

PLANIBEL AND IPLUS

Glass for home appliances and commercial refrigeration equipment

AGC



Your Dreams, Our Challenge

AGC Glass Europe presents...



...its low-e range for home appliances and commercial refrigeration equipment



PLANIBEL AND IPLUS

AGC offers a wide range of solutions for home appliances, commercial refrigeration equipment and food displays. In this brochure, which presents our Planibel low-e pyrolytic and iplus low-e magnetron ranges, you will certainly find the ideal product(s) for your needs.

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Find the right solution for you in AGC's low-e pyrolytic range

— PLANIBEL G, G FAST, PURE COMFORT 10 & 14 —

Planibel G, G Fast and Pure Comfort 10 & 14 are all clear glass featuring a pyrolytic low-e coating applied to the glass surface at high temperature by chemical vapour deposition (CVD) during the float glass production process.

Planibel G – AGC's standard low-e pyrolytic glass – is ideal for oven doors and refrigeration equipment.

Thanks to our special surface treatment – a unique technology developed by AGC Glass Europe – Planibel G Fast and Pure Comfort 10 offer unparalleled scratch resistance, making the glass easier to produce and maintain.

When the application requires a simple monolithic glass, our unique Planibel Pure Comfort 10 delivers superb thermal insulation and a neutral appearance, while Planibel Pure Comfort 14 delivers enhanced transparency combined with excellent light transmission and low reflection.

Compared to other pyrolytic coatings, the emissivity of the Planibel Pure Comfort range is very stable after heat-treating. Both products are the perfect solution for industrial applications where excellent light transmission and thermal performance are crucial, such as home appliances, commercial refrigeration equipment, heated glass and more.

Combining aesthetics and easy processability

PLANIBEL G, G FAST AND PURE COMFORT 10 & 14

What's so special about it?	What does this mean for you?	Planibel G	Planibel G Fast	Planibel Pure Comfort 10	Planibel Pure Comfort 14
Neutral appearance	– Objects and food are clearly visible behind the glass.	***	***	****	*****
Easy to process, no edge deletion needed	– Processing costs are lower thanks to easier and faster processing, shorter tempering cycle time and no edge deletion.	****	*****	*****	****
Emissivity remains stable even when exposed to very high processing temperatures	– All coating properties and benefits remain unchanged (no damage, no deterioration in quality) during standard processing, including high-temperature heating (heat-treating, enamel curing, and bending).	****	****	*****	*****
Unparalleled scratch resistance thanks to the unique surface treatment	– Planibel G Fast and Pure Comfort 10 deliver superior mechanical strength compared with standard pyrolytic coatings. Their smooth surface stays clean longer and is easy to maintain. – Can be used as single glazing or in IGUs (position 1 or position 4).	****	*****	*****	****
Easy to bend	– Since the coating can withstand bending, the bending process is easy.	***	***	*****	*****
Heat-reflective coating	– Saves energy and significantly reduces the temperature on the outer side of oven doors, etc.	***	***	*****	****

What can you use it for? | Be inspired!

- Home appliances** – Domestic ovens, control panels,...
- Industrial appliances** – Commercial ovens, refrigerator doors, food displays

Available thicknesses

Planibel G and G Fast are available in 3.15 mm, 4 mm and 6 mm.
Pure Comfort 10 is available in 4 mm and 5 mm.
Pure Comfort 14 is available only in 4 mm.

For more details about available thicknesses and sizes, see AGC's Product Catalogue at www.agc-yourglass.com

Unparalleled scratch resistance

— PLANIBEL G FAST AND PURE COMFORT 10 —

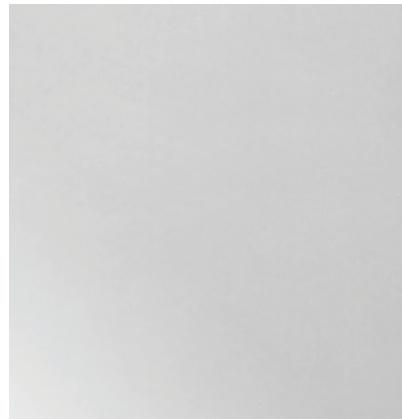
Planibel G Fast and Pure Comfort 10 deliver unparalleled scratch resistance thanks to AGC's special surface treatment.

