

# Report

**Product Carbon Footprint** 

Bathmat

December 2022

Intelligent Facility Solutions Ltd

## Introduction

On behalf of **Intelligent Facility Solutions Ltd**, ClimatePartner has calculated the carbon emissions for the product **Bathmat**, 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 recognised 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<sub>2</sub>e) 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".



## Table

#### Carbon emissions: Bathmat

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

Emission sources	kg CO₂	%
Material acquisition and pre-processing	3.50	57.4
Inbound logistics	2.97	48.6
Packaging	0.34	5.6
Raw materials	0.20	3.2
Production	0.43	7.0
Electricity	0.43	7.0
Distribution and storage	0.17	2.8
Outbound logistics	0.17	2.8
End-of-life	1.55	25.4
End-of-life	1.55	25.4
Non-attributable processes	0.46	7.5
General emissions	0.46	7.5
Overall results	6.11	100.0

# Figure

#### Breakdown according to lifecycle stages



### Next steps

Comprehensive climate action follows the principle: Mitigate unnecessary emissions, reduce existing emissions and offset unavoidable emissions. By calculating the product carbon footprint, it is possible to identify the potential for mitigating and reducing emissions and on this basis offset any unavoidable emissions. As a result, the product can become carbon neutral and designated as such.

#### Mitigate and reduce

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.

#### Carbon neutrality

Carbon reduction measures are implemented step by step over a longer timeframe. It is recommended that simultaneously with these reduction measures, previously unavoidable emissions are offset using internationally recognised carbon offset projects. Carbon offset projects have been shown to reduce carbon emissions, for example, through reforestation efforts or expanding the use of renewable energies. Independent organisations 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 <a href="https://www.climatepartner.com/en/carbon-offset-projects">https://www.climatepartner.com/en/carbon-offset-projects</a>.

The product **Bathmat** will become carbon neutral by offsetting the product related emissions. Responsibility is thus assumed immediately for emissions that cannot be currently mitigated.

A safety margin of 10 % is added to the total to ensure that all ensuing emissions are offset within the system boundaries. As a result, any potential doubts that inherently arise regarding the underlying data are offset, e.g., through the use of database values, assumptions or estimates.

	kg CO <sub>2</sub>
Overall results	6.11
Already carbon neutral	0.13
Not yet carbon neutral	5.98
CO <sub>2</sub> emissions to be offset incl. 10% safety margin	6.58

## Imprint

## Publisher

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December 2022