

Environmental Product Declaration



In accordance with
ISO 14025:2006 for:

BIO-FOMO[®] Eco

from
Biobase Sweden AB

 **EPD**
INTERNATIONAL EPD SYSTEM

Programme	Programme operator	EPD registration number	Publication date	Valid until
The International EPD [®] System www.environdec.com	EPD International AB	EPD-IES-0025720:001	2025-09-18	2030-09-18

An EPD should provide current information and may be updated if conditions change. The stated validity is therefore subject to the continued registration and publication at www.environdec.com

Program information

Program:	The International EPD [®] System
Address:	EPD International AB Box 210 60 SE-100 31 Stockholm SWEDEN
Website:	www.environdec.com
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Accountabilities for PCR, LCA and independent, third-party verification

Product Category Rules (PCR)

PCR: 2021:03 Basic chemicals v1.1.5, valid until 2026-05-03

UN CPC code(s): UN CPC 341, 342, 343, 345 (except subclass 3451)

PCR review was conducted by: Lars-Gunnar Lindfors. The review panel may be contacted via info@environdec.com.

Life Cycle Assessment (LCA)

LCA accountability: Katja Andersson, Greengoat Hållbarhetsbyrå AB

Third-party verification

Independent third-party verification of the declaration and data, according to ISO 14025:2006, via:

EPD verification by individual verifier

Third-party verifier: Sofia Lindroth and Marcus Wendin, Miljögiraff AB

Approved by: The International EPD[®] System

Procedure for follow-up of data during EPD validity involves third-party verifier:

Yes No

The EPD owner has the sole ownership, liability, and responsibility for the EPD.

EPDs within the same product category but registered in different EPD programmes may not be comparable. For two EPDs to be comparable, they must be based on the same PCR (including the same version number) or be based on fully-aligned PCRs or versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical declared/functional units); have equivalent system boundaries and descriptions of data; apply equivalent data quality requirements, methods of data collection, and allocation methods; apply identical cut-off rules and impact assessment methods (including the same version of characterisation factors); have equivalent content declarations; and be valid at the time of comparison. For further information about comparability, see ISO 14025.

Company information

Owner of the EPD: Biobase Sweden AB

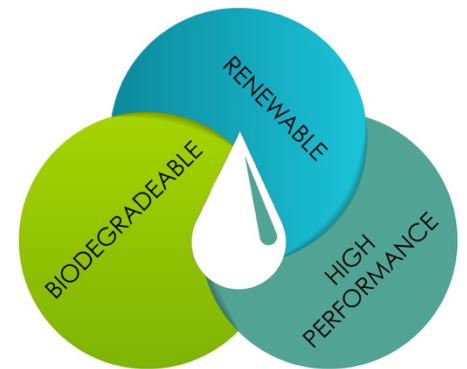
Contact: Erika Widenkvist Zetterström
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SE-120 40 Årsta
SWEDEN

Website: www.bioba.se

Description of the organisation:

Biobase Sweden creates and provides the global industry with bio-based functional fluids enabling efficient production of goods and services. The company develops and produces novel industrial products from renewable streams help construction and production industry reach carbon neutrality. The goal is to offer high-performance both biobased and biodegradable products and provide our customers more sustainable alternatives than currently established fossil-based products.



Our Vision

A global industry expecting 100% renewable functional fluids

Our Mission

We innovate and deliver renewable functional fluids for better products and services

The main production facility of Biobase Sweden is located in Gävle and the sales and R&D office is in Stockholm. The company is certified according to ISO 9001 and ISO 14001.



Product information

Product name:	BIO-FOMO [®] Eco
UN CPC code:	3543
UNSPSC code:	15121503
Geographical scope:	Europe

Product identification:

Size	Article no	GTIN
5L	310	7350071223109
25L	311	7350071223116
208L	312	7350071223123
1000L	313	7350071223116

Product description

BIO-FOMO[®] Eco is a general-purpose product for most types of concrete work and form materials. The product is odorless and gives an excellent surface finish without discolorations. **BIO-FOMO[®] Eco** is recommended for casting waterproof concrete and for use down to -7°C. The product is to be applied in a thin, even layer with a low pressure compressed air sprayer, brush or a paint roller and 1 liter covers 30-50 m².



