7	5.6	0.47	0.55
EnviroTone™ Green	4	81	7	55	6	38	5.9	0.67	0.77
	5	79	7	49	5	34	5.8	0.63	0.73
	6	76	7	45	5	29	5.8	0.60	0.70
	10	63	6	29	5	11	5.9	0.7	0.81
EnviroTone™ Bronze	4	60	6	59	6	30	5.9	0.69	0.80
	5	55	6	52	5	23	5.8	0.65	0.75
	6	50	5	47	5	19	5.8	0.62	0.71
	10	34	5	36	5	9	5.7	0.54	0.63
EnviroTone™ Plus Blue	6	55	6	60	6	27	5.2	0.69	0.79

Commercial glass performance guide

Single Glass – Monolithic and Laminated

Product name	Nominal thickness	Visible light		Solar energy		UV trans	U - value	SHCG	Shading co.
		Trans.	Refl.	Trans.	Refl.				
EnviroTone™ Plus Grey	6	9	4	8	4	1	5.8	0.35	0.41
EnviroTone™ Plus Green	6	65	8	33	6	13	5.7	0.51	0.58
EnviroTone™ Plus Blue	6	53	6	33	5	23	5.8	0.52	0.6
EnviroTone™ Plus Grey	5	20	5	39	5	40	5.8	0.57	0.65
KristalClear™	4	91	8	90	8	73	5.8	0.91	1.05
	5	91	8	90	8	71	5.8	0.90	1.03
	6	91	8	89	8	70	5.7	0.90	1.03
	10	91	8	88	8	66	5.6	0.89	1.02
	12	91	8	87	8	64	5.5	0.88	1.01
	15	91	8	86	8	61	5.5	0.87	1
	19	90	8	84	8	59	5.5	0.86	0.99
Reflective Coatings									
Stopsol ² Bronze	4	26	34	38	27	9	5.8	0.49	0.56
	6	21	34	32	27	6	5.8	0.44	0.51
Stopsol ² Grey	4	24	34	36	27	10	5.9	0.47	0.54
	6	19	33	29	27	7	5.8	0.42	0.49
Solarflex ³ Clear	6	14	37	29	27	9	5.5	0.29	0.33
Solarflex ³ Green	6	12	28	26	14	3	5.5	0.26	0.30
Solarflex ³ Blue	6	8	17	25	14	4	5.5	0.25	0.29

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Product name	Nominal thickness	Visible light		Solar energy		UV trans	U - value	SHCG	Shading co.
		Trans.	Refl.	Trans.	Refl.				
Low E coatings									
KlymetShield™ Neutral (#2)	4	61	7	48	8	48	3.7	0.55	0.64
	6	60	7	46	7	46	3.7	0.54	0.62
KlymetShield™ Clear (#2)	4	82	10	66	10	49	3.7	0.70	0.81
	5	82	11	67	11	52	3.7	0.70	0.81
	6	82	10	66	10	49	3.7	0.70	0.81
	10	79	11	60	9	43	3.6	0.65	0.76
KlymetShield™ Grey (#2)	4	50	7	45	7	21	3.7	0.53	0.62
	6	40	6	37	7	16	3.7	0.47	0.55
KlymetShield™ Green (#2)	4	75	10	49	8	30	3.7	0.56	0.65
	6	71	9	39	7	23	3.7	0.49	0.57
KlymetShield™ Green Plus (#2)	4	68	9	37	7	18	3.7	0.47	0.54
	6	61	8	28	6	12	3.7	0.40	0.47
EVantage ¹ Clear (#2)	6	67	25	58	19	30	3.8	0.62	0.72
EVantage ¹ Blue Green (#2)	6	56	19	35	11	16	3.8	0.45	0.53
EVantage ¹ Grey (#2)	6	32	10	29	8	10	3.8	0.41	0.48
EVantage ¹ SuperBlue ¹ (#2)	6	39	12	23	8	10	3.8	0.37	0.43
EVantage ¹ SuperGreen ¹ (#2)	6	48	15	23	8	7	3.8	0.36	0.43
SolTech ¹ Grey (#2)	6	30	5	23	6	13	3.7	0.36	0.42
Sunergy ² Clear (#2)	4	69	9	54	10	49	4.2	0.61	0.70
	6	68	9	52	9	46	4.1	0.59	0.69
	10	66	8	48	9	42	4.1	0.57	0.66
Sunergy ² Green (#2)	6	56	8	28	6	12	4.1	0.42	0.49
Sunergy ² Grey (#2)	6	34	5	34	5	17	4.1	0.43	0.49
Sunergy ² Azure (#2)	6	56	7	31	6	25	4.1	0.45	0.51
Sunergy ² Dark Blue (#2)	6	40	6	37	6	17	4.1	0.37	0.43

