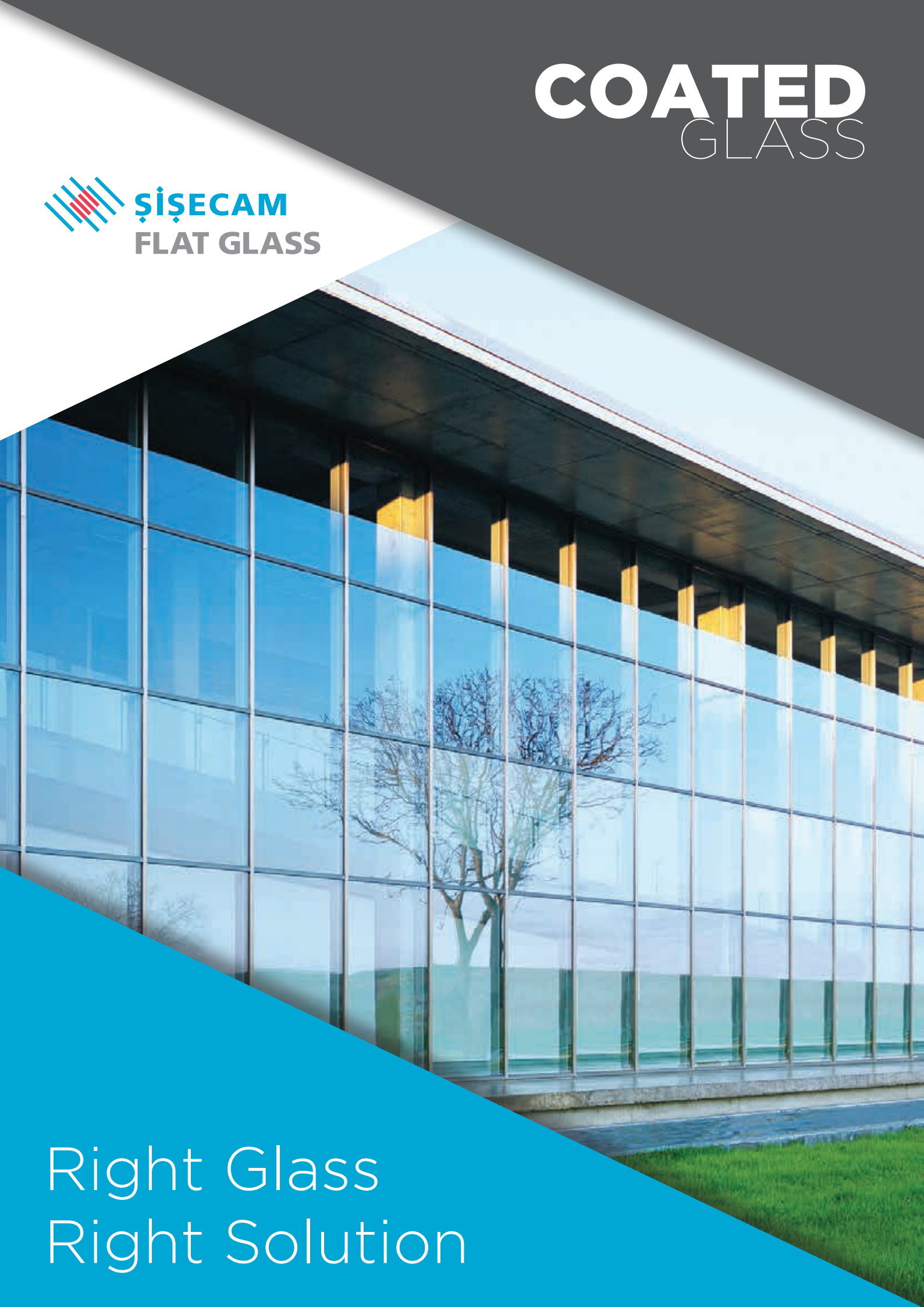
COATED GLASS

ŞİŞECAM
FLAT GLASS



Right Glass
Right Solution

ŞİŞECAM
LOW-E GLASS

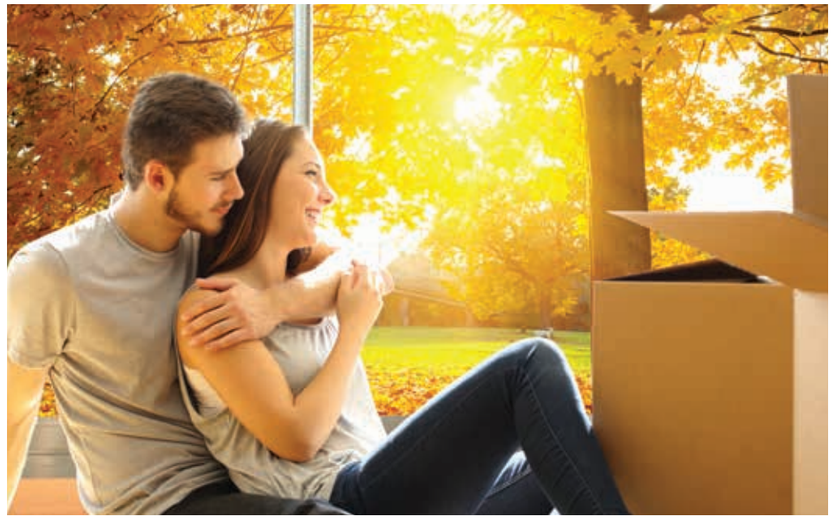
HEAT CONTROL

CONTENTS

Abbreviations: LT: Daylight Transmittance $LR_{ext:}$ Reflectance Outdoor SF: Solar Factor U Value: Thermal Conductivity

Applications

Residential, small/medium sized commercial buildings



Advantages:

- High surface resistance
- Reduces heat loss by 50% compared to ordinary insulating glass units
- Provides heat control and energy efficiency
- Decreases heating expenses
- Does not compromise on natural daylight and transparency
- Ensures maximum benefit from solar heat
- Eliminates cold spots close to window and condensation on glass surface
- Protects against UV radiation over 68%, reducing fading and aging effects.

	Low-E Glass
LT	79%
LR_{ext}	12%
SF	63%
U Value	1.1 W/m^2K

*4 + 16 Argon + (#) 4

ŞİŞECAM
SOLAR CONTROL LOW-E GLASS
NEUTRAL

HEAT & SOLAR CONTROL

Applications

Residential buildings where heat and solar control are required with optimum light transmission

Advantages:

- High surface resistance
- Reduces heat loss by 50%, solar energy transmission by 40% compared to ordinary insulating glass units
- Decreases heating and cooling expenses
- Provides natural daylight and transparency
- Reduces condensation on glass surface
- Eliminates cold spots and hot spots close to windows
- Protects against UV radiation over 75%, reducing fading and aging effects

