WHAT IS CLARITY 333 XC?

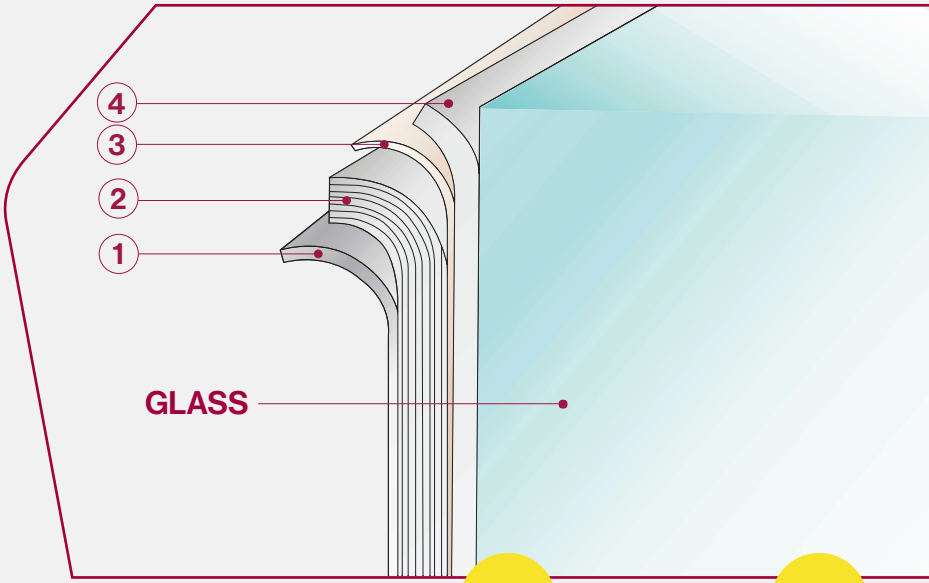
The Clarity 333 XC is a high-tech adhesive film designed to improve building energy efficiency while providing effective solar protection. It is specifically designed to reduce incoming heat and protect against harmful UV rays, while maintaining near-total transparency.

This film is ideal for outdoor applications and is particularly suitable for buildings where aesthetics and performance are priorities.

Structure & understanding of the film

- Thickness : 75µ.
- Film structure: Multilayer PET (PVC Free).

1. Scratch-resistant layer: Provides increased durability and makes cleaning windows easier.
2. Multilayer complexing of nanometric thickness PET.
3. PS adhesive, polymerizing with the glass within 15 days.
4. Adhesive protection liner: to be discarded after installation.



BARE GLASS

CLARITY 333 XC

Superior technical performance of Clarity 333 XC

The adjacent table demonstrates the superior technical performance of Clarity 333 XC compared to bare glass.

By rejecting 57% of solar energy, this film significantly reduces incoming heat, thus improving indoor comfort and lowering air conditioning costs. The low G-value of Clarity 333 XC indicates better energy efficiency, and its 97% near-infrared rejection ensures optimal protection against solar heat. Its durability is enhanced by a warranty of up to 10 years, ensuring reliable and continuous performance.

These features make Clarity 333 XC a cutting-edge solution for solar protection and energy efficiency needs in buildings.

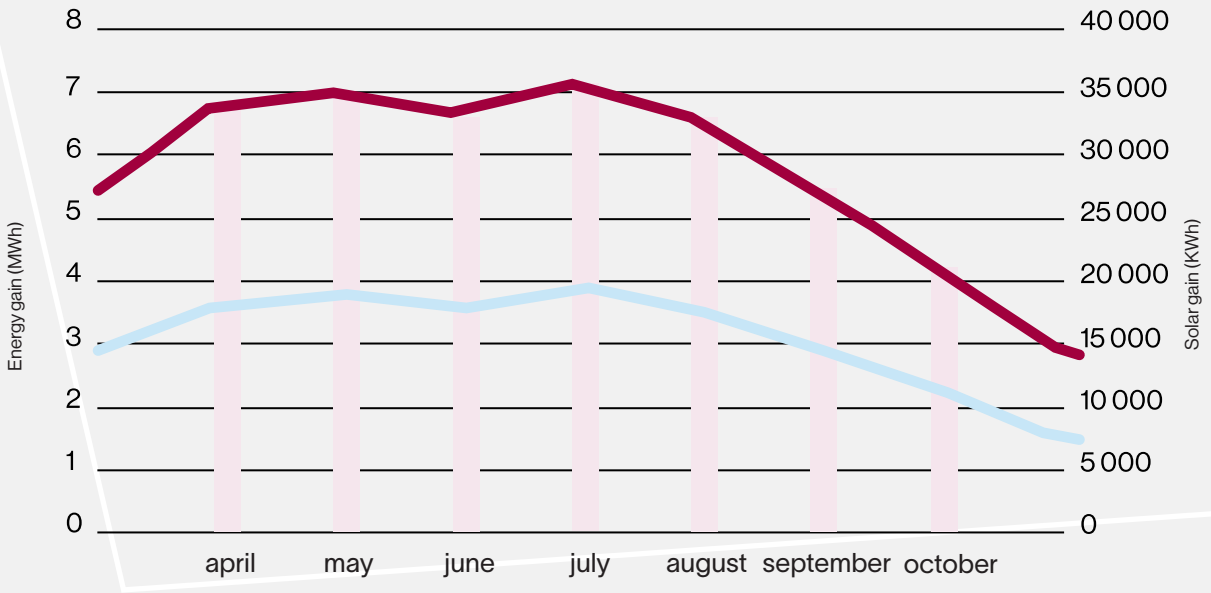
	CLARITY 333 XC*	BARE GLASS, 4 mm
Type of installation	Exterior	/
Mirror effect	Neutral	Neutral
Natural light transmission	Excellent	Excellent
Total solar energy rejected	57%	<15%
G value (clear glass 4mm)	0,49	0,8
G value (clear glass 4 - 15 Argon - 4mm)	0,45	0,75
Shading coefficient	0,6	0,92
Near infrared rejection (980 nm)	97%	<15%
Warranty up to	10 years	/

