

## ANTI-FOG

AGC's anti-condensation coating

**AGC**



Your Dreams, Our Challenge



While highly insulated windows deliver comfort and energy savings, the more we insulate our homes and windows, the greater the likelihood of external condensation forming. Anti-Fog (AF) is a coating specifically developed to be used on the outer pane of the glazing unit to prevent condensation issues. Harnessing its years of expertise in coating technologies, AGC is the first glassmaker ever to successfully combine this special pyrolytic anti-condensation coating with a magnetron thermal insulation coating on a single pane of glass. This two-in-one solution delivers excellent insulation performance while preventing condensation from forming. AGC's Anti-Fog products make your living space more comfortable while ensuring a clear view of the outside world.

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What's so special about it?

What does it mean for you?

Applying the pyrolytic coating in position 1 (#1) increases the temperature of the outer glass pane and prevents condensation from forming

– Ensures a strikingly clear view of the outside world since the glass does not go opaque

Five products with anti-condensation properties:

– Allows you to choose from multiple options so you find the right solution for your needs

- **Planibel Anti-Fog:** glass with anti-condensation coating in #1

- **iplus 1.1-AF:** double-coated glass combining anti-condensation properties (AF in #1) with thermal insulation (low-E 1.1 in #2)

- **Energy N-AF:** double-coated glass combining anti-condensation properties (AF in #1) with thermal insulation and solar control (Energy N in #2)

- **ipasol neutral 70/37-AF:** double-coated glass combining anti-condensation properties (AF in #1) with solar control (ipasol in #2)

- **Stopray Vision-72-AF:** double-coated glass combining anti-condensation properties (AF in #1) with solar control (Stopray in #2)

Also available in Stratobel laminated versions with AF coating always in #1:

– Provides enhanced safety and security as well as acoustic comfort

- Stratobel iplus 1.1-AF

- Stratobel Energy N-AF

- Stratobel ipasol neutral 70/37-AF

- Stratobel Stopray Vision-72-AF

Reduced haze effect

– The Planibel Anti-Fog coating significantly reduces haze\*

Planibel Anti-Fog doesn't need to be heat treated to activate the coating

– Provides the same anti-condensation performance both in annealed and heat-treated versions

Neutral colour

– Is in line with current trends in the residential market

\* Haze is an optical phenomenon visible when looking through a glazing at an angle, giving the impression that the glass is coated with a thin layer of dust.

# Technical Specifications & Performance

Double glazing		LT (%)	SF (%)	LR ext. (%)	LR int. (%)	Ug value W/(m <sup>2</sup> .K)
4 mm Planibel Anti-Fog #2 - 15 mm argon 90% - 4 mm iplus 1.1		75	58	15	15	1.1
4 mm iplus 1.1-AF (AF #1, low-E #2) - 15 mm argon 90% - 4 mm Planibel Clearlite		75	56	15	15	1.1
4 mm Energy N-AF (AF #1, Energy N #2) - 15 mm argon 90% - 4 mm Planibel Clearlite		68	38	15	16	1.0
4 mm Stopray Vision-72-AF (AF #1, Stopray Vision-72 #2) - 15 mm argon 90% - 4 mm Planibel Clearlite		67	36	16	16	1.0
4 mm ipasol neutral 70/37-AF (AF #1, ipasol #2) - 15 mm argon 90% - 4 mm Planibel Clearlite		65	35	15	17	1.0
Triple glazing		LT (%)	SF (%)	LR ext. (%)	LR int. (%)	Ug value W/(m <sup>2</sup> .K)
4 mm iplus 1.1-AF (AF #1, low-E #2) - 15 mm argon 90% - 4 mm Planibel Clearlite - 15 mm argon 90% - 4 mm iplus 1.1 #5		68	48	18	18	0.6
4 mm Energy N-AF (AF #1, Energy N #2) - 15 mm argon 90% - 4 mm Planibel Clearlite - 15 mm argon 90% - 4 mm iplus 1.1 #5		61	35	17	18	0.6

## How does condensation form?

Condensation generally forms at night or at dawn when two specific conditions are met: a significant drop in external temperature combined with a high relative humidity. Under those conditions, the outer surface of a high-performance glazing can become colder than the external temperature. There are two reasons for this: the excellent insulating properties of the glass reduce outward heat loss, and the external environment (i.e. the sky) cools the outer surface of the glass. If the temperature of the outer surface of the glass drops below the dew point\*, then the moisture in the air forms tiny droplets of condensation on the glass.

\* The dew point is the temperature below which the water vapour in a volume of air will condense into drops of water.

UNITED KINGDOM / AGC GLASS UK

Tel: +44 1788 53 53 53 - Fax: +44 1788 56 08 53 - sales.uk@eu.agc.com

OTHER COUNTRIES / AGC GLASS EUROPE

Tel: +32 2 409 30 00 - Fax: +32 2 672 44 62 - sales.headquarters@eu.agc.com

AGC Glass Europe has representatives worldwide.

See [www.agc-younglass.com](http://www.agc-younglass.com) for further addresses.

