

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. This brochure presents our Planibel Low-E pyrolytic and iplus Low-E magnetron ranges. In it, you will certainly find an answer to your needs.

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The solution for you in AGC's Low-E pyrolytic range

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

Planibel G, G fast, Pure Comfort 10 and 14 are all clear glass with a pyrolytic Low-E coating applied at high temperature by chemical vapour deposition (CVD) to the glass surface during the float glass production process. Compared to clear glass, our heat-reflecting coatings help to ensure energy-efficient baking and allow to reduce the number of glass panels in the oven door.

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

Thanks to a special surface treatment – a unique technology developed by AGC Glass Europe – Planibel G fast, Pure Comfort 10 and 14 offer unparalleled scratch-resistance, making the glass easier to produce and maintain.

Our unique Planibel Pure Comfort 10 delivers extremely low emissivity combined with superior insulation and a neutral appearance, while Planibel Pure Comfort 14 offers enhanced transparency with high light transmission and minimised reflected colour.

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

These products deliver excellent performance and meet a multitude of industry requirements for commercial refrigeration equipment, oven doors, etc.

Combining safety, aesthetics and easy processability

PLANIBEL G, G FAST, 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*
Enhanced transparency and a neutral appearance	Objects and food are clearly visible behind the glass in true colours	*	*	**	***
Easy to process, no edge-deletion needed	You can keep processing costs down thanks to easier and faster processing (shorter cycle time = improved capacity)	**	***	***	***
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 treatment, enamel curing and bending)	**	**	***	***
Offers unparalleled scratch-resistance, thanks to the unique surface treatment	Planibel G fast, Pure Comfort 10 and 14 deliver superior mechanical resistance compared with standard pyrolytic coatings. The products' smooth surface stays clean for longer and is easy to maintain	**	***	***	***
Heat-reflecting coating	It can be used on single glazing or IGUs (From pos. 1 to pos. 4) Saves energy and significantly reduces the front temperature of outer oven doors, etc. and keeps the heat outside in commercial refrigeration	**	**	***	**
Easy to bend	Coating resistance to bendability allows easy bending	**	**	***	***
Enhanced electrical conductivity	Can be heated for use in industrial applications such as commercial refrigeration. This avoids condensation issues when opening fridge doors	***	***	***	***

*Planibel Pure Comfort 14 is only available on request.

What can you use it for?	Be inspired...
Home appliance	Domestic and commercial ovens, control panels
Commercial refrigeration equipment and food displays	Fridge, freezer, refrigerator doors & shelves

Availability

Planibel G and G fast are available in various thicknesses ranging from 3.15 to 6 mm and in various dimensions up to 6000 x 3210 mm.

Planibel Pure Comfort 10 is available in 4mm (standard) and in 3.15 mm (on request), in the following dimensions:

- PLF: 6000 x 3210 mm, 5100 x 3210 mm
- DLF: 2250 x 3210 mm

Planibel Pure Comfort 10 is also available in 5 mm, in 6000 x 3210 mm only.

Planibel Pure Comfort 14 is available on request only.

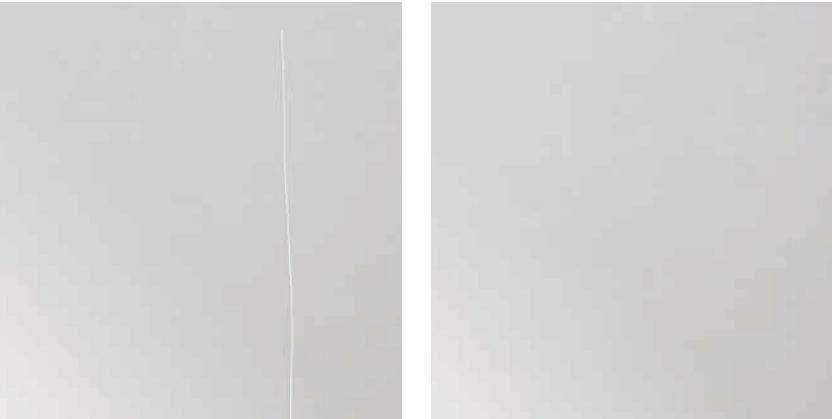
For more details, see AGC's Product Catalogue at www.agc-yourglass.com

Unparalleled scratch-resistance

PLANIBEL G FAST, PURE COMFORT 10 & 14

Planibel G fast, Pure Comfort 10 and 14 deliver unparalleled scratch-resistance.

Coating scratch-resistance
Comparison after a 1 kg metal block has been drawn across the glass



Coated glass without surface treatment AGC glass with surface treatment

Smooth coating: less maintenance
Comparison after water droplets have dried up



Coated glass without surface treatment AGC glass with surface treatment

The Planibel G fast, Pure Comfort 10 and 14 product features make them ideal for use in high-end appliances and food display devices.