	Neutral
LT	66%
LR_{ext}	25%
SF	44%
U Value	1.1 W/m^2K

*4 (#) + 16 Argon + 4

ŞİŞECAM
SOLAR CONTROL LOW-E GLASS
NEUTRAL SELECTIVE

FOR MORE DAY-LIGHT

HEAT & SOLAR CONTROL

Applications

Residential, small/medium sized commercial buildings where heat and solar control are required with high light transmission and low reflection

Advantages:

- High surface resistance
- Reduces heat loss by 50%, solar energy transmission by 40% compared to ordinary insulating glass units
- Decreases heating and cooling expenses
- Provides maximum benefit from daylight and transparency
- Reduces condensation on glass surface
- Eliminates cold spots and hot spots close to windows
- Protects against UV radiation over 84%, reducing fading and aging effects

	Neutral Selective
LT	73%
LR_{ext}	11%
SF	43%
U Value	1.1 W/m^2K

*4 (#) + 16 Argon + 4

Transparent solutions for architectural projects

IZPARK

ŞİŞECAM
FLAT GLASS

ŞİŞECAM
TEMPERABLE
LOW-E GLASS

HEAT CONTROL

SAFETY

Applications

Residences, commercial buildings (office, hotel, shopping mall, airport and etc.), skylights and conservatories where transparency and low reflection are required

Advantages:

- Heat control and energy efficiency
- Decreases heating expenses
- Does not compromise on natural daylight and transparency
- Ensures maximum benefit from solar heat
- Approximately five times stronger than annealed glass against impact
- Minimum risk of injury; when broken it shatters into small, blunt edged fragments