Content declaration

Product

Product components	%	Environmental / hazardous properties
Esters of fatty acids	100%	Non-hazardous according to Regulation (EC) No 1907/2006 and Regulation (EC) No 1272/2008
TOTAL	100%	

The biogenic carbon content of **BIO-FOMO[®] Eco** is 97% (ASTM D6866)

Packaging

Packaging	Material	Weight/kg product	Recycled material
Consumer: Jerrycan 25L	HDPE	0.0499	40% (post-consumer)
Distribution: EU pallet	Wood	0.0459	Refurbished or reused

Consumer packaging:

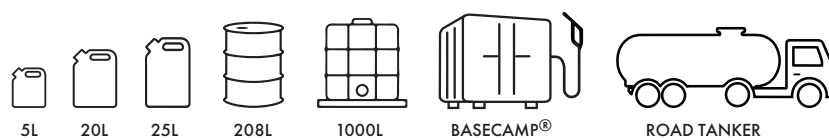
BIO-FOMO[®] ECO is available for customers in several different packaging sizes. Smaller volumes are provided in HDPE plastic containers all containing recycled material. Larger volumes are provided in 1000L IBC tanks also comprised of HDPE as well as galvanized steel. The IBC containers will be fully reused many times and is thus not included in end-of-life. The product may also be supplied in bulk on site (not including consumer packaging) through the BASECAMP[®] filling station.

Results are presented for 25 L container, this because it adds the largest amount of HDPE per declared unit as well as contain the lowest amount of recycled material.

Distribution packaging:

All container sizes are packed on refurbished or reused EU pallets and thus only the transport of the distribution packaging is included in the results. For the smallest size products (5L) cardboard boxes are also used for the distribution.

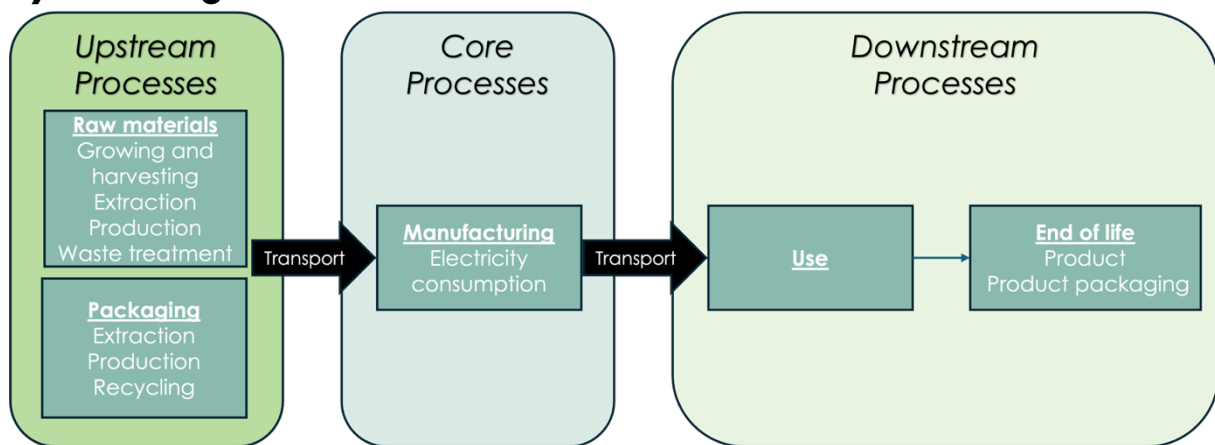
Including distribution packaging, the 25 L container option results in the highest impact in almost all environmental impact categories. For impact categories where the 25 L container has the second highest impact, the difference was less than one percentage point.



LCA information

Functional unit / declared unit:	1 kg
Reference service life:	Not applicable
Time representativeness:	Specific data for manufacturing 2024 Supplier specific data 2020-2023
Databases and LCA software used:	SimaPro version 9.6.0.1 Ecoinvent 3.10
Description of system boundaries:	Cradle-to-Grave
LCA study performed by:	Katja Andersson, Greengoat Hållbarhetsbyrå AB

System Diagram



Upstream processes

The upstream stage encompasses the production and transport of raw materials and packaging, the growing and harvesting of renewable resources, the extraction of non-renewable resources, the production process of the raw materials, the recycling process of packaging material, as well as the treatment of generated waste.

Core processes

The core stage includes the transport of ingredients and packaging to manufacturing facilities, the production processes, and treatment of waste generated in the production processes.