Low-E magnetron range for perfect insulation and safety

IPLUS 1.1T ON CLEARLITE & IPLUS 1.0T ON CLEARLITE

iplus 1.1T and iplus 1.0T are both clear glass with a magnetron Low-E 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 to this, iplus 1.0T on Clearlite 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 on Clearlite	iplus 1.0T on Clearlite
High light transmission and low reflection	– Objects and food are perfectly visible behind the glass	***	***
Enhanced thermal insulation	– iplus 1.0T on Clearlite offers superb thermal comfort of 1.0, keeping goods cool and protecting people in the aisle from the cold	**	***
Neutral colour	– Does not change the colour of the products displayed	**	**
For use in double or triple glazing	– Enables additional design, safety and functions when combined with other AGC glass products – Maximises energy savings (up to 50% reduction in the energy consumption of commercial refrigerators), allowing supermarkets to benefit from low operating costs while increasing comfort for their customers	***	***
Enhanced electrical conductivity	– iplus products can be heated for use in industrial applications, such as commercial refrigeration equipment. This avoids condensation issues when opening the fridge doors	***	***
Thermally toughened safety glass (to be toughened before use)	– Meets high safety standards	***	***

What can you use it for? | Be inspired...

Commercial refrigeration – Coolers, freezers, fridges, wine cabinets

Availability

iplus 1.1T and iplus 1.0T on Clearlite are available in 4 and 6 mm (standard) and in 3.15 mm (on request) in DLF and PLF.

They are also available on request on Planibel Clearvision highly transparent glass.

