



Lower carbon glass for architectural projects

The Guardian NEXA™ range offers **lower carbon glass solutions** to help reduce the **embodied carbon of architectural façades**, with options suited to a wide range of projects and glazing applications. It supports architects, cladders, investors, and other professionals committed to improving the environmental performance of their buildings, while helping projects prepare for potentially evolving expectations around the use of lower carbon materials. The range offers **a lower carbon glass solution for virtually every project's needs.**



Reduced embodied carbon

up to 36% reduction^{1,2}, with options where budget and availability also matter.



Verified values

Environmental Product Declarations (EPDs) available, with third-party verified embodied carbon values.



Versatility

can be coated and/or laminated to provide energy efficiency, safety & security, and bird-friendly performance.



No compromise on aesthetics and performance

same optical quality when compared to our standard float glass products; offers a variety of color and reflectivity options when combined with Guardian SunGuard™ coatings.

With Guardian Glass, you don't have to choose between lower carbon options and project constraints—our range includes **solutions suited to different project specifications and budget considerations.**

[Contact us](#) to discuss the right fit for your project



Estimated embodied carbon reduction

Estimated embodied carbon impact for a 2,000 m² project glazed with a triple-glazed unit composed of 6 mm SunGuard high-performance coated glass + 4 mm float glass + 4 mm ClimaGuard low-E glass; when compared to the average European sputter coated and float glass values^{1,2}, for a similar glazing makeup, only for the glass and coatings.

	Average European standard float glass	Guardian ExtraClear™	Guardian NEXA 9	Guardian NEXA 6
Availability and main benefit	Standard float glass produced by the European's leading flat glass manufacturers	Standard float glass produced by Guardian in Europe	Frequent production campaigns in Europe to support project's timeline, without significant impact on overall budget	Two/three production campaigns in Europe per year; suited for customer specifications with ambitious carbon performance targets
Embodied carbon for a 4 mm glass thickness (A1-A3)	10,05 kg CO ₂ eq/m ²	9.64 kg CO ₂ eq/m ² ↓ -4%	8.58 kg CO ₂ eq/m ² ↓ -14%	6.38 kg CO ₂ eq/m ² ↓ -36%
Estimated embodied carbon reduction for a 2,000 m² glazed façade		Estimated 3,01 tons of CO ₂ saved in total	Estimated 10,63 tons of CO ₂ saved in total	Estimated 27,28 tons of CO ₂ saved in total
Electricity-related operational carbon equivalence for a typical 500 m² building in Europe³		Embodied carbon savings equivalent to ~ 1 month of electricity-related CO ₂ emissions	Embodied carbon savings equivalent to ~ 5 months of electricity-related CO ₂ emissions	Embodied carbon savings equivalent to ~ 13 months of electricity-related CO ₂ emissions

¹ The A1-A3 embodied carbon value for Guardian Glass products are derived from their EPDs and verified for conformance to ISO 14040/44, EN 15804, and the Product Category Rules (PCR) through a program operator and independent reviewer. This comparison is not based on a third-party verified comparative life cycle assessment (LCA). This comparison is based on internal calculations using publicly available EPDs and acknowledges that not all EPDs use the same methodologies, assumptions, and data quality requirements.

² As of October 2025, when comparing the cradle-to-gate (A1 - A3) embodied carbon value of Guardian Europe's standard, NEXA 9 and NEXA 6 float and coated glass vs. an average calculated from publicly available EPDs from the primary European flat glass manufacturers.

³ This estimation is based on an electricity consumption of ~ 246 kWh/m²/year for buildings in Europe with class E energy label and related CO₂ emissions of ~ 0.2 kg CO₂/kWh. Sources: Energy performance requirements for buildings in Europe and Europe's buildings under the microscope (Building performance Institute Europe - BPIE); Greenhouse gas emission intensity of electricity generation in Europe (European Environment Agency).