

# Solar Control Glass

 **ŞİŞECAM**  
TENTESOL

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TENTESOL TITANIUM

## Şişecam Tentesol & Şişecam Tentesol Titanium;

- Durable, easy to clean and resistant to hard climatic conditions.
- Manufactured in accordance with EN 1096 Glass in Building - Coated glass.
- The coating can be placed facing outside (surface:1) or inside (surface:2) of the building. Reflectance is emphasized with first, and color is emphasized with second surface applications.
- Can be toughened, heat strengthened and bent.
- Enameling is possible.

## Insulating Glass Unit<sup>(1)</sup>

Configuration	Coated Surface	Daylight (EN 410)		Solar Energy (EN 410)					Thermal Conductivity(U value, W/m <sup>2</sup> K) (EN 673)			
		Transmittance %	Reflectance Outdoor %	Reflectance Outdoor %	Absorption %	Direct Transmittance %	Solar Factor %	Shading Coefficient	12 mm Cavity		16 mm Cavity	
									Air	Argon	Air	Argon
Şişecam Tentesol Silver	#1	34	34	29	38	34	42	0.48	2.8	2.7	2.7	2.6
	#2	34	28	21	45	34	43	0.49	2.8	2.7	2.7	2.6
Şişecam Tentesol Green	#1	28	33	26	56	18	27	0.31	2.8	2.7	2.7	2.6
	#2	29	20	11	71	18	29	0.33	2.8	2.7	2.7	2.6
Şişecam Tentesol Gray	#1	17	34	27	52	21	30	0.34	2.8	2.7	2.7	2.6
	#2	17	10	10	69	21	32	0.37	2.8	2.7	2.7	2.6
Şişecam Tentesol Bronze	#1	20	33	28	50	22	31	0.36	2.8	2.7	2.7	2.6
	#2	20	12	11	66	23	34	0.39	2.8	2.7	2.7	2.6
Şişecam Tentesol Blue	#1	21	34	27	55	17	26	0.30	2.8	2.7	2.7	2.6
	#2	21	14	10	73	17	28	0.32	2.8	2.7	2.7	2.6

## Insulating Glass Unit with Şişecam Low-E Glass<sup>(2)</sup>

Configuration	Coated Surface	Daylight (EN 410)		Solar Energy (EN 410)					Thermal Conductivity(U value, W/m <sup>2</sup> K) (EN 673)			
		Transmittance %	Reflectance Outdoor %	Reflectance Outdoor %	Absorption %	Direct Transmittance %	Solar Factor %	Shading Coefficient	12 mm Cavity		16 mm Cavity	
									Air	Argon	Air	Argon
Şişecam Tentesol Silver	#1	33	34	36	41	23	31	0.36	1.6	1.3	1.3	1.1
	#2	33	27	29	48	23	32	0.37	1.6	1.3	1.3	1.1
Şişecam Tentesol Green	#1	28	33	27	59	14	20	0.23	1.6	1.3	1.3	1.1
	#2	28	19	12	74	14	22	0.25	1.6	1.3	1.3	1.1
Şişecam Tentesol Gray	#1	16	33	31	56	13	20	0.23	1.6	1.3	1.3	1.1
	#2	16	10	14	72	14	22	0.25	1.6	1.3	1.3	1.1
Şişecam Tentesol Bronze	#1	20	33	32	54	14	21	0.24	1.6	1.3	1.3	1.1
	#2	20	12	15	70	15	23	0.26	1.6	1.3	1.3	1.1
Şişecam Tentesol Blue	#1	20	33	29	59	13	19	0.22	1.6	1.3	1.3	1.1
	#2	21	14	11	76	13	21	0.24	1.6	1.3	1.3	1.1

