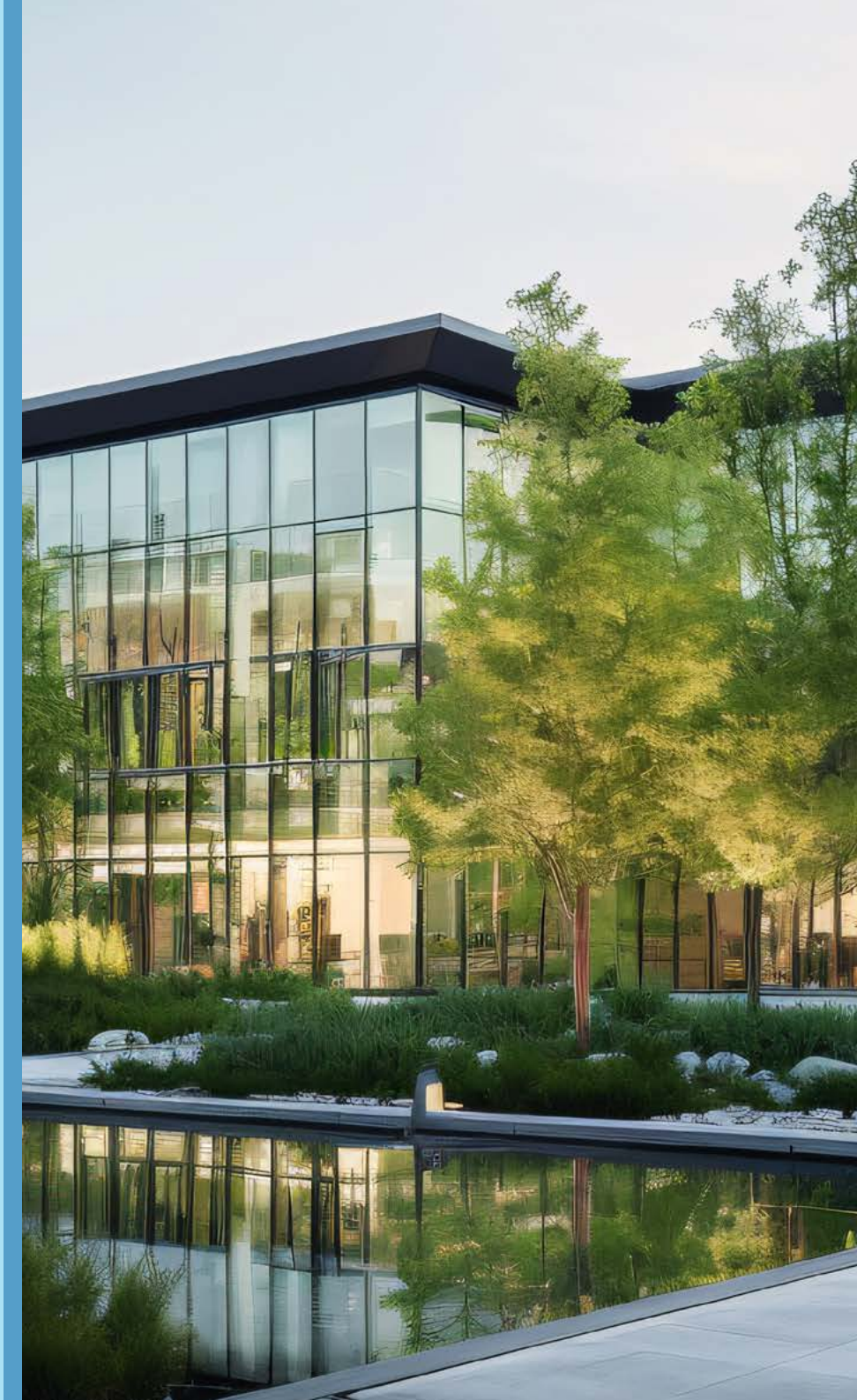
Life cycle assessment of Eastman Saflex™ and Vanceva™ PVB interlayers for architecture

Showcasing our dedication to sustainable practices

saflex™ vanceva™ | from Eastman



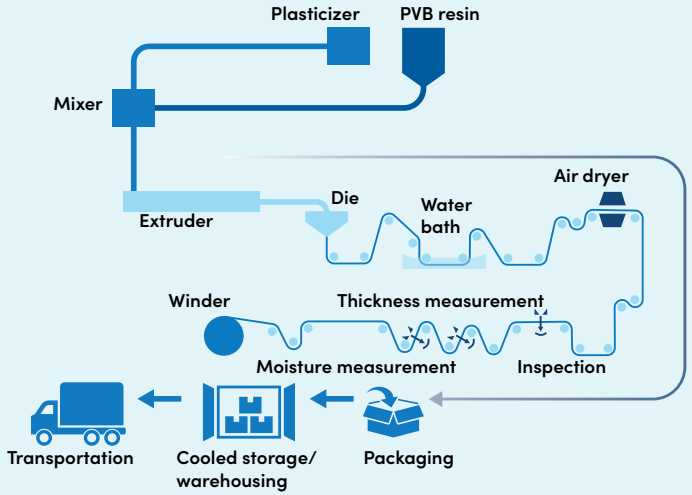
Transparent, accurate and reliable environmental impact data for Saflex and Vanceva

At Eastman, we use the ISO 14040/14044 life cycle assessment (LCA) methodology to quantify the environmental impacts of our products from raw material extraction to PVB interlayer production (cradle to gate).

