



## ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH  
EN 15804+A2 & ISO 14025

Foamit Foam Glass Aggregate Big Bag  
Uusioaines Oy

**EPD HUB, HUB-4613**

Published on 05.12.2025, last updated on 16.03.2026,  
valid until 05.12.2030

Life Cycle Assessment study has been performed in accordance  
with the requirements of EN 15804, EPD Hub PCR version 1.2 (24  
Mar 2025) and JRC characterization factors EF 3.1.

## GENERAL INFORMATION

### MANUFACTURER

Manufacturer	Uusioaines Oy
Address	PL 120, 30101 Forssa
Contact details	myynti@foamit.fi
Website	foamit.fi

### EPD STANDARDS, SCOPE AND VERIFICATION

Program operator	EPD Hub, hub@epdhub.com
Reference standard	EN 15804:2012+A2:2019/AC:2021 and ISO 14025
PCR	EPD Hub Core PCR Version 1.2, 24 Mar 2025
Sector	Construction product
Category of EPD	Sister EPD
Parent EPD number	HUB-3547
Scope of the EPD	Cradle to gate with options, A4-A5, and modules C1-C4, D
EPD author	Emily Lainpelto
EPD verification	Independent verification of this EPD and data, according to ISO 14025: <input type="checkbox"/> Internal verification <input checked="" type="checkbox"/> External verification
EPD verifier	Yazan Badour as an authorized verifier for EPD Hub

This EPD is intended for business-to-business and/or business-to-consumer communication. The manufacturer has the sole ownership, liability, and responsibility for the EPD. EPDs within the same product category but from different programs may not be comparable. EPDs of construction products may not be comparable if they do not comply with EN 15804 and if they are not compared in a building context.

### PRODUCT

Product name	Foamit Foam Glass Aggregate Big Bag
Additional labels	Foamit
Product reference	Foamit
Place(s) of raw material origin	Finland, Denmark, Netherlands, United Kingdom, Germany, Norway, China, Turkey, India
Place of production	Forssa, Finland
Place(s) of installation and use	Europe
Period for data	Calendar year 2024
Averaging in EPD	Multiple products
Variation in GWP-fossil for A1-A3 (%)	+0,5 / -0,6
GTIN (Global Trade Item Number)	-
NOBB (Norwegian Building Product Database)	-
A1-A3 Specific data (%)	93

### ENVIRONMENTAL DATA SUMMARY

Declared unit	1 m <sup>3</sup>
Declared unit mass	206,24 kg
Mass of packaging	1,3 kg
GWP-fossil, A1-A3 (kgCO <sub>2</sub> e)	46,9
GWP-total, A1-A3 (kgCO <sub>2</sub> e)	46,9
Secondary material, inputs (%)	107
Secondary material, outputs (%)	94,9
Total energy use, A1-A3 (kWh)	242
Net freshwater use, A1-A3 (m <sup>3</sup> )	0,08

## PRODUCT AND MANUFACTURER

### ABOUT THE MANUFACTURER

Uusioaines Oy recycles glass waste and produces Foamit foam glass aggregate in its production facilities in Forssa, Finland. The company collects and receives almost all types of glass waste to be recycled back as a raw material for industry and the production of foam glass aggregate.

Uusioaines Oy is part of Foamit Corporation, which has four production sites in the Nordic countries. The sites process recycled glass to produce foam glass aggregate as well as glass cullet, powder, and sand for industrial purposes.

**Management system certifications:** ISO 14001, ISO 9001, ISO 45001 and ISO 50001.

**Product standards:** EN 13055 – Lightweight aggregates

### PRODUCT DESCRIPTION

Foam glass aggregate is a pumice like aggregate that is used by the infrastructure and construction industries as a lightweight fill material. Foam glass aggregate is manufactured from waste glass cullet, and a foaming agent. Foam glass production prevents landfilling of “reject glass” generated at glass recycling plants. Any organic matter impurities in the raw material combusts in the production process, and therefore there is no organic matter in the foam glass product. Foam glass is non-flammable and has good water conductivity properties. Thanks to its foamed cell structure, foam glass aggregate provides excellent thermal insulation. The foam glass aggregate’s flexible settling properties and angle of repose ensure a robust substructure on the worksite.