## Insulating Glass Unit<sup>(1)</sup>

Configuration	Coated Surface	Daylight (EN 410)		Solar Energy (EN 410)					Thermal Conductivity(U value, W/m <sup>2</sup> K) (EN 673)			
		Transmittance %	Reflectance Outdoor %	Reflectance Outdoor %	Absorption %	Direct Transmittance %	Solar Factor %	Shading Coefficient	12 mm Cavity		16 mm Cavity	
									Air	Argon	Air	Argon
Şişecam Tentesol Titanium Silver	#1	58	36	29	21	51	58	0.67	2.8	2.7	2.7	2.6
	#2	58	35	25	24	51	59	0.67	2.8	2.7	2.7	2.6
Şişecam Tentesol Titanium Green	#1	46	35	25	48	27	35	0.40	2.8	2.7	2.7	2.6
	#2	46	25	13	59	28	37	0.43	2.8	2.7	2.7	2.6
Şişecam Tentesol Titanium Gray	#1	28	33	26	45	29	38	0.43	2.8	2.7	2.7	2.6
	#2	28	12	10	60	30	40	0.46	2.8	2.7	2.7	2.6
Şişecam Tentesol Titanium Turquoise	#1	40	33	24	49	26	34	0.39	2.8	2.7	2.7	2.6
	#2	40	18	11	62	27	35	0.41	2.8	2.7	2.7	2.6
Şişecam Tentesol Titanium Blue	#1	35	35	26	48	26	34	0.39	2.8	2.7	2.7	2.6
	#2	35	17	12	61	27	36	0.41	2.8	2.7	2.7	2.6

## Insulating Glass Unit with Şişecam Low-E Glass<sup>(2)</sup>

Configuration	Coated Surface	Daylight (EN 410)		Solar Energy (EN 410)					Thermal Conductivity(U value, W/m <sup>2</sup> K) (EN 673)			
		Transmittance %	Reflectance Outdoor %	Reflectance Outdoor %	Absorption %	Direct Transmittance %	Solar Factor %	Shading Coefficient	12 mm Cavity		16 mm Cavity	
									Air	Argon	Air	Argon
Şişecam Tentesol Titanium Silver	#1	56	35	38	24	37	46	0.53	1.6	1.3	1.3	1.1
	#2	56	33	35	27	38	46	0.53	1.6	1.3	1.3	1.1
Şişecam Tentesol Titanium Green	#1	45	34	26	51	23	29	0.33	1.6	1.3	1.3	1.1
	#2	45	24	14	63	23	30	0.34	1.6	1.3	1.3	1.1
Şişecam Tentesol Titanium Gray	#1	27	33	30	50	21	28	0.32	1.6	1.3	1.3	1.1
	#2	28	11	15	64	21	30	0.34	1.6	1.3	1.3	1.1
Şişecam Tentesol Titanium Turquoise	#1	39	32	25	53	21	28	0.32	1.6	1.3	1.3	1.1
	#2	39	18	12	66	22	29	0.33	1.6	1.3	1.3	1.1
Şişecam Tentesol Titanium Blue	#1	34	34	27	52	21	28	0.32	1.6	1.3	1.3	1.1
	#2	34	17	13	66	21	29	0.33	1.6	1.3	1.3	1.1

The above performances are valid for;

- 1) 6 mm Şişecam Tentesol, Şişecam Tentesol Titanium outer pane+12/16 mm intermediary space-dry air/argon\*+6 mm Şişecam Clear Float Glass inner pane.
- 2) 6 mm Şişecam Tentesol, Şişecam Tentesol Titanium outer pane+12/16 mm intermediary space-dry air/argon\*+6 mm Şişecam Low-E Glass inner pane.

\*Gas filling rate 90%

- "Daylight" and "Solar Energy" properties are calculated with "TNO Science and Industry - WIS 3.01" program using spectral measurements in compliance with EN 410.
- "U-value" is calculated with "TNO Science and Industry - WIS 3.01" program according to EN 673. The emissivity measurements used for calculations are in compliance with EN 673 (Annex A) and EN 12898.
- Şişecam Tentesol and Şişecam Tentesol Titanium are subjected to thermal breakage risks due to higher rates of energy absorption, higher solar radiation and temperature differences between day and night. In order to avoid thermal breakage risks, toughening (tempering) or heat strengthening is recommended.

**Daylight Transmittance (%)** : The ratio of the visible spectrum (light) that is transmitted through glass.

**Daylight Reflectance (outdoor) (%)** : The ratio of the visible spectrum (light) that is reflected outside by glass.

**Solar Factor** : The percentage of total solar radiant heat energy entering the room through the glass. The lower solar factor means better solar control.

**Shading Coefficient** : The ratio of solar factor of a particular glass type to the solar factor of 3 mm clear float glass, set in identical conditions. The lower shading coefficient means better solar control.

**U value (W/m<sup>2</sup>K)** : A measure of the rate of heat loss of a building component. The lower U value means better heat control and more comfort in winter.