

SELECTIVE PYROLITIC GLASS

AGC

GLASS UNLIMITED

SUNERGY



COATING EVOLUTION

Excellence in Aesthetics

Sunergy is a pyrolytic coated glass that combines solar control with thermal insulation. It is an excellent response to current architectural trends, thanks to its neutrality and low reflection.

Sunergy offers the following properties:

- superb solar control
- brilliant aesthetics
- low emissivity properties (low U-value)
- easy processing (hard coating)



Sunergy Clear – “Bolle” Nardini distilleries research & event centre – Bassano del Grappa, Italy – Architect: Massimiliano Fuksas – Studio Fuksas

Cover picture: Sunergy Azur – Exatel Perkuna – Warsaw, Poland – Architect: Archico project

Creativity without Limits

Sunergy can overcome the most difficult architectural challenges. Its processing qualities make it a favourite choice for complex constructions. No surprise that Sunergy is used in award-winning contemporary architecture.

Sunergy has a very neutral shade and low light reflection. These unique aesthetics are perfectly in line with the modern trend in architecture.

BLACKPEARL is the perfect solution for spandrel glazing units with a Sunergy product as the outer sheet. Both vision and spandrel sections of the façade will match perfectly.

*Sunergy Azur – Ulm Library – Ulm, Germany –
Architect: Gottfried Böhm*

ArchiEurope Bau Munich 2005 Award



International Prestige

Sunergy has quickly become a worldwide reference with major projects in Russia, India, Brazil, Australia, South Africa, China and elsewhere. The durable coating means it is easy to transport around the world and its thermal properties suit all types of climates whether in single or double glazing.



*Sunergy Green – Barra Trade III – Rio de Janeiro, Brazil –
Architect: Ecotech*

Most Beautiful Building of Rio de Janeiro Award 2005



Sunergy Clear – Administrative Palace of Moscow Region – Moscow, Russia

From market niches to prestigious projects

Sunergy can be used in a wide range of applications. Its versatility is a key strength.

Offices

Its brilliant aesthetics and technical properties make it a perfect candidate for offices and building façades.

Residential

In most tropical climates, Sunergy is very suitable for use in residential applications in single or double glazing.

Shop Windows

The neutral appearance of Sunergy means that it is suitable for shop windows. Sunergy can lead to important cost savings in air conditioning and heating bills thanks to its solar control and thermal insulation properties.

Car Showrooms

Sunergy can be used in single glazings and in very large dimensions. The prestigious cars are displayed at their best thanks to Sunergy aesthetics and low reflection.

Airports

Sunergy is prized in airports for its neutrality, performance and low reflection. It is used in single or double glazing in many airports:

- Ankara (Turkey): Sunergy Green
- Rio de Janeiro (Brazil): Sunergy Green
- Riga (Latvia): Sunergy Azur
- Bangkok (Thailand): Sunergy Clear

Double-skin Façades

Sunergy can be used in double-skin façades as the outer sheet. This way overheating can be avoided in the buffer zone.

Conservatories

Sunergy is also very popular for conservatories for its neutrality and good balance of solar control (summer) and thermal insulation (winter).

Tramway Windows

Sunergy can easily be curved and laminated in very specific applications requiring security and thermal performances.

