

DuPont™ SentryGlas®
INTERLAYER

Control of solar energy with glass laminates made with SentryGlas® interlayer

Architectural design is enhanced with an abundance of natural light. Energy savings can often be accomplished by considering the solar control of glass design. Sunlight can cause heat gain within a structure, which is sometimes undesirable in terms of energy and air conditioning costs. Other times it may be appropriate in colder climates to maximize the heat retention to reduce heating costs.

The tables below show the solar control values for a limited number of laminated glass configurations. The values were calculated using the LBNL Window 5.2 software program. This is only a subset of configurations that can be calculated; specific customer configurations can be calculated upon request. Table 1 shows laminated clear glass configurations with SentryGlas®. Table 2 shows solar energy control characteristics for laminated glass configurations for different types of tinted glass. Definitions of the different calculated values can be found at the end of this bulletin.

See UV Control Technical Bulletin for more information.



Table 1: Solar Control Characteristics of Clear Glass Laminated with SentryGlas® Interlayer

Nominal Laminate Thickness	SentryGlas®	Glass Type	U-Value (W/m²·K)	SHGC	SC	Tvis, %
1/4 in (6 mm)	0.060 in (1.52 mm)	Clear	5.57	0.76	0.88	88
	0.090 in (2.28 mm)	Clear	5.39	0.74	0.86	85
7/16 in (11 mm)	0.060 in (1.52 mm)	Clear	5.49	0.73	0.84	86
	0.090 in (2.28 mm)	Clear	5.31	0.71	0.82	84
9/16 in (15 mm)	0.060 in (1.52 mm)	Clear	5.82	0.81	0.94	85
	0.090 in (2.28 mm)	Clear	5.82	0.81	0.94	85
1/4 in (6 mm)	0.060 in (1.52 mm)	Low-iron	5.90	0.91	1.04	91
	0.090 in (2.28 mm)	Low-iron	5.90	0.91	1.04	91
7/16 in (11 mm)	0.060 in (1.52 mm)	Low-iron	5.85	0.90	1.04	91
	0.090 in (2.28 mm)	Low-iron	5.31	0.81	0.94	87
9/16 in (15 mm)	0.060 in (1.52 mm)	Low-iron	5.43	0.84	0.96	90
	0.090 in (2.28 mm)	Low-iron	5.25	0.81	0.93	87

Table 2: Solar Control Characteristics of Tinted Glass Laminated with SentryGlas® Interlayer

Nominal Laminate Thickness	SentryGlas®	Glass Type	U-Value (W/m²·K)	SHGC	SC	Tvis, %
1/4 in (6 mm)	0.060 in (1.52 mm)	Bronze	5.57	0.58	0.67	49
	0.090 in (2.28 mm)	Bronze	5.39	0.57	0.66	47
1/4 in (6 mm)	0.060 in (1.52 mm)	Grey	5.57	0.53	0.62	40
	0.090 in (2.28 mm)	Grey	5.39	0.52	0.61	38
7/16 in (11 mm)	0.060 in (1.52 mm)	Bronze	5.49	0.51	0.59	37
	0.090 in (2.28 mm)	Bronze	5.31	0.50	0.59	36
7/16 in (11 mm)	0.060 in (1.52 mm)	Grey	5.49	0.46	0.54	28
	0.090 in (2.28 mm)	Grey	5.31	0.46	0.53	27
9/16 in (15 mm)	0.060 in (1.52 mm)	Bronze	5.43	0.47	0.55	31
	0.090 in (2.28 mm)	Bronze	5.25	0.47	0.55	30
9/16 in (15 mm)	0.060 in (1.52 mm)	Grey	5.43	0.43	0.50	22
	0.090 in (2.28 mm)	Grey	5.25	0.43	0.50	21

The U-Value is the measure of the rate at which heat is lost through a material.

The Solar Heat Gain Coefficient (SHGC) measures how well a product blocks heat caused by sunlight. The lower a window's SHGC, the less solar heat it transmits.

The Shading Coefficient (SC) is the ratio of total solar transmittance to the transmittance through 1/8-inch clear glass.

The visible transmittance (Tvis %) is the percentage of visible light that makes it through a material.

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