

# Coated Glass

Stopsol  
Sunergy  
Planibel G





# STOPSOL

## Superb solar heat reflective glass to improve coziness

Our reflective glass, Stopsol, has an excellent quality and long lasting performance to turn your office or resident into the most comfortable place. It is reflecting light and heat, thus give coziness to your place. You will find your life more enjoyable.

## High performance glass with long lasting reflection

Walls which once were blind have become walls of light. Glass was designed so as to create comfort while remaining aesthetically pleasing. In recent years, a new generation of high performing glass is contributing more than ever to major energy savings.

Stopsol is single sheet glass covered with a thin transparent metal oxide through pyrolytic process, a sophisticated result of European technology. This reflective coating has long lasting endurance and high quality, reflects light and heat, and delivers rich touch of style while at the same time reduce energy consumed for air conditioner.

Stopsol is available in two types of solar control coatings, namely Stopsol Classic, which has a slight amber reflection, and Stopsol Supersilver, which has a silver appearance. These coatings are applied on one surface of the glass only. As stopsol is produced by the pyrolytic on-line coating process, its coating as durable as the substrate itself. Stopsol can be used as a single glass, with the the coating facing either the outside or the inside of the building, without any changes in its performance. It can withstand harsh environmental conditions, contribute to energy savings and enhance comfort and privacy.

In relation to the harsh tropical climate, Stopsol glass coating gives an exceptional strength to the glass sheet, to endure conditions such as extreme temperature changes, pollution and corrosive/humid air, while keeping the internal climate stability and comfortable. The coating will guarantee a greater stability of the appearance and performance of the glass for long time, to retain its original color and brilliance.

Stopsol is easy to process, assemble in install. When heat-strengthened or tempered, it can withstand thermal shock. Assembled in double glazing with asymmetric panes, it adds acoustic insulation properties to its thermal function. Stopsol can also be curved, With this large number of choices, you can add special unique touch to your architectural creations.

## Features

- ▶ With "Pyrolytic coatings" stopsol reflective glazing exceptionally resist to harsh environment conditions such as extreme temperature changes, pollutions and corrosions. This special coating ensure the greater stability if appearance and performance overtime, it will never peel off nor lose its brilliance or its original colour
- ▶ By reflecting a large amount of sunlight and energy, Stopsol still has a good light transmission capability
- ▶ Stopsol coating can be placed facing the outside or the inside of the building
- ▶ Stopsol with its wide color range offers flexibility to express creative and attractive design. It is also ideal for vision and spandrels

## Range

Stopsol Supersilver Clear, Stopsol Supersilver Dark Blue, Stopsol Supersilver Green, Stopsol Supersilver Blue Green, Stopsol Supersilver Euro Grey, Stopsol SupersilverDark Grey, Stopsol Classic Dark Blue, Stopsol Classic Green



# Technical Characteristic

## STOPSOL

Type of Glass	Standard Thickness (mm)	Coating Position	Energy Characteristic				Light Characteristic		Solar Factor (%)	Shading Coefficient *3*4	U Value W/m <sup>2</sup> k
			Transmittance (%)	Reflectance (%)	Absorption (%)	Ultra Violet Transmission (%)	Transmittance (%)	Reflectance (%)			
Stopsol Supersilver Clear (SSFL)	6	#1	67	20	13	40	69	28	71	0.82	5.8
		#2	67	18	15	40	69	27	72	0.83	5.8
	8	#1	64	20	15	39	67	29	68	0.79	5.7
		#2	64	17	19	39	67	27	69	0.80	5.7
Stopsol Supersilver Dark Blue (SSDH)	5	#1	38	20	41	22	46	29	51	0.58	5.8
		#2	38	11	51	22	46	17	54	0.61	5.8
	6	#1	34	20	46	20	43	29	47	0.54	5.8
		#2	34	10	56	20	43	15	51	0.58	5.8
	8	#1	27	20	53	16	37	28	43	0.50	5.7
		#2	27	8	65	16	37	12	47	0.54	5.7
Stopsol Supersilver Blue Green (SSBN)	6	#1	31	19	50	16	48	27	46	0.53	5.8
		#2	31	9	60	16	48	16	49	0.56	5.8
	8	#1	25	18	57	12	44	26	43	0.49	5.7
		#2	25	8	67	12	44	13	46	0.53	5.7
Stopsol Supersilver Green (SSGN)	5	#1	35	18	47	14	56	27	46	0.53	5.8
		#2	35	11	54	14	56	20	49	0.56	5.8
	6	#1	31	18	50	13	54	27	46	0.53	5.8
		#2	31	10	59	13	54	19	49	0.56	5.8
	8	#1	24	18	58	7	49	26	42	0.48	5.7
		#2	24	8	68	7	49	15	45	0.52	5.7
Stopsol Supersilver Euro GREY (SSGE)	6	#1	39	20	41	15	33	28	51	0.58	5.8
		#2	39	9	53	15	33	10	54	0.62	5.8
	8	#1	31	18	50	9	26	26	46	0.53	5.7
		#2	31	7	62	9	26	7	50	0.58	5.7
Stopsol Supersilver Dark Grey (SSDG)	5	#1	30	21	49	29	15	29	45	0.51	5.9
		#2	30	7	63	29	15	6	49	0.56	5.9
Stopsol Classic Green (CGN)	5	#1	24	24	52	15	32	32	39	0.45	5.9
		#2	24	10	66	15	32	18	44	0.51	5.9
	6	#1	21	24	54	7	31	32	37	0.43	5.8
		#2	21	9	70	7	31	17	42	0.49	5.8
	8	#1	15	26	59	4	27	32	33	0.38	5.7
		#2	15	8	76	4	27	16	39	0.45	5.7
Stopsol Classic Dark Blue (CDH)	5	#1	26	26	48	11	26	33	40	0.46	5.8
		#2	26	10	64	11	26	16	45	0.52	5.8
	6	#1	23	25	53	10	24	31	38	0.44	5.8
		#2	23	10	67	10	24	14	43	0.50	5.8
	8	#1	18	25	57	8	20	31	35	0.40	5.8
		#2	18	8	74	8	20	11	40	0.46	5.8