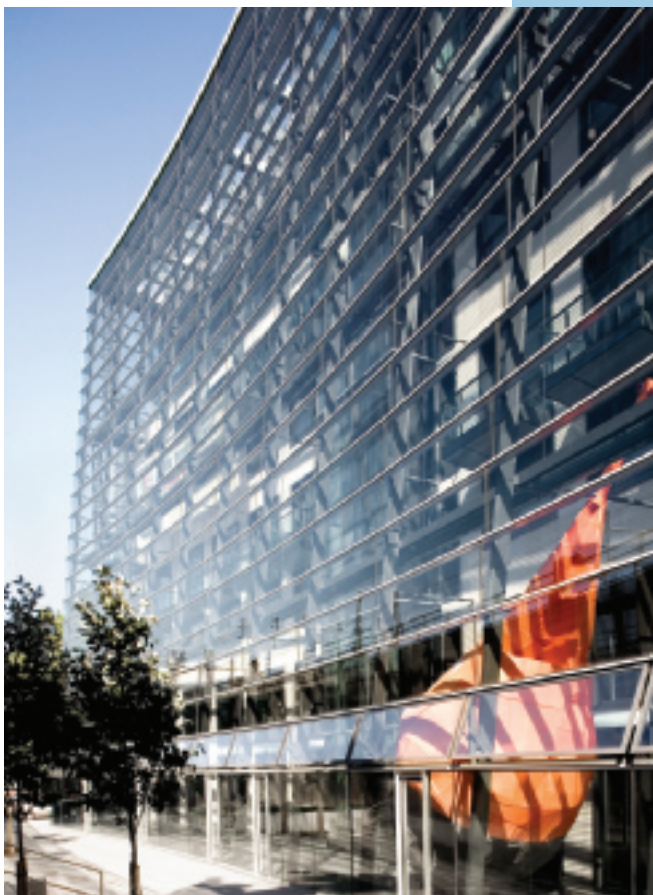


Sunergy Green ▲
Galeria Inno shopping center – Brussels, Belgium

▼ Tramway passengers enjoy visual comfort in this tram in Melbourne, Australia.



Sunergy Clear in double-skin façade monolithic 8 mm. ▶
Kronprinzenkarre – Berlin, Germany



Sunergy Clear ▼
Mercedes-Benz car showroom – Melbourne, Australia



▼ Sunergy Clear
Diamond villa residential estate
Shanghai, China





Variety of Possibilities

Sunergy offers the advantages of a pyrolytic coating:

- no edge deletion
- leaves no scratches on the glass
- problem-free stacking and storage
- multiple processing possibilities
(tempering, curving, laminating, silkscreen printing, ...)
- can be used as single or double Glazing
- can be combined in a "Smart Combination"

Thanks to SUNERGY's pyrolytic coating glass processors have no problems meeting the most advanced architectural requirements. This is thanks to the extremely hard coating that can easily satisfy a variety of applications.

Assembly

The complete range of SUNERGY glasses can be assembled into double glazing. When SUNERGY is made into a double glazed unit the solar control and heat-insulating properties are improved.

Laminated

The complete range of SUNERGY glasses can be laminated. If used as single laminated glass we recommend the coating is glazed in position 4 in view of the technical properties. Laminated glass comprises of two or more sheets of glass, bonded together by one or more layers of PVB, or Stratophone acoustic interlayers.

AGC Flat Glass Europe supplies laminated SUNERGY for safety (Stratobel) or noise reduction (Stratophone) applications with AGC Flat Glass Europe warranty.

Tempered or Heat-strengthened

The complete range of SUNERGY glasses can be tempered or heat strengthened.

Curving

The complete range of SUNERGY glasses can be curved.

Enamelling and Silkscreen Printing

The complete range of SUNERGY glasses can be enamelled and silkscreen printed on the non-coated side (some conditions do apply).

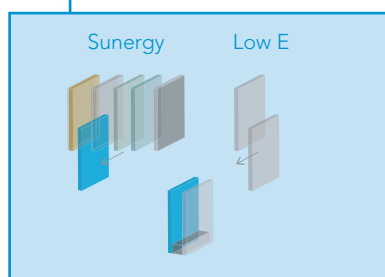
	Sunergy Clear	Sunergy Green	Sunergy Azur	Sunergy Dark Blue
Laminated*	•	•	•	•
Double glazing	•	•	•	•
Toughened	•	•	•	•
Curved	•	•	•	•
Screen-printed**	•	•	•	•

* after toughening

** some conditions do apply

Smart Combinations

A Smart Combination is an optimal assembly combining a solar control coated glass (Sunergy) with a low-emissivity glass (Planibel Top N+/NT or G / Gfast). This Smart Combination allows you to improve the solar factor and the U-Value of the double glazing unit (see performances table on page 11).





