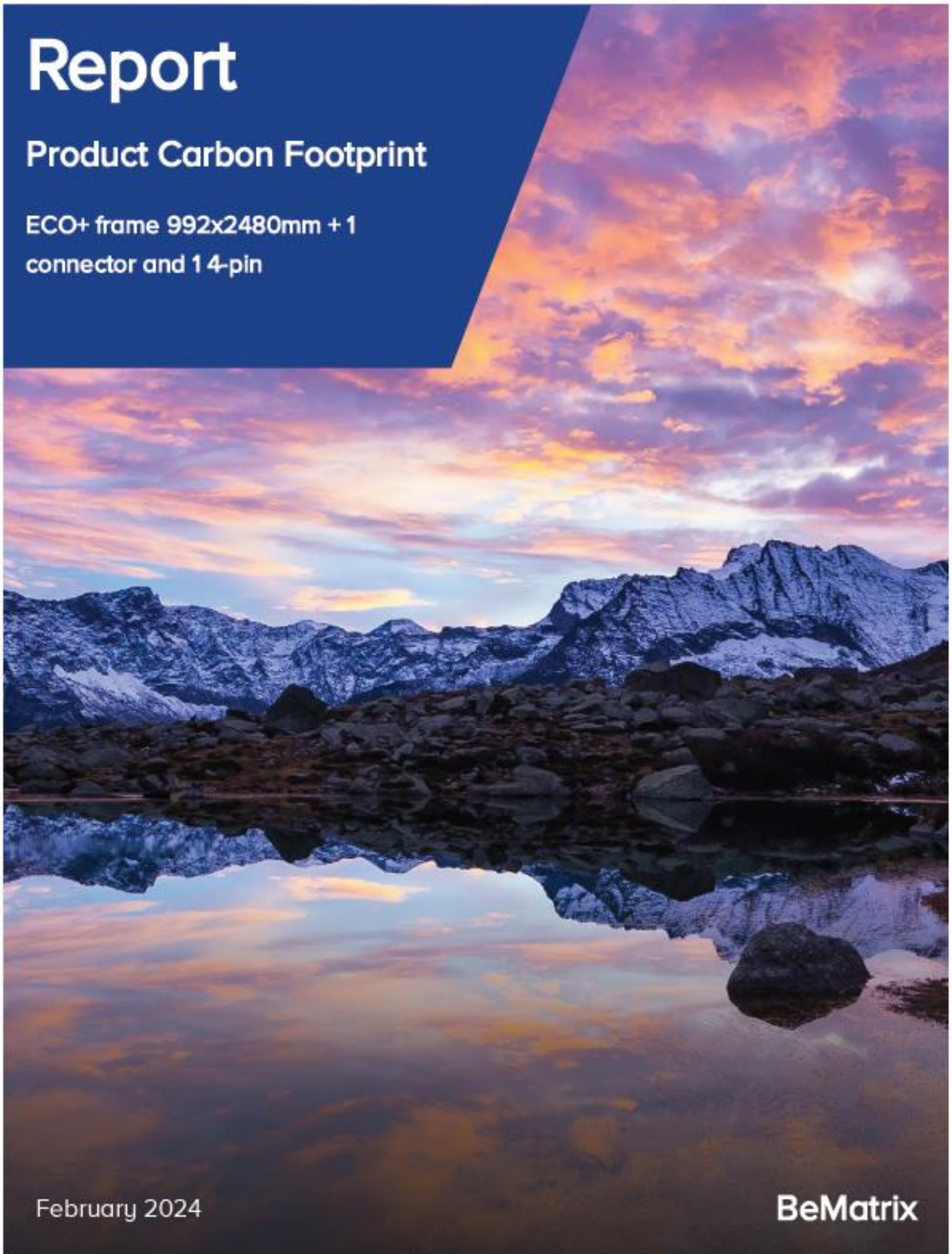


Report

Product Carbon Footprint

ECO+ frame 992x2480mm + 1
connector and 1 4-pin



February 2024

BeMatrix

Introduction

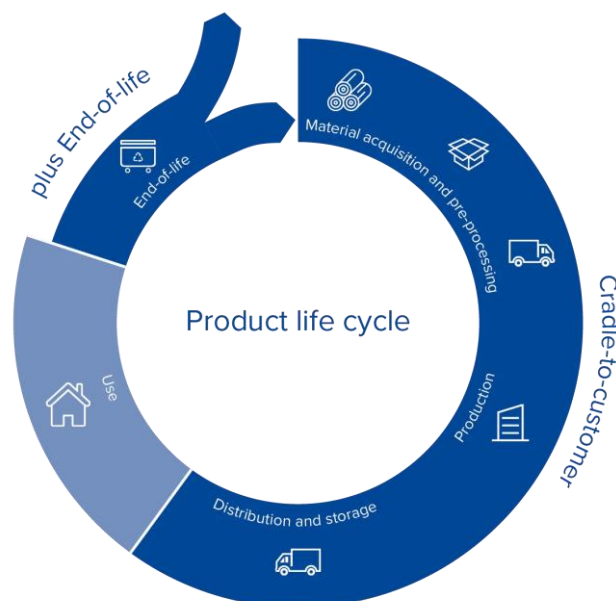
On behalf of **BeMatrix**, ClimatePartner has calculated the carbon emissions for the product **ECO+ frame 0992x2480mm + 1 connector and 1 4-pin as well as ECO+ frame 0496x2976mm + 1 connector and 1 4-pin and ECO+ frame 0992x2418mm + 1 connector and 1 4-pin**, in line with the Greenhouse Gas Protocol Product Life Cycle Accounting and Reporting Standard (GHG Protocol).

The study's boundary follows a “cradle-to-customer plus waste” approach. Here, emissions were taken into account according to the following lifecycle stages: Extraction and pre-processing of raw materials and packaging, production, supply of the product up to the customer’s factory gates as well as any relevant disposal emissions for the product and its packaging.

In this approach, the calculation focuses on the processes that can be monitored by the producer. The emissions from the service life or 'use' stage cannot generally be controlled and are subject to assumptions and estimates in the application. As such, they were not taken into account throughout the calculation.

Where possible, primary data was used. Where this was not possible, secondary data was gathered from recognized sources. The underlying emission factors are derived from international databases, such as ecoinvent or GEMIS. All greenhouse gases were taken into account for the calculation and are represented in carbon dioxide equivalents (CO_{2e}) for improved legibility and comparability.

Emissions that could not be directly attributed to the product but were required for production, such as employee commuting or business travel, were also included in the calculation as “general emissions”.



Explanation extrapolation

Within this calculation, the product **ECO+ frame 0992x2480mm + 1 connector and 1 4-pin** has been calculated but as product **1 4-pin and ECO+ frame 0496x2976mm + 1 connector and 1 4-pin** has the same weight and production processes the emissions are seen as similar and therefore the products have been calculated as one.

Product **ECO+ frame 0992x2418mm + 1 connector and 1 4-pin** has also been added to this calculation as the product has a similar weight and production process. The calculation is conservative for this product.

This report is for all **ECO+ frame 0992x2480mm + 1 connector and 1 4-pin as well as 1 4-pin and ECO+ frame 0496x2976mm + 1 connector and 1 4-pin and ECO+ frame 0992x2418mm + 1 connector and 1 4-pin**, that have been produced on the automatic line.