Downstream processes

The downstream stage includes the transportation of the products to customer, the use of the products, as well as the end of life of the product and consumer packaging.

Excluded lifecycle stages

The life cycle inventory does not include any processes such as business travel of employees, employee commuting, research and development activities, or other indirect emissions. Nor does it include infrastructure e.g. the production and maintenance of buildings, inventories or other equipment used in the production. The construction and maintenance of roads or electricity grids is also not included.

Additional information

Cut-off criteria

For this study the following cut-off criteria has been applied:

Relevance	Cut-off
Mass	Applied if the mass flow was less than 1% of the cumulative mass of all the inputs and outputs of the LCI model.
Energy	Applied if the energy flow was less than 1% of the cumulative energy of all inputs and outputs of the LCI model
Environmental	If the flow met any of the above criteria for exclusion yet was assumed to have a potentially significant environmental impact, its environmental relevance was evaluated further based on external research on similar materials. If an excluded material significantly contributed to the overall results in the life cycle impact assessment (LCIA), more information and data was collected and assessed in the modelled system

Allocation:

Allocation based on mass or energy content was applied when allocation could not be avoided.

Data quality

The following data quality requirements are used for all the central LCI data:

Criteria	Data quality requirement in LCA study
Geographical coverage	The processes included in the dataset shall be well representative of the geography stated in the "location" indicated in the metadata
Technology representativeness	Average technology or Best Available Technology should be applied when available
Reproducibility	The modelling details and input-output data shall be described so that the results can be reproduced by a third party to approximate the results of the study
Completeness	All significant processes, inputs, outputs, within the defined system boundaries shall be comprehensively represented, with any missing data identified, justified, and addressed
The boundary with nature	Agricultural production is part of the product system

Electricity mix:

BIO-FOMO[®] Eco is produced in Gävle, Sweden. Electricity for the manufacturing is sourced from 100% hydro power and has been modelled using the Ecoinvent dataset *Electricity, high voltage {SE} | electricity production, hydro, run-of-river | Cut-off, U*. For upstream processes regional residual mixes are used unless the supplier purchases electricity with a guarantee of origin. The emission factor for the GWP-GHG indicator is 14.2 g CO₂e per kWh.

Results of the environmental performance indicators

Impact category indicators

The results for 1 kg BIO-FOMO Eco without packaging

PARAMETER	UNIT	Upstream	Core	Downstream	TOTAL	
Global warming potential (GWP)	Fossil	kg CO2 eq.	1.45E+00	1.36E-01	2.76E-01	1.86E+00
	Biogenic	kg CO2 eq.	-4.63E+00	1.26E-04	4.63E+00	6.65E-04
	Land use and land transformation	kg CO2 eq.	1.33E-02	5.21E-05	9.15E-05	1.35E-02
	TOTAL	kg CO2 eq.	-3.17E+00	1.36E-01	4.90E+00	1.87E+00
	GWP-GHG	kg CO2 eq.	1.46E+00	1.36E-01	2.76E-01	1.87E+00
Ozone layer depletion (ODP)	kg CFC 11 eq.	8.07E-08	2.63E-09	5.48E-09	8.88E-08	
Acidification potential (AP)	mol H+ eq.	1.36E-03	3.23E-04	5.74E-04	2.26E-03	
Eutrophication potential (EP)	Aquatic freshwater	kg P eq.	7.69E-05	1.18E-05	1.87E-05	1.07E-04
	Aquatic marine	kg N eq.	6.97E-04	7.75E-05	1.38E-04	9.12E-04
	Aquatic terrestrial	mol N eq.	4.19E-03	8.39E-04	1.49E-03	6.52E-03
Photochemical oxidant creation potential (POCP)	kg NMVOC eq.	1.18E-03	4.96E-04	9.54E-04	2.63E-03	
Abiotic depletion potential (ADP)*	Metals and minerals	kg Sb eq.	1.60E-06	6.17E-07	8.97E-07	3.11E-06
	Fossil resources	MJ. net calorific value	5.48E+00	1.90E+00	3.88E+00	1.13E+01
Water deprivation potential (WDP)*	m3 world eq. deprived	6.97E-02	1.02E-02	1.61E-02	9.60E-02	