* Film data based on 4mm single glass

REDUCTION OF ENERGY CONSUMPTION

Clarity 333 XC is designed to offer exceptional energy performance, significantly reducing air conditioning costs. It effectively rejects heat, thus reducing reliance on cooling systems.

This reduction in air conditioning needs translates into significant savings on energy bills and a decrease in carbon footprint.



Calculation carried out and averaged based on a building equipped with clear double glazing, facing east, south, and west. It is heated in winter by a heat pump (SCOP = 3.5) and cooled in summer by air conditioning (SEER = 3). The energy mix is then adapted according to the reference country.

This graph illustrates how the film reduces solar gains, leading to significant savings in air conditioning costs.

- **Bordeaux curve:**

  Represents solar gains without film, showing the amount of solar heat penetrating through the glazing.

- **Blue curve:**

  Represents solar gains with the film, demonstrating a drastic reduction in solar heat.

- **Pink columns:**

  Illustrate energy gains month by month, showing the savings achieved in air conditioning.

Installing Clarity 333 XC allows you to reduce heat, while making energy and financial savings

1

Less heat:

Clarity 333 XC reduces the amount of penetrating solar heat by up to 70%, as shown by the drop between the burgundy and blue curves.

2

Energy savings from air conditioning:

The pink columns show air-conditioning-related energy gains, month after month, totalling up to 43 MWh per year for 500 m² of glazing.

3

Financial savings:

By reducing the need for air conditioning, Clarity 333 XC makes substantial savings on energy bills. The figures in the graph show a financial saving equivalent to around €10,000 per year.

AESTHETICS AND TRANSPARENCY WITH THE CLARITY 333 XC

Unlike traditional metalized films that can alter the appearance of buildings, Clarity 333 XC is designed to be discreet and nearly invisible. It is ideal for buildings where aesthetics are paramount, such as historic facades or prestigious buildings.

TRANSPARENCY

This film offers a reflection of only 10%, compared to 7% for clear glass, ensuring a natural and preserved appearance.

DISCRETION

The film is nearly invisible, maintaining the original appearance of the glazing while improving its energy performance.

ENHANCED SECURITY

The film offers additional protection in case of glass breakage. With its thickness of 75 µm, it holds the glass pieces together, thus reducing the risk of injuries caused by glass shards.

ARCHITECTURAL COMPATIBILITY

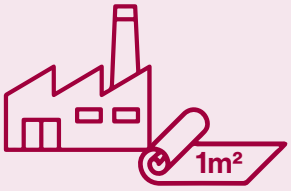
Ideal for facades and listed buildings, where preserving the exterior appearance is essential.

SEE MORE

REDUCTION OF CO2 EMISSIONS

By optimizing the energy efficiency of buildings, Clarity 333 XC helps reduce energy consumption and CO2 emissions. The Carbon Quota analysis shows that Clarity 333 XC offsets the CO2 emissions generated during its production in just 6 months, making this film a responsible and sustainable choice.

To ensure the positive impact of Clarity 333 XC on the environment, Solar Screen collaborated with Carbon Quota. This in-depth analysis certifies the environmental benefits of Clarity 333 XC, confirming its efficiency and durability.

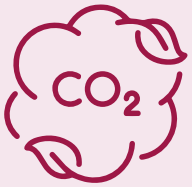


CO2 EMITTED FOR PRODUCTION

2 KG OF CO2 PER M²

ANNUAL CO2 SAVINGS

3.89 KG OF CO2 PER M²



CO2 EMISSIONS OFFSET

IN 6 MONTHS

LIFESPAN

MORE THAN 10 YEARS

SIMPLIFIED CARBON FOOTPRINT OF INSTALLING 1M² OF CLARITY 333 XC IN FRANCE

	CO2 IN KG	CONSUMPTION IN KWH
Energy saved thanks to air conditioning in summer	-4,32	-80
Additional energy for heating in winter	0,432	8
Final savings	**-3,89**	**-72**

ENERGY SAVED THROUGH AIR CONDITIONING:

The energy saved by reducing air conditioning usage is 80 KWh, saving 4.32 kg of CO2.

ADDITIONAL ENERGY FOR HEATING:

The additional energy required for heating is 8 KWh, resulting in 0.432 kg of CO2 emissions.

NET GAINS IN CO2 EMISSIONS:

The difference between CO2 saved by reducing air conditioning and CO2 emitted for heating is 3.89 kg of CO2 per m² per year.

Clarity 333 XC stands out for its ability to offset the CO2 emissions generated during its production in just 6 months. With an annual saving of 3.89 kg of CO2 per m², this film significantly contributes to reducing the carbon footprint of buildings while providing effective and durable solar protection.

Information and values provided as an example and not contractual. Analysis available on request.