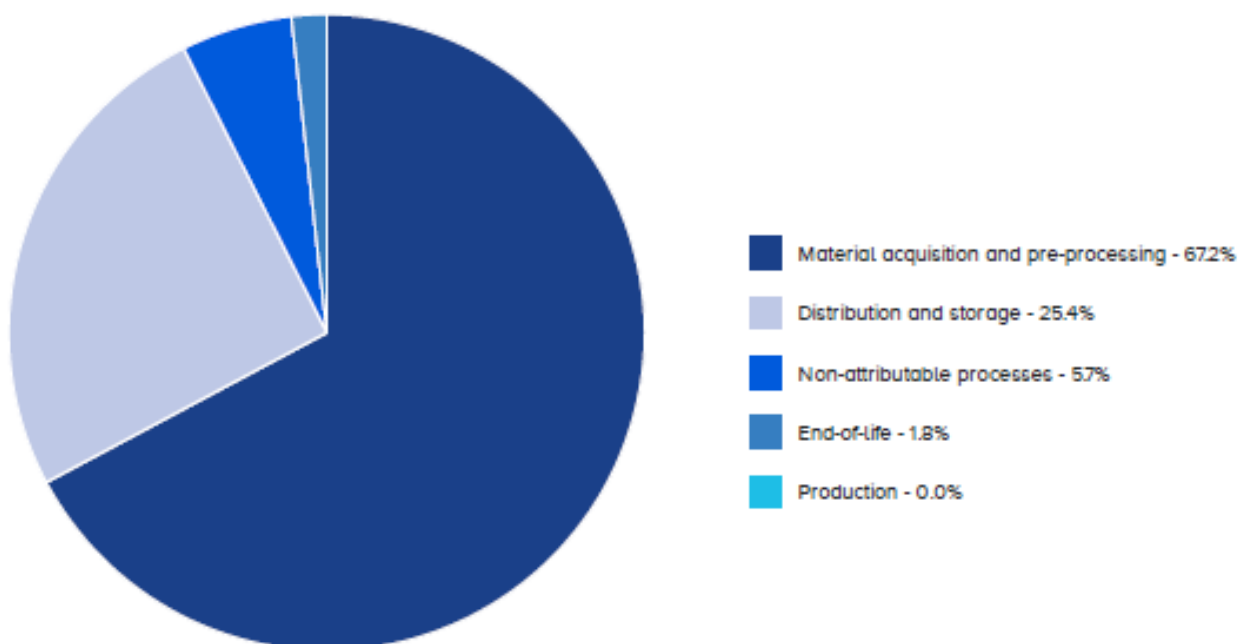
Table

Carbon emissions: ECO+ frame 0992x2480mm + 1 connector and 1 4-pin and ECO+ frame 0496x2976mm + 1 connector and 1 4-pin and ECO+ frame 0992x2418mm + 1 connector and 1 4-pin,

Total result for: product 1 pc. cradle-to-customer plus end-of-life

Emission sources	kg CO₂	%
Material acquisition and pre-processing	38.14	67.2
Raw materials	37.61	66.3
Packaging	0.40	0.7
Inbound logistics	0.13	0.2
Production	0.00	0.0
Electricity	0.00	0.0
Distribution and storage	14.39	25.4
Outbound logistics	14.39	25.4
End-of-life	1.01	1.8
End-of-life	1.01	1.8
Non-attributable processes	3.21	5.7
General emissions	3.21	5.7
Overall results	56.75	100.0

Figure



Next steps

The company should now use the findings of the calculation for effective climate protection. For this purpose, reduction targets must be defined and implemented, climate projects must be financed and the climate protection commitment must be communicated transparently.

Set reduction targets

The reduction targets should be ambitious and adapted to the current state of scientific knowledge. ClimatePartner recommends differentiating between short-, medium- and long-term reduction targets. This is due to the fact that some measures can be implemented quickly, while others take time, for example, because processes and products need to be rethought or because the supply chain needs to be included. Reduction is therefore a continuous process and as such should be part of the corporate strategy.

Implement reduction measures

In general, there are two possible courses of action to mitigate and reduce emissions.

1. Good product design and its associated reduction in materials, improved energy efficiency in production, and regional procurement of raw materials and packaging to mitigate emissions before they actually arise.
2. Conscious decision-making to procure low-emission raw materials and packaging, energy sources or transport can further reduce the product's emissions.

Finance climate projects

The implementation of some CO₂ reduction measures requires fundamental changes and take time. Therefore, the financing of climate protection projects in addition to our own reduction of emissions is urgent and necessary. Carbon offset projects have been shown to reduce carbon emissions, for example, through reforestation efforts or expanding the use of renewable energies. Independent organizations monitor to what extent these contribute to carbon reductions, after which the quantified savings can be sold in the form of certified emission reductions to finance the project. More information can be found at <https://www.climatepartner.com/en/carbon-offset-projects>.

Communicate transparently

In climate protection, it is important to share successes and make visible what the company has achieved in each of the five steps in climate protection - calculate, set targets, implement measures, finance climate projects, communicate. This gives consumers, business partners or anyone interested an overview of where the company stands in climate protection. For example, this can be done with our ClimatePartner certification label and the Climate-ID website.

Imprint

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