

Summary off the LCA / EPD from Panels by Plants.

Partikal

PANELS BY PLANTS

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Product:

Panels by Plants, a sustainable biobased sheet material for interior walls and furniture.

Composition:

Made from agricultural residual streams – plant fibres from bell pepper, hemp and flax – bound with a sugar-based adhesive from the food industry. Characteristics: VOC-free, regulates indoor humidity, and is fully rain-compostable at the end of its service life.

Functional unit:

The calculations in the EPD/LCA are based on 1 m² of sheet material weighing 8.125 kg with a thickness of 20 mm.

Report details

Owner:

Rik Makes BV, Eindhoven.

Validity:

The document was issued on 12-01-2026 and is valid until 12-01-2031. The product is listed in the Dutch National Environmental Database (NMD).

Status:

Verified in accordance with international standards (ISO 14025 and EN 15804+A2).

Carbon footprint (GWP Total):

As a manufacturer, we only have influence over the cradle-to-gate phase (A1-A3).

Panels by Plants stores a significant amount of CO₂, as the plants absorbed CO₂ during their growth.

In the cradle-to-gate phase, Compostboard has a net negative footprint of -5.98 kg CO₂.

This includes 6.89 kg of CO₂ stored in the fibres, with 0.9 kg CO₂ emitted for, among other things, the electricity used in the production process and the transport of raw materials.

Full lifecycle result (A-D):

Over the entire lifecycle (including incineration), the total impact is 0.97 kg CO₂ eq. per m².

Environmental impact (Only in NL):

The key environmental score in The Netherlands is the MKI (Environmental Cost Indicator),

which represents the total shadow price of the product:

Total MKI score under the A2 calculation set: €0.31 per m² –

Total MKI score under the A1 calculation set: €0.09 per m²

Origin:

The fibres and binder are sourced exclusively from the Netherlands and are considered by-products of the textile industry, meaning the impact of cultivation is not attributed to the board.

End of life:

The material can be shredded and spread as compost on agricultural land, completing the full circle. For the calculation, an incineration scenario was used due to its more favourable results. The material can also be fully recycled.