	Neutral 71/53
LT	72%
LR_{ext}	19%
SF	53%
U Value	1.1 W/m^2K

*6 (#) + 16 Argon + 6

Right glass
Right solution

ŞİŞECAM
FLAT GLASS

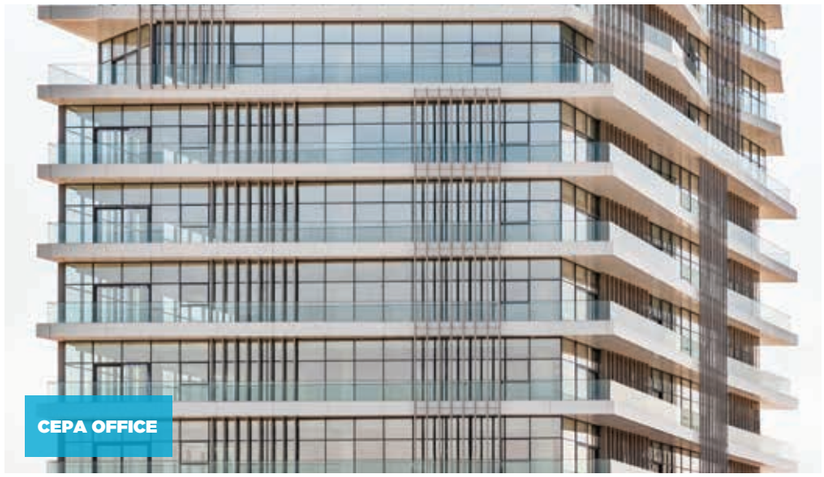
TAI - TUSAS ACADEMY

ŞİŞECAM
TEMPERABLE SOLAR CONTROL LOW-E GLASS

HEAT & SOLAR CONTROL | SAFETY

Applications

Neutral 62/44: Residences and education complexes where high light transmission is needed
Neutral 50/33: Offices, hotels and hospitals where optimum daylight transmission and efficient solar control are necessary
Neutral 41/27: Skylights or warm climate areas where daylight control and efficient solar protection are required
NEW **Deep Blue 40/28:** Skylights and residence projects where daylight control, more efficient solar control and blue color effect on façade are required



Advantages:

- Heat and solar control with a single coating
- Different performance choices for different applications
- Decreases heating and cooling expenses
- Approximately five times stronger than annealed glass against impact
- Minimum risk of injury; when broken it shatters into small, blunt edged fragments

	Neutral 62/44	Neutral 50/33	Neutral 41/27	Deep Blue 40/28
LT	61%	50%	42%	%40
LR_{ext}	21%	30%	36%	%19
SF	43%	34%	27%	%28
U Value	1.1 W/m^2K	1.1 W/m^2K	1.1 W/m^2K	1.1 W/m^2K

*6 (#) + 16 Argon + 6

ŞİŞECAM
TEMPERABLE SOLAR CONTROL LOW-E GLASS NEW

HEAT & SOLAR CONTROL | SAFETY

Applications

Neutral 70/37: Residences, villas and store front glazing where transparency and low reflection are required
Neutral 58/32: Residences, offices and commercial buildings where high light transmission and efficient solar control are necessary
Neutral 51/28: Offices, hospitals and hotels where optimum light transmission, maximum solar control and greenish color effect on façade are required
Neutral 50/27: Offices, hospitals and hotels where optimum light transmission, maximum solar control and bluish color effect on façade are required

Advantages:

- Heat and more efficient solar control with a single coating
- Different color choices on façade for different projects
- Decreases heating and cooling expenses
- Approximately five times stronger than annealed glass against impact
- Minimum risk of injury; when broken it shatters into small, blunt edged fragments

	Neutral 70/37	Neutral 58/32	Neutral 51/28	Neutral 50/27
LT	69%	58%	%50	%49
LR_{ext}	15%	21%	%19	%16
SF	36%	32%	%28	%26
U Value	1.1 W/m^2K	1.1 W/m^2K	1.1 W/m^2K	1.1 W/m^2K

*6 (#) + 16 Argon + 6

Glass..
Our profession, our passion

ŞİŞECAM
FLAT GLASS

ŞİŞECAM
HEADQUARTERS

ŞİŞECAM
TENTESOL

SOLAR CONTROL

Applications

Façades or windows of commercial buildings where reflective glass is required

Advantages:

- Prevents solar heat transmission into buildings
- Controls the luminosity of sunlight
- Provides comfortable working environment
- Energy efficiency and savings on cooling expenses
- Perfect uniform appearance for façades
- Provides privacy
- Can be toughened, heat strengthened, laminated, enameled and bent
- Easy to handle and process
- No shelf life