Scratch resistant coating

Comparison after a 1 kg metal block has been drawn across the glass



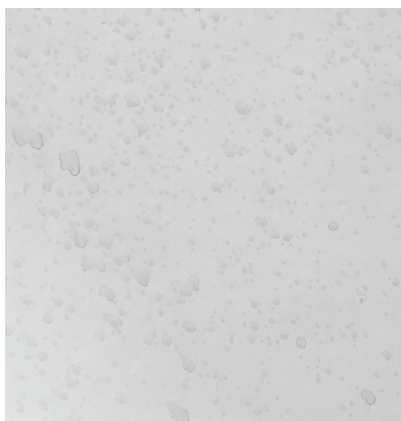
Coated glass without AGC's surface treatment



Coated glass with AGC's special surface treatment

Smooth coating: less maintenance

Comparison after water droplets have dried



Coated glass without AGC's surface treatment



Coated glass with AGC's surface treatment



Low-e magnetron range for perfect insulation and safety

IPLUS 1.1T AND IPLUS 1.0T

iplus 1.1T and iplus 1.0T are both clear glass with a low-e magnetron coating applied offline. They deliver high light transmission, enhanced transparency and a neutral colour, allowing customers to see products on display without any alteration in colour. In addition, iplus 1.0T also provides superior thermal insulation, keeping goods cool and protecting shoppers in the aisle from the cold. Both products are ideal for commercial refrigeration equipment.

What's so special about it?	What does this mean for you?	iplus 1.1T	iplus 1.0T
High light transmission, low reflection and neutral colour	– Objects and food are perfectly visible behind the glass	*****	*****
	– Does not change the colour of the products on display.	***	***
Enhanced thermal insulation	– iplus 1.0T delivers superb thermal comfort of 1.0 W/m ² K, keeping goods cool and protecting people in the aisle from the cold.	****	*****
For use in double or triple glazing	– Additional design options, safety features and functions are available when combined with other AGC glass products.	****	*****
	– Maximises energy savings (up to 50% reduction in the energy consumption of commercial refrigerators), enabling supermarkets to benefit from low operating costs while increasing comfort for their customers.		

What can you use it for? | Be inspired!

Commercial refrigeration equipment – Coolers, freezers, refrigerators, wine cabinets

Availability

iplus 1.1T and iplus 1.0 T are available in 4 mm and 6 mm thicknesses (standard) and in 3.15 mm (on demand) in DLF and PLF sizes. They are also available on demand on Planibel Clearvision extra-clear glass.

iplus 1.1T and iplus 1.0T are Cradle to Cradle Certified™ Silver.



