

# B!POD



Environmental  
Profile  
2024





# Responsibility, commitment, evolution

Goal 12.8: promoting universal understanding of sustainable lifestyles.

## The 2024 environmental profile of BIPOD

In fulfilling this Environmental Profile, we have taken on the responsibility to communicate with seriousness the key and most relevant environmental features of BIPOD, following a rigorous measurement process, and to commit to providing product sustainability information in a transparent, responsible, and effective manner to evolve more sustainable consumption patterns.



"By 2030, ensure that people worldwide have the relevant information and awareness for sustainable development and lifestyles in harmony with nature."

Sustainable consumption and production aim to promote resource and energy **efficiency**, sustainable infrastructure, access to basic services, the creation of green and decent jobs, and a **better quality of life for all**.

The Guidelines for Providing Product Sustainability Information by UNEP – United Nations Environment Programme and ITC – International Trade Centre have been our compass for creating the Profile. The data on which it is based are the result of the "Multi-parametric ecoprofile analysis" and "Circularity analysis" conducted in 2023.

**The goal of BIPOD** and the communication of its sustainability features is, in the long run, the achievement of Target 12.8 - Goal 12 of the UN SDGs: **to contribute to the reduction of the future economic, environmental and social costs of development, the enhancement of economic competitiveness and the reduction of poverty.**

# What you'll find in B!POD's Environmental Profile

What we measured  
What we compared  
With which standards  
In which area

## Getting to know us to improve ourselves.

We wanted to analyze the environmental performance of B!POD within a "cradle-to-gate" framework: it is indeed within these boundaries that most of the specific data of the B!POD system are present, and those most representative for the stages of greatest competence of the manufacturer.

However, the impacts of a product do not end when it is packaged and ready for delivery: that's why we have also developed and quantified **scenarios related to the use phase and end-of-life of B!POD.**

To assess how the innovative effort underlying B!POD represents an improvement in vacuum storage systems, we finally deemed it appropriate to **compare the results of B!POD's contribution to Global Warming** (in kilograms of CO2 equivalent) with the industry benchmark related to a traditional system.



### Time Boundaries

June 1, 2022 – May 31, 2023



### Data sources and scope of investigation

- ▶ Multi-parametric Ecoprofile Analysis
- ▶ Circularity Analysis
- ▶ Cradle-to-gate



### Functional Unit (1 B!POD STARTER PACK)

- ▶ DROID
- ▶ Set of 3 containers in sizes S, M, L
- ▶ Charging system
- ▶ Manuals



### Materials

- ▶ DROID: ABS, PP, silicone, PC
- ▶ Containers: PP, Silicone, Tritan, Ocean Bound Plastics



### Container certifications

MoCA, FDA approved, BPA free



### Followed Approaches

- ▶ UNI EN ISO 14044:2021
- ▶ UNI/TS 11820



### UNEP Principles pursued

- ▶ Reliability
- ▶ Relevance
- ▶ Clarity
- ▶ Accessibility
- ▶ Behavioural change and long-term impact
- ▶ Comparability





# Straight to the point. A product designed for limited emissions.

We've contained unnecessary impacts by minimizing weights and packaging.

## Ecodesign is focusing on the essential.

In the **design and realization of B!POD**, we have tried to minimise impacts caused by non-essential product components.