	Silver	Green	Blue	Grey	Bronze
LT	33%	28%	21%	17%	20%
LR_{ext}	27%	19%	14%	10%	12%
SF	31%	20%	19%	21%	22%
U Value	1.1 W/m^2K	1.1 W/m^2K	1.1 W/m^2K	1.1 W/m^2K	1.1 W/m^2K

*6 (#) + 16 Argon + (#) 6

**Outer pane Şişecam Tentesol, inner pane Şişecam Low-E Glass

ŞİŞECAM
TENTESOL TITANIUM

SOLAR CONTROL

Applications

Façades or windows of commercial buildings where reflective glass is required

Advantages:

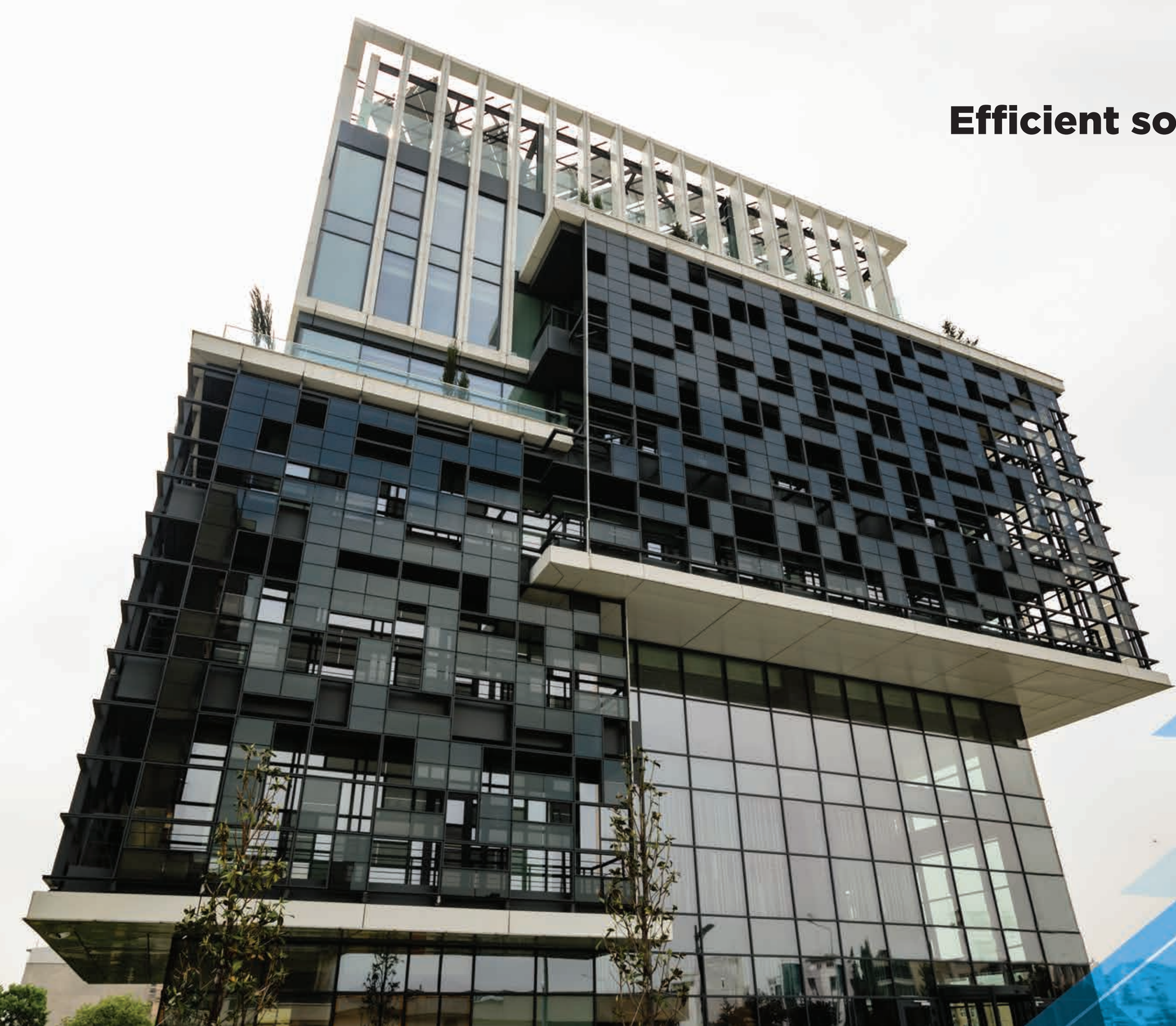
- Prevents solar heat transmission into buildings
- Controls the luminosity of sunlight
- Provides comfortable working environment
- Energy efficiency and savings on cooling expenses
- Optimum light transmission
- Due to its coating, colour of the substrate glass appears more clearly
- Provides visual comfort
- Can be toughened, heat strengthened, laminated, enameled and bent
- Easy to handle and process
- No shelf life

