

Advanced float technology from GUARDIAN GLASS

Guardian Glass has introduced Guardian Nexa™, a lower-carbon float glass, to the European market following successful pilot production runs. Developed through research and development, technical innovation and manufacturing expertise, Guardian Nexa can be used across a wide range of building façade applications. It is designed to help reduce the embodied carbon of the built environment while maintaining the performance and aesthetics expected of conventional float glass.

CARBON REDUCTION AND TRANSPARENCY

Guardian Nexa can serve as a base glass or laminated glass for the company's high-performance coated products, including the Guardian SunGuard and Guardian ClimaGuard ranges.

When compared with standard float glass production, Guardian Nexa offers:

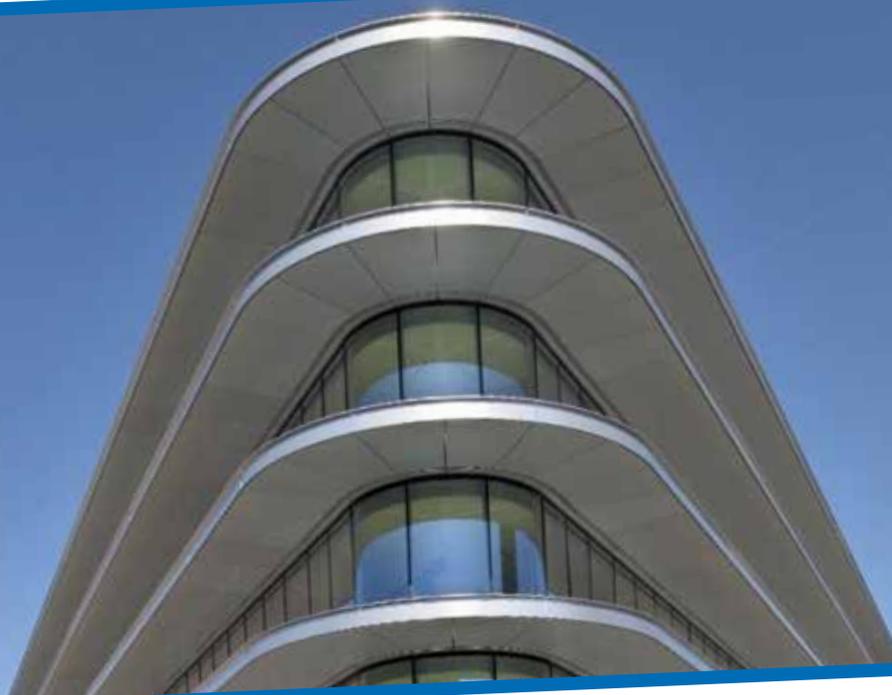
- More than 30 percent lower embodied carbon, to approximately 7.0 kg CO₂e/m² for 4 mm float glass

- Increased cullet content from both internal and external sources

- Comparable performance and aesthetics to Guardian ExtraClear

The stated embodied carbon reduction is based on a comparison between the estimated value for 4 mm Guardian Nexa glass and 4 mm Guardian ExtraClear glass produced in Europe. Embodied carbon data are expressed as CO₂ equivalent (kg/m²) emitted during the A1-A3 production

stages and calculated using a standard 4 mm thickness. The calculation is an estimate derived from the material's Embodied Carbon Factor (ECF), based on a regional Environmental Product Declaration (EPD) that has been independently verified by a third party. The A1-A3 stages include raw material extraction and processing, transportation of raw materials to the manufacturing site, and product manufacturing.



A lower-carbon float glass has entered the European market thanks to GUARDIAN GLASS' launch of its Guardian Nexa™. Developed through R&D and manufacturing innovation, the product reduces embodied carbon by more than 30 percent compared with standard float glass - all while maintaining its performance, and with an EPD that was expected back in 2024.

ENVIRONMENTAL STEWARDSHIP

Guardian Glass continues to focus on improving the environmental performance and efficiency of its manufacturing processes and products while reducing resource consumption. This includes attention to raw material sourcing and furnace efficiency.

Guus Boekhoudt, Executive Vice President at Guardian Glass, described the launch as the result of coordinated efforts between R&D and operations teams, combin-

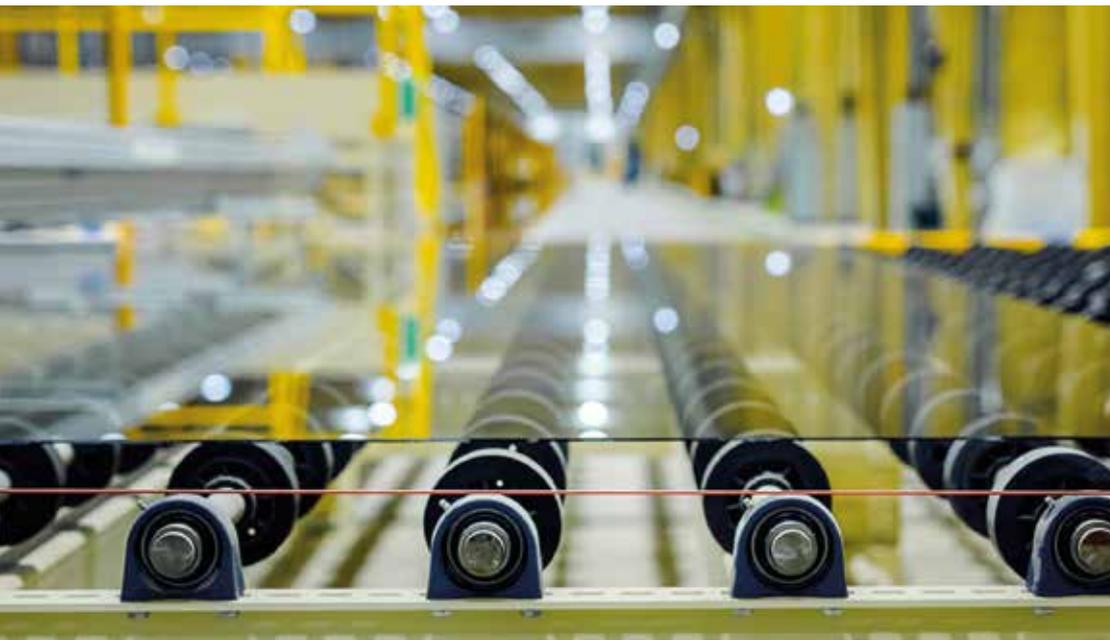
ing ongoing manufacturing innovation with optimised cullet use. He noted that the development aligns with the company's Envi-

ronmental Stewardship priorities, including enhanced energy efficiency, reduced air emissions and responsible resource management.



ENVIRONMENTAL PRODUCT DECLARATION AVAILABILITY

Detailed environmental data for Guardian Nexa will be documented in an Environmental Product Declaration, currently under development and expected in Q2 2024. Since 2021, the scope of EPDs for Guardian Glass products in Europe has been expanded to include CO2 emissions generated during production processes, increasing transparency for customers.



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