We prioritize credible, transparent and scientifically supported data to build a circular economy and reduce our environmental impact. By using LCA, we establish a strong foundation for assessing our environmental performance and identifying areas for improvement to achieve carbon neutrality by 2050, empowering our decision-making with confidence.

This brochure is a condensed version of the full LCA study, which is third-party verified by Quantis.

PVB interlayer production process and LCA scope



Global warming potential (GWP) data for Saflex and Vanceva PVB interlayers[a]

Product portfolio	GWP (kg CO_2 eq/kg)	GWP (kg CO_2 eq/m²) for 0.76 mm[b]
Saflex Clear	4.5	3.6
Saflex Acoustic	5.8	4.7
Saflex Solar	6.3	5.1
Vanceva Colors (excl. Arctic Snow)	5.3	4.3
Vanceva Arctic Snow	4.5	3.6

[a] GWP impact indicator according to EN 15804+A2 (EF3.1), and full range of LCA impact indicator results is available on request.
[b] To calculate the GWP of Saflex and Vanceva in other thicknesses, please contact us.

Saflex and Vanceva LCA methodology and scope

- **Scope:** Study focused on cradle-to-gate production of Saflex and Vanceva PVB interlayers, including raw material acquisition, operations, energy supply, resource extraction, shipment, packaging, warehousing and transport.
- **Methodology:** ISO 14040/14044 standards guided the study, and the Eastman LCA group is adopting the Together for Sustainability (TfS) guidelines.
- **Software:** LCA for Experts (formerly GaBi) database maintained by Sphera was used.
- **Data time frame:** The data were collected between 2019 and 2021.
- **Impact indicator:** LCA results in the brochure focus on global warming potential (carbon footprint) using the EN 15804+A2 (EF3.1) Climate Change Total impact indicator.
- **Functional unit:** 1 kg of the specified Saflex product
- **Results:** Portfolio results represent a global LCA value, excluding acoustic-colored products and specialties like Saflex FlySafe 3D and hurricane applications.

Saflex Clear LCA was verified on April 9, 2022. Data and methodology can be found here.
Saflex Acoustic and Solar and Vanceva LCA critical review was issued in March 2024.

How to use Saflex and Vanceva LCAs to your benefit

Support your corporate sustainability reporting.

LCAs are essential tools for Scope 3 reporting. Scope 3 emissions include all indirect greenhouse gas (GHG) emissions that occur in the upstream and downstream activities of an organization. This encompasses the GHG emissions associated with the procurement of raw materials.

Transparent and verifiable data is necessary to make credible claims to auditors and stakeholders. Saflex and Vanceva LCAs, verified by third party, serve as valuable data sources to support sustainability reporting objectives.

Report embodied carbon of your projects with more accuracy and at a more granular level.

Engineers and architects require accurate data for detailed analysis when calculating their building projects' embodied carbon. Eastman can support this need by providing specific Saflex and Vanceva product carbon footprint data for various product families.

Improve the accuracy of the environmental product declarations (EPDs) for your laminated glass.

With LCA data now available by product family for Saflex and Vanceva interlayers, you can provide precise EPDs instead of using generic PVB values from common LCA databases.

Earn points in green building certifications schemes.

Voluntary certification schemes reward the use of products with third-party LCA or EPD certification. With a third-party verified LCA, Saflex Clear, Saflex Acoustic, Saflex Solar and Vanceva interlayers can contribute to earning green building certification credits.[1]

[1]*Contributes to LEED BD+C v4.1 credit MRc2 (Building Life-Cycle Impact Reduction), and BREEAM International New Construction Version 6 Mat 01 (life cycle impacts) and Mat 03 (Responsible sourcing of construction products) assessment issues. The contribution of Saflex 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.*

For more information,
visit saflex.com/sustainability.

EASTMAN

Eastman Corporate Headquarters
P.O. Box 431
Kingsport, TN 37662-5280 U.S.A.

U.S.A. and Canada, 800-EASTMAN (800-327-8626)
Other locations, +(1) 423-229-2000

eastman.com/locations

AI-ARCH-18905 5/24