AVAILABILITY

Availability of SUNERGY in single glazing:

Product	Nominal thickness* (mm)	Max. dimensions for manufacturing (mm)
Sunergy Clear	3 - 4 - 6 - 8 - 10	6000 x 3210
Sunergy Green	6 - 8 - 10	6000 x 3210
Sunergy Azur	4 - 6 - 8 - 10	6000 x 3210
Sunergy Dark Blue	6 - 8	6000 x 3210

* For other thicknesses and dimensions please contact AGC Flat Glass Europe.

Sunergy is also available in laminated version Stratobel:

- up to 1010.x
- mixed with clear or tinted float
- standard PVB or acoustic Stratophone.

*Sunergy Azur – Naberezhnaya Tower – Moscow, Russia –
Architect: RTKL UK, ENKA, Natal*



Type of glass		Position of the Sunergy® coating	Thickness (mm)	Colour index RD65	Light properties			UV (%)	Energy properties						Ug-Value W/(m².K) 90% Argon	American standards*			
					LT%	Reflection (%)			DET	ER	EA	SF	Shading coefficient			U summer W/(m².K)	U winter W/(m².K)	RHG W/m²	
						Ext	Int						Tot.	Short wave					Long wave
Sunergy	Clear	2	3	98	69	9	10	43	56	10	34	63	0,72	0,65	0,07	4,2	4,33	4,67	493
		2	4	98	69	9	10	41	56	10	34	62	0,71	0,64	0,07	4,2	4,31	4,64	481
		2	6	97	68	9	10	38	54	9	37	60	0,69	0,62	0,07	4,1	4,31	4,59	468
		2	8	97	67	9	10	36	52	9	39	59	0,68	0,60	0,08	4,1	4,29	4,54	462
		2	10	96	66	8	10	33	50	9	41	58	0,67	0,58	0,09	4,1	4,27	4,49	455
Sunergy	Green	2	6	88	56	7	10	12	31	6	63	42	0,48	0,36	0,12	4,1	4,55	4,59	338
		2	8	85	52	7	9	8	26	6	68	38	0,44	0,30	0,14	4,1	4,55	4,54	313
		2	10	82	48	7	9	6	22	5	73	36	0,41	0,25	0,16	4,1	4,55	4,49	294
Sunergy	Azur	2	4	91	60	8	10	25	40	7	53	50	0,57	0,46	0,11	4,2	4,51	4,64	406
		2	6	88	56	7	10	20	34	6	60	45	0,52	0,39	0,13	4,1	4,53	4,59	363
		2	8	84	52	7	9	16	29	6	65	41	0,47	0,33	0,14	4,1	4,53	4,54	331
		2	10	80	48	7	9	13	26	6	68	38	0,44	0,30	0,14	4,1	4,51	4,49	312
Sunergy	Dark Blue	2	6	78	40	6	9	16	26	6	68	38	0,44	0,29	0,15	4,1	4,59	4,59	327
		2	8	72	35	6	9	12	21	5	74	35	0,39	0,23	0,16	4,1	4,54	4,60	300

Double Glazing

Sunergy	Clear	2	6-16-4	96	61	12	16	31	46	12	42	52	0,60	0,53	1,8	2,04	1,89	400
Sunergy	Green	2	6-16-4	87	51	10	16	10	27	7	66	33	0,38	0,31	1,8	2,18	1,89	268
Sunergy	Azur	2	6-16-4	87	50	10	16	17	30	8	62	36	0,41	0,34	1,8	2,16	1,89	285
Sunergy	Dark Blue	2	6-16-4	77	37	8	16	13	23	6	71	29	0,33	0,26	1,8	2,21	1,9	239

Double glazing filled with 90% Argon with Planibel TOP N+ coating in position 3

Sunergy	Clear	2	6-16-4	96	59	11	15	14	37	15	48	44	0,51	0,43	1,1	1,37	1,27	324
Sunergy	Green	2	6-16-4	87	49	9	15	5	24	7	69	29	0,33	0,28	1,1	1,37	1,43	212
Sunergy	Azur	2	6-16-4	86	49	9	15	9	26	8	66	32	0,37	0,30	1,1	1,37	1,41	227
Sunergy	Dark Blue	2	6-16-4	77	35	7	15	7	19	7	74	25	0,29	0,22	1,1	1,37	1,46	187

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