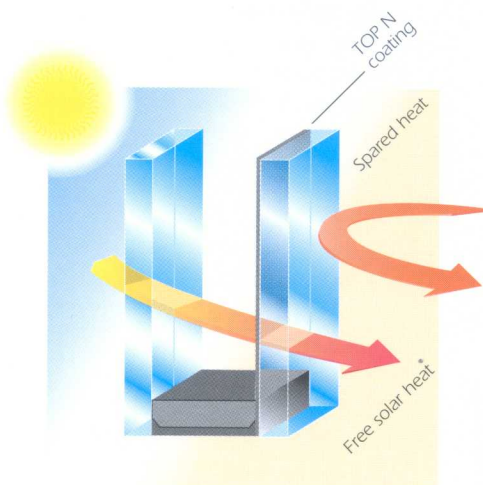


PLANIBEL TOP N[®]

TOP-FLIGHT THERMAL AND LIGHT COMFORT



DESCRIPTION

PLANIBEL TOP N low-emissivity glass consists of a sheet of Planibel float glass that has been vacuum-coated on one side with the new TOP N coating. It has been specially designed for use in double glazed units where it can achieve some of the highest energy ratings around by combining enhanced thermal insulation with an optimum solar heat throughout.

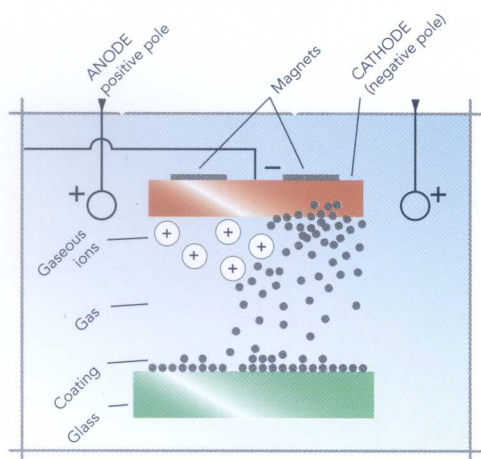
$$\frac{U=1,1 \text{ W/(m}^2\cdot\text{K)}}{TL=79\%}$$

Would you like to offer your customers a double glazed unit that features enhanced thermal insulation, a neutral appearance and a light transmission rating that is virtually the same as a traditional double glazed unit ?

With Glaverbel's new PLANIBEL TOP N glass, you can do just that.

In line with its ongoing drive to keep pace with market developments, Glaverbel is introducing the innovative PLANIBEL TOP N, its new low-emissivity vacuum-coated glass.





MANUFACTURING PROCESS

The TOP N coating is applied using an electromagnetic process to project metal particles onto the glass in a vacuum. This process has the advantage of yielding a glass covered with a perfectly uniform low-emissivity 'magnetron' coating. The metal particles are responsible for PLANIBEL TOP N's photometric and thermal characteristics.

There may be slight variations in colour, visible when light shines through and reflects off the glass. Such variations are inherent to the manufacturing process and must be considered normal and unavoidable.

ADVANTAGES

When assembled in double glazing (4 mm-15 mm 100% argon - 4 mm composition), PLANIBEL TOP N can achieve

- an exceptionally high light transmission rating of 79%;
- a very low heat loss coefficient (U-value) of 1.1 W/(m².K), thereby ensuring maximum energy saving;
- a neutral appearance when light reflects off the glass;
- a significant gain in free solar heat (SF=64%).

PLANIBEL TOP N combines these features to offer unrivalled visual, thermal and aesthetic performance.

PLANIBEL TOP N[®]

COMBINING A HIGH-QUALITY COATING WITH EASE OF ASSEMBLY

The PLANIBEL TOP N low-emissivity glass is the ideal complement to Glaverbel's range of 'high performance' glasses.

Apart from the advantages mentioned above, PLANIBEL TOP N can be processed easily while complying with the rules governing vacuum-coated glasses.

PLANIBEL TOP N has been designed for assembly into double glazed units. It may be combined with Stopsol solar control glasses, Imagin patterned glasses, Stratobel laminated glasses as well as other glasses in the Glaverbel range. Such combinations result in multifunctional glass products.

PHOTOMETRIC AND THERMAL CHARACTERISTICS

PLANIBEL TOP N in monolithic glass

Thickness mm	Light transmission %	Light reflection %
4	87	6
5	87	6
6	86	6

PLANIBEL TOP N in double glazing*

Composition mm	Light transmission %	Light reflection %	Solar factor %	U-value W/(m ² .K)
4-12(air)-4	79	13	64	1,6
4-15(air)-4	79	13	64	1,4
4-12(argon 100%)-4*	79	13	64	1,3
4-15(argon 100%)-4*	79	13	64	1,1
4-12(argon 90%)-4*	79	13	64	1,3
4-15(argon 90%)-4*	79	13	64	1,2

* The characteristics given opposite apply to a double glazing with PLANIBEL TOP N (coating in position 3) and a sheet of Glaverbel's clear Planibel float glass.

Manufacturing sizes:

PLFs measuring 6 m x 3.21 m

Standard thicknesses

4, 5 and 6 mm (consult Glaverbel for other thicknesses)



www.MyGlaverbel.com

Headquarters

Ch. de La Hulpe 166 - B-1170 BRUSSELS

Tel : +32 2 674 31 11 - Fax : +32 2 674 31 62

marketing.communication@glaverbel.com