This EPD considers foam glass aggregate big bag products produced in Uusioaines Oy production facility in Forssa, Finland. Please see manufacturer website or contact manufacturer for technical product information.

Further information can be found at [foamit.fi](http://foamit.fi)

### PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	0	-
Minerals	100	Finland, Denmark, Netherlands, Norway, Germany, United Kingdom, China
Fossil materials	0	-
Bio-based materials	0	-

### BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

Biogenic carbon content in product, kg C	0
Biogenic carbon content in packaging, kg C	0

### FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 m3
Mass per declared unit	206,24 kg
Functional unit	-
Reference service life	-

### SUBSTANCES, REACH - VERY HIGH CONCERN

The product does not contain any REACH SVHC substances in amounts greater than 0,1 % (1000 ppm).

## PRODUCT LIFE-CYCLE

### SYSTEM BOUNDARY

This EPD covers the life-cycle modules listed in the following table.

Product stage		Assembly stage		Use stage							End of life stage				Beyond the system boundaries			
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D		
X	X	X	X	X	ND	ND	ND	ND	ND	ND	ND	X	X	X	X	X		
Raw materials	Transport	Manufacturing	Transport	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction/ demolition	Transport	Waste processing	Disposal	Reuse	Recovery	Recycling

Modules not declared = ND. Modules not relevant = MNR

### MANUFACTURING AND PACKAGING (A1-A3)

The environmental impacts considered for the product stage cover the manufacturing of raw materials used in the production as well as packaging materials and other ancillary materials. Also, fuels used by machines, and handling of waste formed in the production processes at the manufacturing facilities are included in this stage. The study also considers the material losses occurring during the manufacturing processes as well as losses during electricity transmission.

A market-based approach is used in modelling the electricity mix utilized in the factory.

Raw material supply (A1): This module considers the extraction and processing of raw materials used for the manufacturing of foam glass aggregate.

Transport of the raw materials (A2): This module consists of the transportation of all raw materials covered by module A1, from the extraction, production, and treatment site to the factory, considering the specific distances of each material supplier.

Manufacturing of foam glass aggregate (A3): This module refers to the production process of the foam glass aggregate in the production plant. It includes the combustion of fuels (LPG), the water consumed during the manufacturing process and the used packaging materials. It also considers the waste generated from the production process: the treatment and transport from the production plant to the waste manager.

The use of green energy in manufacturing is demonstrated through contractual instruments (GOs, RECs, etc.), and its use is ensured throughout the validity period of this EPD.

#### **TRANSPORT AND INSTALLATION (A4-A5)**

Transportation impacts occurred from final products delivery to construction site (A4) cover fuel direct exhaust emissions, environmental impacts of fuel production, as well as related infrastructure emissions.

Installation impacts that occurred from installing the foam glass aggregate to the building site (A5). Use of machinery when installing foam glass delivered in big bags is minimal. This module also considers the packaging material waste generated in installation.

#### **PRODUCT USE AND MAINTENANCE (B1-B7)**

Product use and maintenance modules (B1-B7) have not been included in this EPD as there are no use phase emissions.

Air, soil, and water impacts during the use phase have not been studied.

#### **PRODUCT END OF LIFE (C1-C4, D)**

Deconstruction or demolition (C1): This includes the dismantling of the foam glass aggregate after its use by a hydraulic digger.

Transport to the waste processing site (C2): This module considers a default distance of 50 km between the building where the product was installed and the reuse site or the waste manager facility.

Waste processing (C3): This module includes the reconditioning of the foam glass aggregate waste for its reuse. In this study it is assumed that 95% of the foam glass aggregate is reused directly without any treatment.