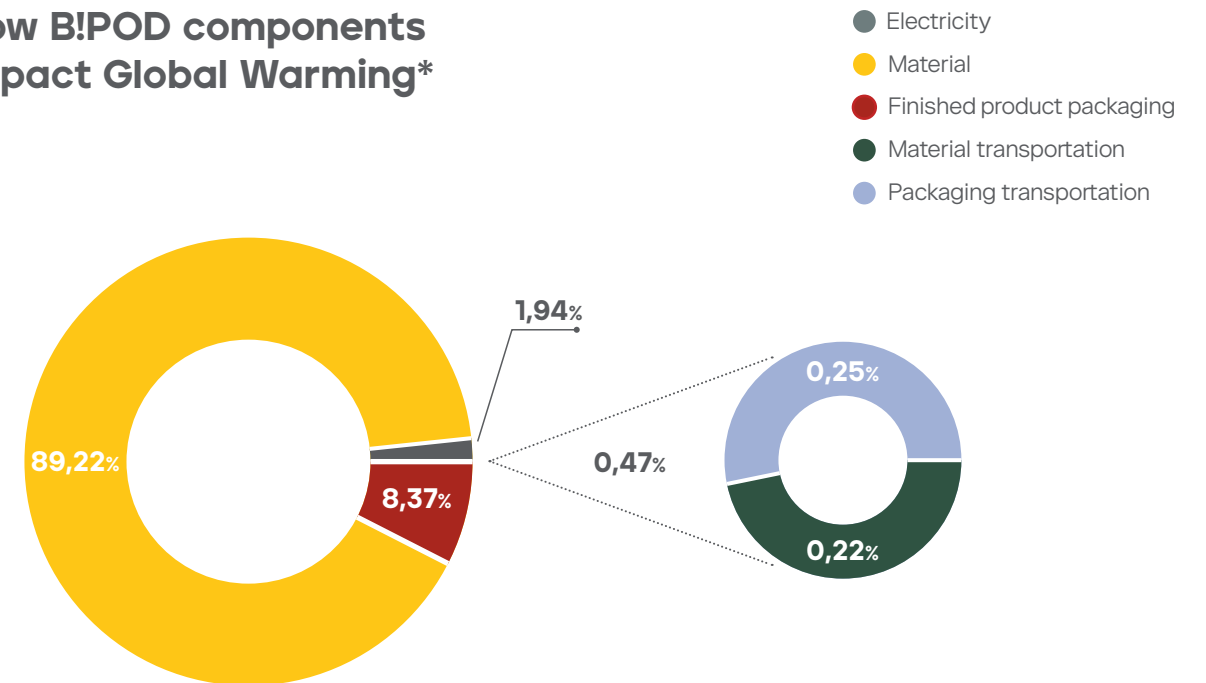
Although it is not possible to completely eliminate the impacts of elements such as transport of materials, packaging or energy for manufacturing, we have managed to limit these unnecessary emissions: **the greatest impacts are in fact to be attributed to the 'material' component**, i.e. the material itself of which B!POD is made.

This result makes us proud, but it doesn't distract us from our goal: **to gradually and further reduce the total impact of B!POD.**

## Environmental performance indicators analyzed

- ▶ Climate change (greenhouse gas GHG emissions - kgCO<sub>2</sub>eq)
- ▶ Water resource consumption
- ▶ Fossil energy consumption
- ▶ Renewable energy consumption
- ▶ Ozone depletion
- ▶ Acidification potential
- ▶ Photochemical oxidation potential (smog)
- ▶ Aquatic ecotoxicity
- ▶ Terrestrial ecotoxicity
- ▶ Land use

## How B!POD components impact Global Warming\*



\* as a % of the total "Global Warming (GWP100)" indicator equal to 453.13 kgCO<sub>2</sub>eq

# A long life for better performance towards sustainability

Reducing the impact of the use phase and end-of-life of the product.

## 15 Years of service life.

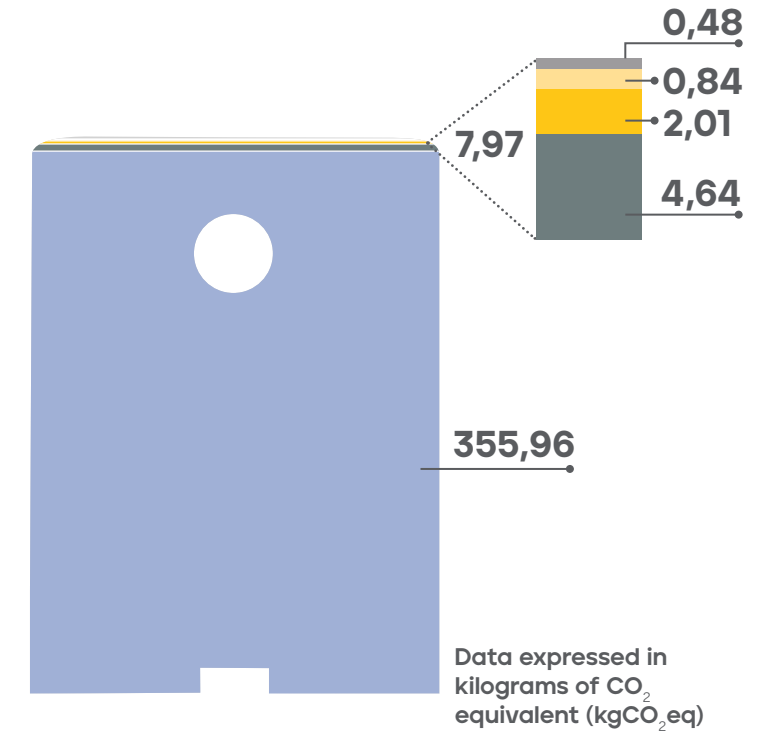
We've designed BIPOD to accompany you for a long time. During its service life, its *carbon footprint* is determined almost exclusively by the energy required for its daily operation.