	Silver	Green	Blue	Grey	Turquoise
LT	56%	45%	34%	28%	39%
LR_{ext}	33%	24%	17%	12%	18%
SF	46%	29%	28%	29%	28%
U Value	1.1 W/m^2K	1.1 W/m^2K	1.1 W/m^2K	1.1 W/m^2K	1.1 W/m^2K

*6 (#) + 16 Argon + (#) 6

**Outer pane Şişecam Tentesol Titanium, inner pane Şişecam Low-E Glass

Efficient solar control



ŞİŞECAM
FLAT GLASS

BURSAGAZ

ŞİŞECAM
LOW-E GLASS

HEAT CONTROL GLASS

4 mm Clear Float Glass + 16 mm Cavity + (#3) 4 mm Low-E Glass	Daylight (EN 410)			Colour Rendering Index (Ra) %	Solar Energy (EN 410)					Thermal Conductivity (U Value) W/m²K (EN 673)	
	Transmittance %	Reflectance Outdoor %	Reflectance Indoor %		Direct Transmittance %	Reflectance Outdoor %	Absorption %	Solar Factor (g value) %	Shading Coefficient	Dry Air	Argon
Neutral	79	12	11	97	53	27	21	63	0.72	1.3	1.1

Low-E coating can be placed on the 2nd or 3rd surface of the insulating glass unit.

ŞİŞECAM
SOLAR CONTROL
LOW-E GLASS

HEAT & SOLAR CONTROL GLASS

4 mm Solar Control Low-E Glass (#2) + 16 mm Cavity + 4 mm Clear Float Glass	Daylight (EN 410)			Colour Rendering Index (Ra) %	Solar Energy (EN 410)					Thermal Conductivity (U Value) W/m²K (EN 673)	
	Transmittance %	Reflectance Outdoor %	Reflectance Indoor %		Direct Transmittance %	Reflectance Outdoor %	Absorption %	Solar Factor (g value) %	Shading Coefficient	Dry Air	Argon
Neutral	66	25	22	96	41	37	22	44	0.50	1.3	1.1
Neutral Selective	73	11	11	95	41	29	31	43	0.50	1.3	1.1

ŞİŞECAM
TINTED FLOAT GLASS

SOLAR CONTROL GLASS
(BODY TINTED)

6 mm Tinted Float Glass + 16 mm Cavity + (#3) 6 mm Low-E Glass / 6 mm Clear Float Glass	Daylight (EN 410)			Colour Rendering Index (Ra) %	Solar Energy (EN 410)					Thermal Conductivity (U Value) W/m²K (EN 673)	
	Transmittance %	Reflectance Outdoor %	Reflectance Indoor %		Direct Transmittance %	Reflectance Outdoor %	Absorption %	Solar Factor (g value) %	Shading Coefficient	Dry Air	Argon
Neutral + Low-E Glass	78	12	12	96	50	26	24	60	0.69	1.3	1.1
Neutral + Clear Float Glass	81	15	15	97	69	13	18	75	0.86	2.7	2.6
Green + Low-E Glass	63	9	11	86	31	8	61	38	0.44	1.3	1.1
Green + Clear Float Glass	66	11	14	87	38	7	55	45	0.52	2.7	2.6
Blue + Low-E Glass	49	8	11	78	29	9	61	36	0.42	1.3	1.1
Blue + Clear Float Glass	50	9	14	79	37	8	56	44	0.51	2.7	2.6
Grey + Low-E Glass	39	6	9	93	27	12	60	36	0.41	1.3	1.1
Grey + Clear Float Glass	40	7	12	94	39	7	54	47	0.54	2.7	2.6
Bronze + Low-E Glass	44	7	10	94	29	12	60	37	0.42	1.3	1.1
Bronze + Clear Float Glass	46	8	13	94	41	7	52	49	0.56	2.7	2.6
Turquoise + Low-E Glass	54	8	10	82	29	8	63	36	0.42	1.3	1.1
Turquoise + Clear Float Glass	56	9	13	83	36	7	57	44	0.50	2.7	2.6

Şişecam Tinted Float Glass is recommended to be used toughened or heat strengthened to avoid thermal breakage risks.