### Remarks :

- Coating position #2 : Inside coating position
- The data are calculated using spectral measurements that are conform to standards EN 410 (1998), ISO 9050, WIS/WINDAT, Illuminant Aobserver 20 CIE 1931.
- Energy properties according to ISO / DIS 9050, NFRC 100-2001 and/or EN 410.
- U value (formerly k-value) is calculated according to standard ISO EN 673 and/or NFRC 100-2001 conditions.
- Ultra Violet Transmittance according ISO/DIS 9050 table 4, DIN 67507 clause 6 table 4, pr-EN 410 table 3 (280nm-380nm).
- This document is no evaluation of the risk of glass breakage due to thermal stress. For tempered glass the risk of spontaneous breakage due to Nickel-Sulfide is not covered by PT Asahimas Flat Glass Tbk. The Heat Soak Test is available on request.
- Specifications, technical and other data are based on information available at the time of preparation of this document and are subject to change without notice. PT Asahimas Flat Glass Tbk ca not be held responsible for any deviation between the data introduced and the the conditions on site.



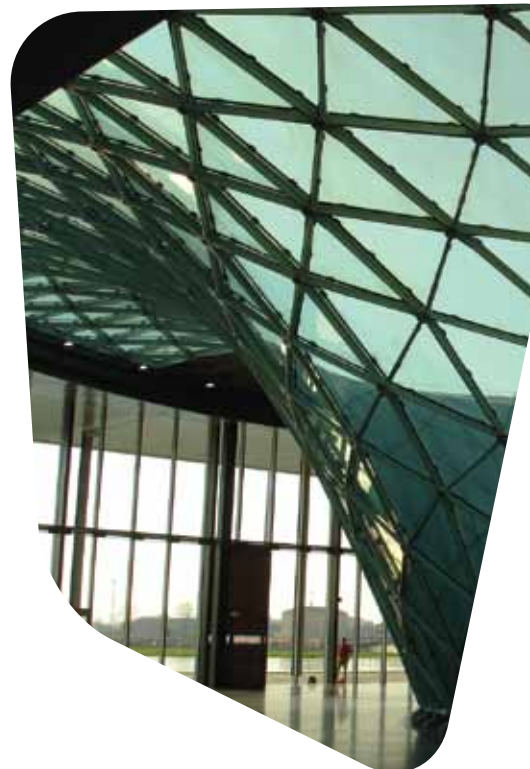
## Solar control low-e glass

Sunergy is a low reflecting glass, prized for its superb appearance and visual comfort. The range excels in thermal insulation and solar control properties

## The multifunctional glass range

Sunergy is a hard, pyrolytic coating which involves applying a thin uniform coating of metal oxides to the glass by CVD (Chemical Vapour Deposition) process that provide both solar control and thermal insulation properties. This product not only offers excellent selectivity but it also has very Low Reflection (7%) & Low U-value.

Sunergy Combines solar control with thermal insulation, it is also an excellent response to current architectural trends, thanks to its neutrality and low reflection. The name SUNERGY is no coincidence, the product creates synergies and offers a solution to the problems that architects and glass processors had, until now, to contend with. SUNERGY is the only product that has both the performance of a soft-coated and the flexibility in processing of a hard coated glass.