It's no surprise for a **product with a 15-year service life**, for which **only 2 battery changes and 5 changes of containers, gaskets, and valves** are expected. But even the emissions caused by the operation of your BIPOD can be contained.

**How?** You can do it every time you choose to purchase electricity from certified renewable sources. When you finally want to replace it, don't dispose of it, but help us recover it: this way, you'll emit 98% less CO<sub>2</sub> equivalent kilograms into the environment compared to disposing of it in a WEEE treatment center.

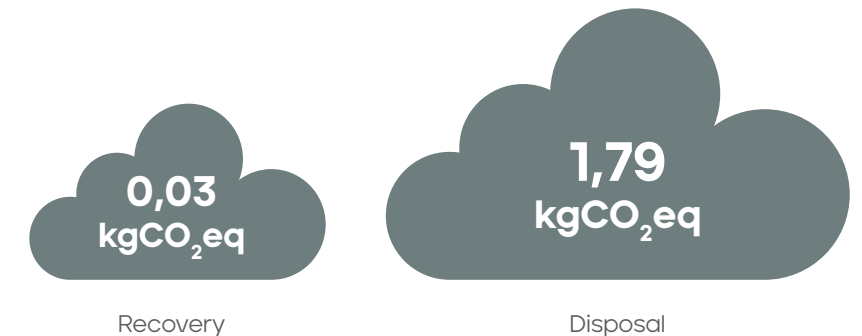
## Amount of CO<sub>2</sub> emitted over the product's lifetime compared to the Global Warming indicator:

- 0,13% Gasket change
- 0,23% Battery change
- 0,55% Valve change
- 1,28% Container change
- 97,81% Energy consumption kWh per HI-power process



## End-of-life: Recovery vs. Disposal

Comparison of emissions from the product's end-of-life considering recovery as an alternative to disposal.



# Lower emissions during usage and throughout its lifespan

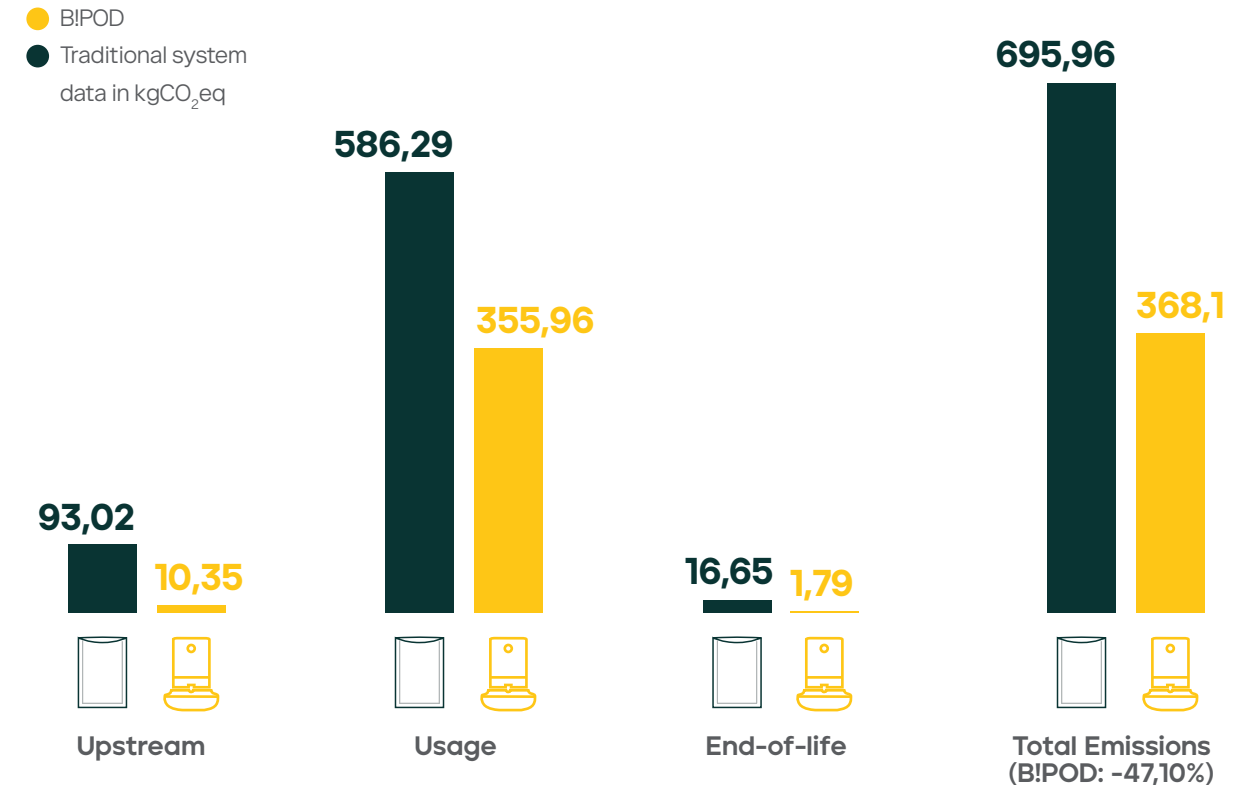
Comparison of energy consumption emissions between B!POD and a traditional system.