ŞİŞECAM
TEMPERABLE
LOW-E GLASS

TEMPERABLE HEAT CONTROL GLASS

6 mm Temperable Low-E Glass (#2) + 16 mm Cavity + 6 mm Clear Float Glass	Daylight (EN 410)			Colour Rendering Index (Ra) %	Solar Energy (EN 410)					Thermal Conductivity (U Value) W/m²K (EN 673)	
	Transmittance %	Reflectance Outdoor %	Reflectance Indoor %		Direct Transmittance %	Reflectance Outdoor %	Absorption %	Solar Factor (g value) %	Shading Coefficient	Dry Air	Argon
Neutral 71/53	72	19	17	96	48	25	27	53	0.61	1.3	1.1
Green 59/36	60	14	17	87	30	10	60	35	0.40	1.3	1.1
Blue 45/34	46	10	16	80	28	10	62	33	0.38	1.3	1.1
Grey 36/34	36	8	16	94	28	13	59	33	0.38	1.3	1.1
Bronze 41/35	42	9	16	93	29	13	57	34	0.39	1.3	1.1

ŞİŞECAM
TEMPERABLE
SOLAR CONTROL
LOW-E GLASS

TEMPERABLE HEAT & SOLAR CONTROL GLASS

6 mm Temperable Solar Control Low-E Glass (#2) + 16 mm Cavity + 6 mm Clear Float Glass	Daylight (EN 410)			Colour Rendering Index (Ra) %	Solar Energy (EN 410)					Thermal Conductivity (U Value) W/m²K (EN 673)	
	Transmittance %	Reflectance Outdoor %	Reflectance Indoor %		Direct Transmittance %	Reflectance Outdoor %	Absorption %	Solar Factor (g value) %	Shading Coefficient	Dry Air	Argon
NEW **Neutral 70/37**	69	15	17	95	34	37	29	36	0.42	1.3	1.1
NEW **Neutral 58/32**	58	21	20	94	29	36	35	32	0.37	1.3	1.1
NEW **Neutral 51/28**	50	19	18	94	25	31	45	28	0.32	1.3	1.1
NEW **Neutral 50/27**	49	16	19	89	23	32	45	26	0.30	1.3	1.1
NEW **Deep Blue 40/28**	40	19	25	86	23	18	59	28	0.32	1.3	1.1
Neutral 62/44	61	21	21	96	39	27	34	43	0.50	1.3	1.1
Green 51/30	51	16	20	88	25	11	64	29	0.34	1.3	1.1
Blue 39/28	39	11	20	80	23	11	66	28	0.32	1.3	1.1
Grey 31/28	31	9	19	94	23	14	64	28	0.32	1.3	1.1
Bronze 35/29	36	10	20	92	24	14	62	29	0.33	1.3	1.1
Neutral 50/33	50	30	27	93	30	35	35	34	0.39	1.3	1.1
Green 41/25	41	22	27	85	20	14	67	24	0.28	1.3	1.1
Blue 32/24	32	15	26	78	18	13	68	23	0.26	1.3	1.1
Grey 28/26	25	11	26	92	17	16	66	22	0.25	1.3	1.1
Bronze 31/25	29	13	26	94	18	17	65	22	0.26	1.3	1.1
Neutral 41/27	42	36	34	89	24	41	36	27	0.31	1.3	1.1
Green 34/20	35	26	34	81	16	16	69	20	0.23	1.3	1.1
Blue 26/19	26	17	34	74	14	15	71	19	0.22	1.3	1.1
Grey 21/18	21	12	34	88	13	19	68	17	0.20	1.3	1.1
Bronze 24/18	24	15	34	93	14	20	67	18	0.21	1.3	1.1

ŞİŞECAM TENTESOL

SOLAR CONTROL GLASS
(REFLECTIVE)