## Technical Characteristic

### SUNERGY

Type of Glass	Standard Thickness (mm)	Coating Position	Energy Characteristic				Light Characteristic		Solar Factor (%)	Shading Coefficient *3*4	U Value W/m²k
			Transmittance (%)	Reflectance (%)	Absorption (%)	Ultra Violet Transmission (%)	Transmittance (%)	Reflectance (%)			
Sunergy Clear (SNFL)	3	#2	53	10	37	50	70	7	60	0.70	4.2
	4	#2	52	10	38	47	70	7	59	0.68	4.2
	5	#2	52	10	38	46	69	7	59	0.67	4.1
	6	#2	51	9	40	44	69	7	59	0.67	4.1
	8	#2	49	9	42	42	68	7	57	0.65	4.1
	10	#2	47	9	45	38	67	6	56	0.64	4.1
Sunergy Green (SNGN)	6	#2	27	6	67	16	56	6	41	0.47	4.1
	8	#2	23	6	71	12	52	6	37	0.43	4.1
Sunergy Blue Green (SNBN)	6	#2	25	6	69	17	48	6	39	0.45	4.1
	8	#2	21	5	74	13	42	5	35	0.41	4.1
Sunergy Euro Grey (SNGE)	6	#2	28	6	66	15	33	5	41	0.47	4.1
	8	#2	22	6	72	11	25	5	36	0.41	4.1

#### Remarks :

- Coating position #2 : Inside coating position
- The data are calculated using spectral measurements that are conform to standards EN 410 (1998), ISO 9050, WIS/WINDAT, Illuminant Aobserver 20 CIE 1931. Energy properties according to ISO / DIS 9050, NFRC 100-2001 and/or EN 410.
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## Features

- Sunergy offers visual & thermal comfort. The excellent combination of light transmission, solar control & thermal insulation makes Sunergy the ideal glass of all seasons
- Sunergy offers flexibility in processing. It can be processed to safety glass (heat strengthened, tempered, or laminated) and Insulated Glass Unit

## Range

Sunergy Clear, Sunergy Green, Sunergy Blue Green, Sunergy Euro Grey



# PLANIBEL G

## The glass with a high performance low-e hard coating

Planibel G is a glass product that combines application of two layers of low emissivity, through CVD (Chemical vapor Deposition) process. These coatings are applied on one surface of the glass. Those two coatings reduces the heat transmittance therefore improve comfort.

Planibel G is a low emissivity glass consisting of a sheet of clean float glass hot coated. With a metal oxide coating, aiming at blocking the re-radiated heat to penetrate into the building . Because the re-radiated heat penetration from outside to inside is reduced, it is much easier to keep the climate indoors at an even temperature. The opposite is also true from building in cold climate.

Planibel G can also provide solar control with smart combination meaning to combine a solar control glass (Stopsol and Sunergy) with Planibel G in a laminated or insulated glass unit.



## Technical Characteristic

PLANIBEL G											
Type of Glass	Standard Thickness (mm)	Coating Position	Energy Characteristic				Light Characteristic		Solar Factor (%)	Shading Coefficient *3*4	U Value W/m <sup>2</sup> k
			Transmittance (%)	Reflectance (%)	Absorption (%)	Ultra Violet Transmission (%)	Transmittance (%)	Reflectance (%)			
Planibel G	3.2	#2	70	10	20	55	82	11	73	0.84	3.7
	4	#2	68	10	22	53	82	11	72	0.83	3.7
	5	#2	67	10	23	51	81	10	71	0.81	3.7
	6	#2	66	10	25	47	80	10	70	0.80	3.7

Remarks :

- Coating position #2 : Inside coating position
- The data are calculated using spectral measurements that are conform to standards EN 410 (1998), ISO 9050, WIS/WINDAT, Illuminant Aobserver 20 CIE 1931.
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## Features

- Low Emissivity Planibel G not only saves a considerable amount of energy, but it is also the easiest Low-E coated glass to process
- The coating applied online using a high temperature (almost 600°C) adheres to the surface of the glass becoming remarkably durable
- With its super-hard coating Planibel G boasts several features, making it the ideal low emissivity glass for processors

## Range

Planibel G is available in thickness ranging 3.2mm ,4mm, 5mm, and 6mm

# Coated Glass

## Application

- Windows of high grade and high performance buildings
- Windows in landed residential
- Villas to optimize comfort
- For all type of glass walls

## Easy to process

Stopsol, Sunergy, and Planibel G could be processed in many different ways as follow :

- Single Glass
- Double Glazed Unit
- Laminated Glass
- Heat Stengthened, Tempered, and Enameled Glass



**ASAHIMAS**  
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