Considering a service life of 15 years for the B!POD product, we compared **the emissions from energy consumption for the operation of the device during all phases of the life** of a starter pack (3 B!POD containers and their lids together with the vacuum pump) with a quantity of vacuum bags necessary to cover the considered time frame.

The result distinguishes B!POD's performance with an emissions contribution (in terms of kilograms of CO<sub>2</sub> equivalent) **47% lower than the competitor** used as a benchmark.



## Comparison of emissions between B!POD and a traditional system over the entire lifecycle\*



\*The bags considered for the benchmark analysis are defined as reusable by the manufacturer. It is assumed as a precautionary approach that the vacuum bags can be used up to 100 times. By proportioning the use of reusable bags to the service life of 1 **B!POD starter pack**, the number of necessary bags and their related emissions contribution were calculated.

The calculation is based on the following information, developed through assumption and estimation processes:

- ▶ **8 uses per day**, as assumed in the calculation of the emissions contribution related to the usage phase, the results of which are presented in the technical documents at the end of the Profile;
- ▶ **Bag lifespan**: 12.5 days (based on the assumption of 100 reuses);

- ▶ **438 bags per size (S, L, M)** compared to the useful life of 1 B!POD starter pack equal to 15 years;
- ▶ **Emissions** related to the "energy consumption" component during the operation of the device.



# Step by step, our transition towards circularity

High data quality and low uncertainty levels to identify areas of excellence.

High indices in material and policy areas.

The **transition towards a circular economy** requires a rethink of strategies and market models, where assessing the circularity of a product is an **essential requirement** for pursuing concrete actions and achieving measurable results.

The first and fundamental step in this evolution is the quality and accuracy of the information available: BIPOD has been developed and designed to best meet these challenges, with a commitment to always identify new opportunities for improvement on the parameters analyzed.

The analysis of BIPOD's circularity level shows particularly rewarding results for the **use of secondary materials**, the **reuse and reintroduction of production plastic waste** into the manufacturing process, multi-parametric LCA analysis, sourcing raw materials from local suppliers, resource accounting, extending the product warranty period, internal training on circular economy themes, and stakeholder engagement.



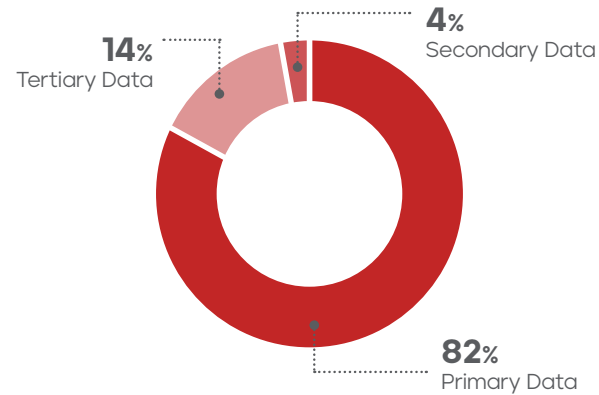
## Quality Requirements for Circular Performance Indicators

The data characteristics of circular performance indicators reflect, where technically feasible, the following quality requirements::