SOLAR CONTROL

6 mm Tentesol (#2) + 16 mm Cavity + (#3) 6 mm Low-E Glass / 6 mm Clear Float Glass	Daylight (EN 410)			Colour Rendering Index (Ra) %	Solar Energy (EN 410)					Thermal Conductivity (U Value) W/m²K (EN 673)	
	Transmittance %	Reflectance Outdoor %	Reflectance Indoor %		Direct Transmittance %	Reflectance Outdoor %	Absorption %	Solar Factor (g value) %	Shading Coefficient	Dry Air	Argon
Silver + Low-E Glass	33	27	31	94	23	29	48	31	0.35	1.3	1.1
Silver + Clear Float Glass	35	28	36	93	36	21	43	43	0.49	2.7	2.6
Green + Low-E Glass	28	19	31	92	14	12	75	20	0.23	1.3	1.1
Green + Clear Float Glass	29	20	35	93	19	11	71	27	0.31	2.7	2.6
Blue + Low-E Glass	21	14	31	87	13	11	76	19	0.22	1.3	1.1
Blue + Clear Float Glass	21	14	36	88	18	10	72	27	0.31	2.7	2.6
Grey + Low-E Glass	17	10	31	94	14	14	73	21	0.24	1.3	1.1
Grey + Clear Float Glass	18	10	35	94	22	10	68	31	0.36	2.7	2.6
Bronze + Low-E Glass	20	12	31	86	15	15	70	22	0.25	1.3	1.1
Bronze + Clear Float Glass	21	12	36	85	24	11	65	33	0.38	2.7	2.6

Şişecam Tentesol is recommended to be used toughened or heat strengthened to avoid thermal breakage risks.

ŞİŞECAM TENTESOL TITANIUM

SOLAR CONTROL GLASS
(TITANIUM REFLECTIVE)

SOLAR CONTROL

6 mm Tentesol Titanium (#2) + 16 mm Cavity + (#3) 6 mm Low-E Glass / 6 mm Clear Float Glass	Daylight (EN 410)			Colour Rendering Index (Ra) %	Solar Energy (EN 410)					Thermal Conductivity (U Value) W/m²K (EN 673)	
	Transmittance %	Reflectance Outdoor %	Reflectance Indoor %		Direct Transmittance %	Reflectance Outdoor %	Absorption %	Solar Factor (g value) %	Shading Coefficient	Dry Air	Argon
Silver + Low-E Glass	56	33	31	98	38	36	27	46	0.53	1.3	1.1
Silver + Clear Float Glass	59	35	36	99	54	25	21	59	0.68	2.7	2.6
Green + Low-E Glass	45	24	31	89	23	14	63	29	0.34	1.3	1.1
Green + Clear Float Glass	47	25	36	90	29	13	58	36	0.41	2.7	2.6
Blue + Low-E Glass	34	17	31	80	21	13	66	28	0.32	1.3	1.1
Blue + Clear Float Glass	36	17	36	81	28	12	60	35	0.41	2.7	2.6
Grey + Low-E Glass	28	12	30	96	22	16	62	29	0.34	1.3	1.1
Grey + Clear Float Glass	30	12	34	97	32	11	57	41	0.47	2.7	2.6
Turquoise + Low-E Glass	39	18	29	84	22	13	66	28	0.32	1.3	1.1
Turquoise + Clear Float Glass	41	19	34	85	28	11	61	36	0.41	2.7	2.6

Şişecam Tentesol Titanium is recommended to be used toughened or heat strengthened to avoid thermal breakage risks.

EXPLANATIONS

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 (g value) (%): The percentage of total solar radiant heat energy passing 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 (0.87), set in identical conditions. The lower shading coefficient means better solar control.

U Value (W/m²K): 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.

Colour Rendering Index (Ra) (%): Describes how much an object's colour changes when it is observed through glazing. The higher the colour rendering index is the more natural the object's colours appear.

SOLUTIONS FOR VARIOUS NEEDS

Due to its Low-E coating, prevents heat loss through glazing. Does not compromise on natural daylight.

Reduces solar heat gain in summer.

Due to its Solar Control Low-E coating, provides effective thermal insulation by preventing heat loss in winter and decreases solar heat gain in summer. Does not compromise on natural daylight.

Due to its temperable property, Temperable Low-E / Solar Control Low-E Glass is appropriate for using as safety glass as it shatters into small, blunt edged fragments which reduce the risk of injury. Approximately five times stronger than annealed glass against impact.

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ŞİŞECAM
FLAT GLASS

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