Product comparison table

Technical specifications

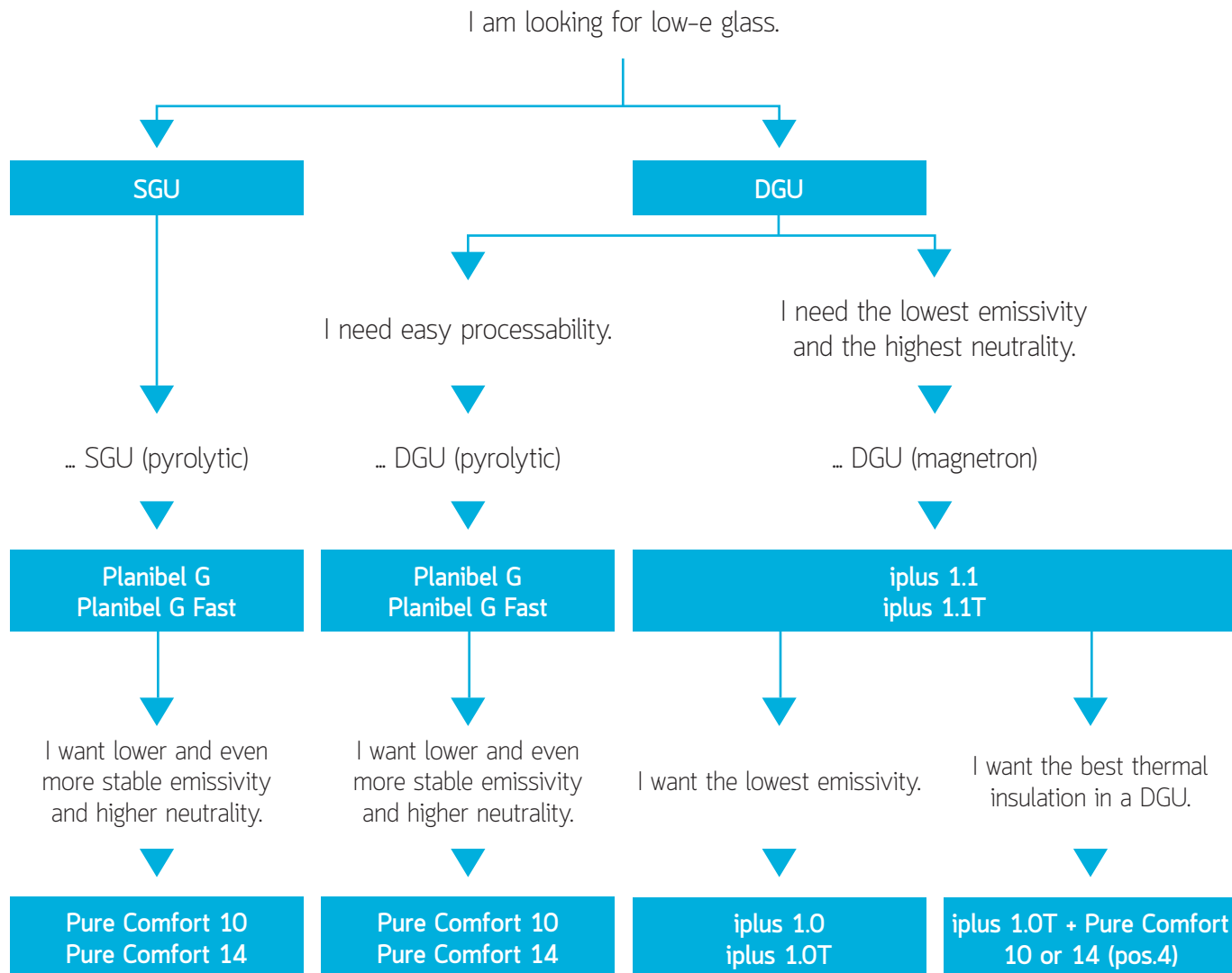
Properties	Pyrolytic range					Magnetron range			
	Planibel G	Planibel G Fast	Planibel Pure Comfort 10		Planibel Pure Comfort 14	iplus 1.1T		iplus 1.0T	
						Double glazing 4-16-4 (Argon 90%)	Triple glazing 4-14-4-14-4 (Argon 90%)	Double glazing 4-16-4 (Argon 90%)	Triple glazing 4-14-4-14-4 (Argon 90%)
Thickness (mm)	4	4	4	5	4	24	40	24	40
Coating position(s)	2	2	2	2	2	3	2 and 5	3	2 and 5
Ug value W/(m²K) EN 673w	3.7	3.7	3.5	3.5	3.6	1.1	0.6	1.0	0.6*
Light transmission (%) EN 410	83	83	81	81	83	82	75	81	73
Light reflection (%) EN 410 (external/internal)	10/11	10/11	11/11	10/11	11/11	12/12	15/15	13/14	18/18
Colour rendering index (%) EN 410	98	98	98	98	99	98	97	98	97
Haze (max. %)	0.5	0.5	0.5		0.7				
Normal emissivity of the coated side per EN 12898	0.14	0.14	0.10		0.13	0.03	0.01	0.03	0.01
Sheet resistance Ω/sq (max.)	17	17	10		14	3.9	2.2	3.9	2.2
Classification of coated glass per EN 1096-1	A	A	A		A	C	C	C	C

* A Ug value of 0.5 W/m²K is reached when a 16 mm spacer is used.

Processing options

Cutting	Straight and circular cuts are possible
Edge deletion	Planibel G, Planibel G Fast, Pure Comfort 14 and Pure Comfort 10 do not require edge deletion. iplus 1.1 and iplus 1.0 require edge deletion.
Heat-treating	Planibel G and Pure Comfort 14 can be thermally toughened or heat-strengthened in all types of heat-treating furnaces.
	Planibel G Fast and Pure Comfort 10 can be thermally toughened or heat-strengthened with either the coated or non-coated side in contact with the rollers, and in all types of heat-treating furnaces.
	iplus 1.1T and 1.0T must be thermally toughened or heat-strengthened.
Shaping and edge-finishing	Can be laminated
	Edge grinding
	Grinding
	Drilling
	Notches
	Silkscreen printing and enamelling on both sides
	Painting
	Heated glass
	Can be bent in all types of heat-treating furnaces
Insulating glazing units (IGUs)	Double or triple glazing

How to choose the right coated glass for you





AGC GLASS EUROPE, A EUROPEAN LEADER IN FLAT GLASS

Based in Louvain-la-Neuve (Belgium), AGC Glass Europe produces, processes and markets flat glass for the construction industry (external glazing and interior decoration), car manufacture and solar power applications. It is the European branch of AGC, the world's leading producer of flat glass. It has over 100 sites throughout Europe, from Spain to Russia.

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