- ▶ Temporal coverage
- ▶ Geographical coverage
- ▶ Completeness
- ▶ Representativeness
- ▶ Reproducibility
- ▶ Accuracy
- ▶ Timeliness
- ▶ Consistency
- ▶ Comprehensibility
- ▶ Precision
- ▶ Availability
- ▶ Recoverability

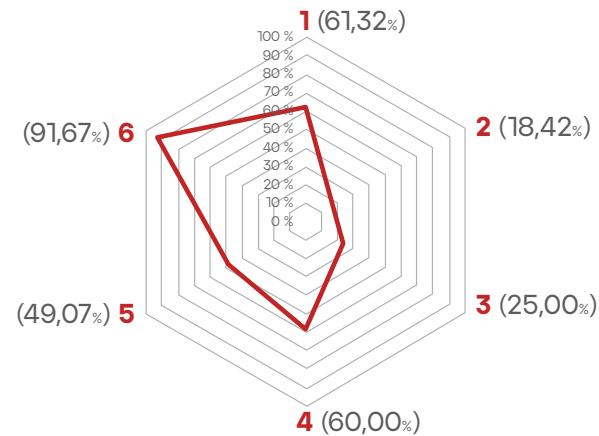
### High quality of reported data, low uncertainty

To ensure adequate assessment of circularity, it is essential to establish the quality of available data. For this purpose, a procedure consistent with the reference standards was developed that provides for a qualitative assessment of data accuracy and quality indicators. This assessment has allowed the classification of data quality indicators based on their origin.



### Circularity Level by category

1. Raw materials and components
2. Energy and water resources
3. Waste and emissions
4. Logistics
5. Product/service
6. Human resources, assets, policies, and sustainability





# Our intention: responsible actions in continuous evolution

The results achieved become starting points for a journey of continuous improvement.

## From environmental profile to sustainability profile.

We are aware that the efforts made are necessary but not sufficient to ensure BIPOD's increasing sustainability.

Necessary because mapping a product's characteristics and its usage throughout its lifecycle is the starting point for any assessment or action for continuous improvement. Not sufficient because our ideas, technologies, capabilities, and inventiveness will allow us to consider this Environmental Profile and the underlying data as a benchmark for further improvement actions that we commit to undertake, to generate an increasingly performing LCA and a more positive impact on circularity.

**Our commitment is to work together with our stakeholders to optimize BIPOD's performance in specific and increasingly numerous areas.**



### Third-party certification

We commit to subjecting subsequent LCA analyses to **certification by a Third Party**, to ensure transparency, correctness, and completeness of the data and information provided regarding BIPOD's environmental impacts and level of environmental sustainability and circularity, for our current and future customers.



### Supply chain

We commit to **involving our suppliers** to confirm in a more detailed and thorough manner the representativeness of the data used for environmental performance indicators, and to verify the possibility of implementing improvement actions in terms of Life Cycle Assessment.



### Energy

We commit to promoting, also among our suppliers, the **introduction of mechanisms for self-production of electricity from renewable sources** or the purchase of electricity through Guarantees of Origin



### Product communication

In this phase, we pursued **4 Fundamental Principles and 2 Aspirational Principles from UNEP**: the progressive adoption of all 10 principles in BIPOD's sustainability communication represents our commitment to achieving Target 12.8 - Goal 12 of the United Nations SDGs: to contribute to reducing future economic, environmental, and social costs of development, enhancing economic competitiveness, and reducing poverty

BIPOD - Environmental Profile 2024 is based on the documents *BIPOD Starter Pack - Multi-parametric Ecoprofile Analysis and BIPOD Starter Pack - Circularity Analysis* issued on November 17, 2023, by ECOCOMUNICAZIONE SRL in collaboration with HENRY & CO. SRL on behalf of SAES GETTERS S.p.A.

The data contained herein are drawn from the aforementioned documents, the use of which is in accordance and consistent with the principles outlined in the ISO 14040 series guidelines. Adherence to these guidelines does not replace the verification and validation of the data by an independent Third Party.

The Environmental Profile and its contents have been designed and developed following the Guidelines for Providing Product Sustainability Information by UNEP - OnePlanetNetwork.

ECOCOMUNICAZIONE SRL and HENRY & CO. SRL and their respective members are not responsible for the use of the results reported herein by third parties in a manner that is not fully compliant with the guidelines described here

*Document closed on  
6 March 2024 by  
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