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Single Glass – Monolithic and Laminated

Product name	Nominal thickness	Visible light		Solar energy		UV trans	U - value	SHCG	Shading co.
		Trans.	Refl.	Trans.	Refl.				
Laminated glass - annealed									
Protekta™ Clear	6.38	87	8	72	7	<1	5.7	0.79	0.91
	10.38	86	8	66	7	<1	5.6	0.74	0.85
Protekta™ Translucent	6.38	66	7	56	6	<1	5.7	0.67	0.78
	10.38	64	7	51	6	<1	5.6	0.64	0.74
Protekta™ Grey	6.38	42	5	47	6	<1	5.7	0.61	0.71
	10.38	41	5	42	5	<1	5.7	0.59	0.67
	12.38	41	5	41	5	<1	5.6	0.58	0.67
Protekta™ Green	6.38	71	7	63	6	<1	5.7	0.72	0.83
	10.38	70	7	57	6	<1	5.6	0.69	0.79
	12.38	69	7	56	6	<1	5.6	0.68	0.78
Protekta™ Green Plus	6.38	65	7	30	5	<1	5.7	0.50	0.58
	10.38	65	6	31	5	<1	5.6	0.51	0.59
	12.38	64	6	30	5	<1	5.6	0.51	0.58
KlymetShield™ L Clear (#4)	6.38	82	10	64	9	<1	3.6	0.68	0.79
	10.38	79	11	58	9	<1	3.6	0.64	0.74
KlymetShield™ L Neutral (#4)	6.38	59	7	42	7	<1	3.6	0.51	0.60
	10.38	62	8	40	7	<1	3.6	0.49	0.58
KlymetShield™ L Grey (#4)	6.38	37	6	27	6	<1	3.6	0.39	0.46
	10.38	38	6	26	6	<1	3.6	0.39	0.46
Sunergy ² Clear (#4)	6.38	67	9	51	9	<1	4.1	0.58	0.67
	10.38	65	9	46	8	<1	4.2	0.55	0.63
Sunergy ² Grey (#4)	6.38	33	6	30	6	<1	4.1	0.44	0.51

Notes

1. In the case of double glazing, the relevant thicknesses of either EnviroClear™ float glass, OptEma™ Low E float glass or KlymetShield™ Clear Low E float glass are used as the backing glass as indicated.
2. Values are calculated using both LBL Windows 5.2 software to NFRC-100 – 2001 and LBL Windows 6.3 software to NFRC 100-2010 conditions.
3. Where # appears next to the product name, this indicates the position of the coated surface of the glass.
4. Glass surfaces are counted from the exterior face of the building. For IGU's the first thickness indicated is the outer glass thickness, then 12 for the thickness of the air/argon space and then the relevant thickness of the inner panel.
5. The values given are centre of glass values. It is very important to note that the above listed glass performance will differ to that of a window assembly using these products.
6. The above information is, to the best of our knowledge, accurate. SOLOS Glass Industries Limited disclaims any liability for loss or damage arising from the use of such data.
7. It is recommended that a thermal assessment be carried out prior to specifying any type of performance glass to determine any risk of thermal breakage.

Definitions of values

1. Visible Trans. – Percentage of visible light that can pass directly through the glass – the higher the value the more visible light that will pass through.
2. Visible Refl. – Percentage of visible light that is reflected off the exterior.
3. Solar Trans. – Percentage of solar energy and normal incident light passing through the glass.
4. Solar Refl. – Percentage of solar energy and normal incident light reflected out.
5. UV trans. – Percentage of UV light transmitted measured in the light range of 300 – 380nm. The lower the number the better.
6. U Value – Measured in watts per m² per degree Celsius (w/m²°C) and is a measure of the rate of heat gain or loss through the glass due to environmental differences between outdoor and indoor air.
7. Shading Co. – Shading coefficient is the ratio of solar heat gain through the glass relative to that through 3mm clear glass. The lower the number the better the performance.
8. SHGC – Solar Heat Gain Coefficient – The proportion of total solar radiation that is transferred through the glass at normal incidence, it comprises the direct solar transmission and part of the solar absorption dissipated inwards by radiation and convection. The lower the number the better the solar performance.

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