

Life cycle assessment of Saflex™ LiteCarbon™ Clear PVB interlayer



Developed from a holistic approach to sustainability, Saflex™ LiteCarbon™ Clear is Eastman's first-generation reduced-carbon-footprint PVB interlayer. Saflex LiteCarbon Clear is the result of a comprehensive sustainability strategy that uses various approaches, including pre-consumer recycled content (ISO 14021 manufacturing energy efficiency, an optimized supply chain and operational excellence.



Life cycle assessment (LCA) results

Eastman conducted a life cycle assessment (LCA) to evaluate the environmental profile of Saflex LiteCarbon Clear PVB interlayer. These condensed results are from a full LCA study that meets ISO 14040/4044 guidelines and has undergone a successful third-party review by Quantis.

LCA of Saflex LiteCarbon Clear (0.76 mm)

Impact indicator	Saflex LiteCarbon (0.76-mm Clear PVB interlayer)
Global warming potential (GWP) according to EN 15804+A2 (EF3.1) Climate Change Total	2.4 kg CO ₂ eq./m ²

*Cradle-to-gate life cycle assessment results per m²
of Saflex product environmental footprint*



Saflex LiteCarbon
Clear climate change
impact vs. equivalent
Saflex Clear

1.2 kg CO₂ eq./m² less

Saflex LiteCarbon Clear LCA

- ISO 14040/14044 standards used to guide this study
- Cradle-to-gate assessment from Eastman production site in Ghent, Belgium¹
- Functional unit: per square meter (m²) of Saflex LiteCarbon Clear
- Impact assessment modeling through LCA for Experts by Sphera
- Data collected in 2023
- LCA results in this brochure are limited to the global warming potential (carbon footprint) according to the EN 15804+A2 (based on EF3.1) Climate Change Total impact indicator. Full indicator results available upon request
- Critical third-party review by Quantis issued March 25, 2024
- Environmental product declaration (EPD) pending

¹Cradle-to-gate according to EN 15804+A2 (A1-A3 modules) includes all relevant processing at Eastman, raw material acquisition, upstream operations, energy supply, natural resource extraction, shipment of raw materials, final packaging, outbound warehousing and global transport. The LCA serves as a global proxy value.

Benefits of using Saflex LiteCarbon Clear's third-party verified LCA environmental impact data



Feature lower carbon footprint in your laminated glass EPDs

By using Saflex LiteCarbon Clear, glass laminators can create laminated glass with lower embodied carbon.

To prove and claim the low embodied carbon, glass laminators can rely on the third-party verified LCA of LiteCarbon Clear and confidently produce their EPD.

To streamline the process, Eastman can assist in integrating LiteCarbon Clear's life-cycle inventory into our customers' databases, enabling the inclusion of any desired impact indicators (e.g., EN 15804+A2).



Contribute to your project's embodied carbon reduction

Saflex LiteCarbon Clear carbon footprint data from the LCA study enables accurate calculation of embodied carbon for glazing elements. This information helps environmental consultants support projects embodied carbon reduction goals.



Earn points in green building certifications schemes

Saflex LiteCarbon contributes to the following credits:¹

LEED BD+C v4.1

- Credit MRc2: Building Life-Cycle Impact Reduction
- Pilot credit MRpc132: procurement of low-carbon construction materials

BREEAM International New Construction v6.0

- Issue Mat 01: life cycle impacts
- Issue Mat 03: responsible sourcing of construction products

¹The contribution of Saflex LiteCarbon to the credit and issues is indirect, and achievement depends on building design factors, including glass type and configuration, combination of glass, proper design and installation, and interaction with other construction materials.

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