The results for packaging (25 L container) per 1 kg BIO-FOMO Eco

PARAMETER	UNIT	Upstream	Core	Downstream	TOTAL	
Global warming potential (GWP)	Fossil	kg CO2 eq.	1.54E-01	1.51E-02	1.19E-01	2.88E-01
	Biogenic	kg CO2 eq.	-7.11E-03	1.05E-05	5.19E-04	-6.58E-03
	Land use and land transformation	kg CO2 eq.	1.08E-04	5.00E-06	1.73E-05	1.30E-04
	TOTAL	kg CO2 eq.	1.47E-01	1.51E-02	1.20E-01	2.81E-01
	GWP-GHG	kg CO2 eq.	1.54E-01	1.51E-02	1.19E-01	2.88E-01
Ozone layer depletion (ODP)	kg CFC 11 eq.	4.96E-09	3.00E-10	1.15E-09	6.41E-09	
Acidification potential (AP)	mol H+ eq.	4.37E-04	3.15E-05	1.22E-04	5.90E-04	
Eutrophication potential (EP)	Aquatic freshwater	kg P eq.	3.88E-05	1.02E-06	3.48E-05	7.46E-05
	Aquatic marine	kg N eq.	1.04E-04	7.57E-06	3.13E-05	1.43E-04
	Aquatic terrestrial	mol N eq.	1.05E-03	8.16E-05	2.96E-04	1.43E-03
Photochemical oxidant creation potential (POCP)	kg NMVOC eq.	5.99E-04	5.23E-05	1.36E-04	7.87E-04	
Abiotic depletion potential (ADP)*	Metals and minerals	kg Sb eq.	8.41E-07	4.91E-08	1.69E-07	1.06E-06
	Fossil resources	MJ, net calorific value	3.42E+00	2.13E-01	5.48E-01	4.18E+00
Water deprivation potential (WDP)*	m3 world eq. deprived	5.27E-02	8.83E-04	4.41E-03	5.80E-02	

* Disclaimer: The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator.

Resource use indicators

The results for 1 kg BIO-FOMO Eco without packaging

PARAMETER		UNIT	Upstream	Core	Downstream	TOTAL
Primary energy resources – Renewable	Use as energy carrier	MJ, net calorific value	3.27	4.26	37.18	44.71
	Used as raw materials	MJ, net calorific value	37.11	0	-37.11	0
	TOTAL	MJ, net calorific value	40.38	4.26	0.07	44.71
Primary energy resources – Non-renewable	Use as energy carrier	MJ, net calorific value	5.92	2.02	4.12	12.06
	Used as raw materials	MJ, net calorific value	0	0	0	0
	TOTAL	MJ, net calorific value	5.92	2.02	4.12	12.06
Secondary material (optional)		kg	0	0	0	0

The results for packaging (25 L container) per 1 kg BIO-FOMO Eco

PARAMETER		UNIT	Upstream	Core	Downstream	TOTAL
Primary energy resources – Renewable	Use as energy carrier	MJ, net calorific value	0.36	0	0.03	0.39
	Used as raw materials	MJ, net calorific value	0	0	0	0
	TOTAL	MJ, net calorific value	0.36	0	0.03	0.39
Primary energy resources – Non-renewable	Use as energy carrier	MJ, net calorific value	3.68	0.23	2.73	6.63
	Used as raw materials	MJ, net calorific value	2.14	0	-2.14	0
	TOTAL	MJ, net calorific value	5.82	0.23	0.58	6.63
Secondary material (optional)		kg	0.02	0	-0.02	0

Waste indicators

The results for 1 kg BIO-FOMO Eco without packaging

PARAMETER	UNIT	Upstream	Core	Downstream	TOTAL
Hazardous waste disposed	kg	0	0	0	0
Non-hazardous waste disposed	kg	0	0	0	0
Radioactive waste disposed	kg	0	0	0	0

The results for packaging (25 L container) per 1 kg BIO-FOMO Eco

PARAMETER	UNIT	Upstream	Core	Downstream	TOTAL
Hazardous waste disposed	kg	0	0	0	0
Non-hazardous waste disposed	kg	0	0	0	0
Radioactive waste disposed	kg	0	0	0	0

References

General Programme Instructions of the International EPD® System. Version 3.0.1

PCR 2021:03. Basic chemicals. Version 1.1.5

ISO 14040:2006 Environmental management – Life cycle assessment – Principles and framework

ISO 14044:2006 Environmental management – Life cycle assessment – Requirements and guidelines

ISO 14025:2006 Environmental labels and declarations – Type III environmental declarations – Principles and procedures