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



Comparative product table

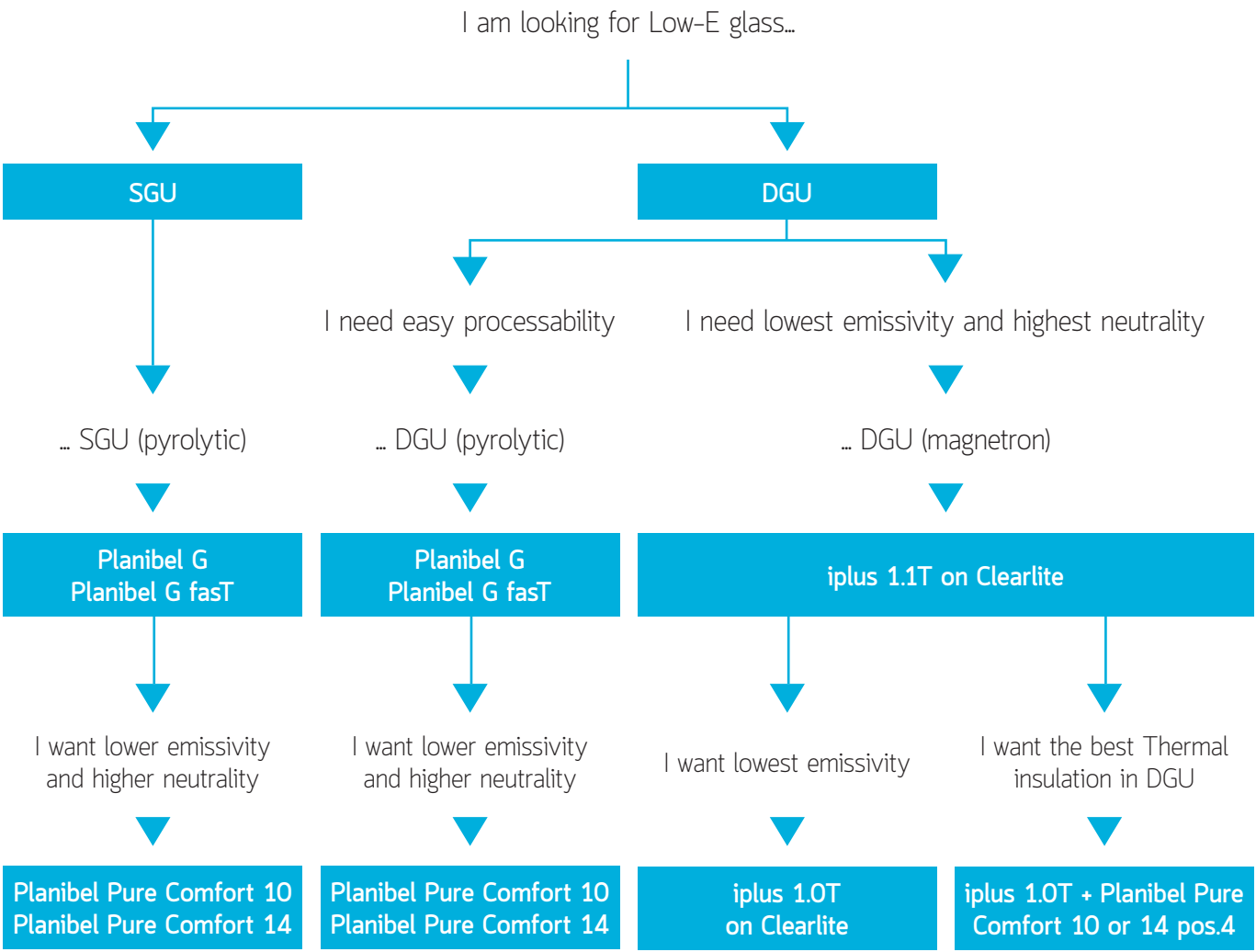
Technical specifications

Single glazing											
	Thickness	Coating position(s)	U _g -value	Light transmission	Light reflection (external/ internal)	Colour rendering index	Colour: neutral	Haze (max.)	Normal emissivity of the coated side	Sheet resistance of the coating	Classification of the coated glass
	mm		EN 673 W/m²K	EN 410 %	EN 410 %	EN 410 %		%	EN 12898 -	Ω/m²	EN 1096-1
Planibel G	4	2	3,7	83	10/11	98	**	0,5	0,14	13 to 17	A
Planibel G fasT	4	2	3,7	83	10/11	98	**	0,5	0,14	13 to 17	A
Planibel Pure Comfort 14	4	2	3,7	84	11/11	99	***	0,4	0,14	13 to 15	A
Planibel Pure Comfort 10	4	2	3,5	82	10/11	99	***	0,5	0,10	8 to 10	A
Planibel Pure Comfort 10	5	2	3,5	81	10/11	99	***	0,5	0,10	8 to 10	A
Double glazing											
4 / 16 / 4 Planibel G, Air 100%	24	3	1,5	75	17/16	98	**	0,5	0,14	13 to 17	A
4 / 16 / 4 Planibel G fasT, Air 100%	24	3	1,5	75	17/16	98	**	0,5	0,14	13 to 17	A
4 / 16 / 4 Planibel Pure Comfort 14, Air 100%	24	3	1,5	76	17/16	99	***	0,4	0,14	13 to 15	A
4 / 16 / 4 Planibel Pure Comfort 10, Air 100%	24	3	1,4	75	17/16	99	***	0,5	0,10	8 to 10	A
4 / 16 / 4 iplus 1.1T on Clearlite, Argon 90%	24	3	1,1	82	12/12	98	**	-	0,03	2,2	C
4 / 16 / 4 iplus 1.0T on Clearlite, Argon 90%	24	3	1,0	81	13/14	98	**	-	0,01	3,9	C
4 / 16 / 4 iplus 1.0T on Clearlite, Argon 90%, Planibel Low-e Pure Comfort 10	24	2 4	0,9	74	15/15	99	***	-	0.01 0.10	3.9 8 to 10	C A
4 / 16 / 4 iplus 1.0T on Clearlite, Argon 90%, Planibel Low-e Pure Comfort 14	24	2 4	0,9	75	16/16	99	***	-	0.01 0.14	3.9 13 to 15	C A
Triple glazing											
4 / 14 / 4 / 14 / 4 iplus 1.1T on Clearlite, Argon 90%	40	2 and 5	0,6	75	15/15	97	**	-	0,03	2,2	C
4 / 14 / 4 / 14 / 4 iplus 1.0T on Clearlite, Argon 90%	40	2 and 5	0,6	73	18/18	97	**	-	0,01	3,9	C
4 / 16 / 4 / 16 / 4 iplus 1.0T on Clearlite, Argon 90%	44	2 and 5	0,5	73	18/18	97	**	-	0,01	3,9	C

Processing options

Safety	<div>– Planibel G: Can be thermally toughened or heat strengthened in all types of tempering furnaces</div> <div>– Planibel G fasT, Pure Comfort 10 and 14: Can be thermally toughened or heat strengthened in all types of tempering furnaces. During this process, the coated side can be in contact with rollers</div> <div>– iplus 1.1T and 1.0T on Clearlite: Must be thermally toughened or heat strengthened</div>
	Can be laminated
Cutting	Can be cut straight or circular
Shaping and edge-finishing	Edge grinding
	Grinding
	Drilling
	Notches
	Silk-screen printing and enamelling possible
	Painting
	Heated glass
	Can be bent
Insulating glazing units (IGUs)	Double or triple glazing

How to choose the coated glass you need?



REFRIGERATED SERVE OVER COUNTER



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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