Disposal (C4) This module considers the 5% of foam glass aggregate that cannot be reused and is therefore disposed of.

# SYSTEM DIAGRAM



## LIFE-CYCLE ASSESSMENT

### CUT-OFF CRITERIA

The study does not exclude any modules or processes which are stated mandatory in the reference standard and the applied PCR. The study does not exclude any hazardous materials or substances. The study includes all major raw material and energy consumption. All inputs and outputs of the unit processes, for which data is available for, are included in the calculation. There is no neglected unit process more than 1% of total mass or energy flows. The module specific total neglected input and output flows also do not exceed 5% of energy usage or mass.

The production of capital equipment, construction activities, and infrastructure, maintenance and operation of capital equipment, personnel-related activities, energy and water use related to company management and sales activities are excluded.

### VALIDATION OF DATA

Data collection for production, transport, and packaging was conducted using time and site-specific information, as defined in the general information section on page 1 and 2. Upstream process calculations rely on generic data as defined in the Bibliography section. Manufacturer-provided specific and generic data were used for the product's manufacturing stage. The analysis was performed in One Click LCA EPD Generator, with the 'Cut-Off, EN 15804+A2' allocation method, and characterization factors according to EN 15804:2012+A2:2019/AC:2021 and JRC EF 3.1.

### ALLOCATION, ESTIMATES AND ASSUMPTIONS

Allocation is required if some material, energy, and waste data cannot be measured separately for the product under investigation. All allocations are done as per the reference standards and the applied PCR. In this study, allocation has been done in the following ways:

Data type	Allocation
Raw materials	No allocation
Packaging material	No allocation
Ancillary materials	Allocated by mass or volume
Manufacturing energy and waste	Allocated by mass or volume

### PRODUCT & MANUFACTURING SITES GROUPING

Type of grouping	Multiple products
Grouping method	Based on average results of the product group – by total mass
Variation in GWP-fossil for A1-A3, %	+0,5 / -0,6

Mass of declared unit is a weighted average that has been calculated from technical product specifications (kg/m<sup>3</sup>) and 2024 production information.

### LCA SOFTWARE AND BIBLIOGRAPHY

This EPD has been created using One Click LCA EPD Generator for EPD Hub V3 v3.2.3. The LCA and EPD have been prepared according to the reference standards and ISO 14040/14044. The EPD Generator uses Ecoinvent v3.10.1/3.11 and One Click LCA databases as sources of environmental data. Allocation used in Ecoinvent 3.10.1/3.11 environmental data sources follow the methodology 'allocation, Cut-off, EN 15804+A2'.

# ENVIRONMENTAL IMPACT DATA

The estimated impact results are only relative statements which do not indicate the end points of the impact categories, exceeding threshold values, safety margins or risks.

## CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, EF 3.1

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP – total <sup>1)</sup>	kg CO <sub>2</sub> e	8,54E-01	5,69E+00	4,31E+01	4,96E+01	8,14E+00	1,06E+00	ND	ND	ND	ND	ND	ND	ND	5,94E-01	1,11E+00	0,00E+00	6,44E-02	-7,93E+01
GWP – fossil	kg CO <sub>2</sub> e	8,53E-01	5,68E+00	4,31E+01	4,96E+01	8,14E+00	1,06E+00	ND	ND	ND	ND	ND	ND	ND	5,94E-01	1,11E+00	0,00E+00	6,44E-02	-7,93E+01
GWP – biogenic	kg CO <sub>2</sub> e	0,00E+00	0,00E+00	-2,00E-03	-2,00E-03	0,00E+00	2,00E-03	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
GWP – LULUC	kg CO <sub>2</sub> e	9,99E-04	2,48E-03	6,60E-03	1,01E-02	2,88E-03	2,06E-04	ND	ND	ND	ND	ND	ND	ND	7,31E-05	4,97E-04	0,00E+00	3,68E-05	-4,65E-02
Ozone depletion pot.	kg CFC-11e	1,26E-08	9,91E-08	1,68E-06	1,79E-06	1,62E-07	1,33E-08	ND	ND	ND	ND	ND	ND	ND	1,12E-08	1,64E-08	0,00E+00	1,86E-09	-2,17E-07
Acidification potential	mol H <sup>+</sup> e	4,52E-03	8,41E-02	4,56E-02	1,34E-01	2,55E-02	5,00E-03	ND	ND	ND	ND	ND	ND	ND	5,11E-03	3,78E-03	0,00E+00	4,56E-04	-6,39E-01
EP-freshwater <sup>2)</sup>	kg Pe	2,47E-04	2,89E-04	2,08E-03	2,62E-03	5,40E-04	4,64E-05	ND	ND	ND	ND	ND	ND	ND	2,55E-05	8,64E-05	0,00E+00	5,29E-06	-2,36E-02
EP-marine	kg Ne	7,75E-04	2,18E-02	1,28E-02	3,54E-02	8,58E-03	2,33E-03	ND	ND	ND	ND	ND	ND	ND	2,36E-03	1,24E-03	0,00E+00	1,74E-04	-8,75E-02
EP-terrestrial	mol Ne	8,25E-03	2,41E-01	1,35E-01	3,84E-01	9,33E-02	2,42E-02	ND	ND	ND	ND	ND	ND	ND	2,58E-02	1,35E-02	0,00E+00	1,90E-03	-9,33E-01
POCP (“smog”) <sup>3)</sup>	kg NMVOCe	2,91E-03	7,11E-02	8,38E-02	1,58E-01	3,99E-02	7,76E-03	ND	ND	ND	ND	ND	ND	ND	7,86E-03	5,58E-03	0,00E+00	6,81E-04	-2,74E-01
ADP-minerals & metals <sup>4)</sup>	kg Sbe	1,35E-05	1,28E-05	1,21E-04	1,47E-04	2,66E-05	1,09E-06	ND	ND	ND	ND	ND	ND	ND	2,67E-07	3,10E-06	0,00E+00	1,02E-07	-1,31E-04
ADP-fossil resources	MJ	1,09E+01	7,53E+01	6,78E+02	7,64E+02	1,14E+02	1,16E+01	ND	ND	ND	ND	ND	ND	ND	7,66E+00	1,61E+01	0,00E+00	1,58E+00	-6,97E+02
Water use <sup>5)</sup>	m <sup>3</sup> e depr.	1,89E-01	3,04E-01	2,35E+00	2,84E+00	5,62E-01	5,84E-02	ND	ND	ND	ND	ND	ND	ND	2,80E-02	7,96E-02	0,00E+00	4,56E-03	-6,19E+00

1) GWP = Global Warming Potential; 2) EP = Eutrophication potential. Required characterisation method and data are in kg P-eq. Multiply by 3,07 to get PO4e; 3) POCP = Photochemical ozone formation; 4) ADP = Abiotic depletion potential; 5) EN 15804+A2 disclaimer for Abiotic depletion and Water use and optional indicators except Particulate matter and Ionizing radiation, human health. The results of these environmental impact indicators shall be used with care as the uncertainties on these results are high or as there is limited experience with the indicator.

### ADDITIONAL (OPTIONAL) ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, EF 3.1

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Particulate matter	Incidence	3,75E-08	3,23E-07	3,96E-07	7,57E-07	6,40E-07	1,04E-07	ND	ND	ND	ND	ND	ND	ND	1,45E-07	1,11E-07	0,00E+00	1,04E-08	-1,16E-05
Ionizing radiation <sup>6)</sup>	kBq 11235e	7,45E-02	7,04E-02	3,52E-01	4,97E-01	1,46E-01	1,05E-02	ND	ND	ND	ND	ND	ND	ND	6,18E-03	1,40E-02	0,00E+00	9,93E-04	-1,19E+00
Ecotoxicity (freshwater)	CTUe	1,81E+00	8,10E+00	1,40E+02	1,50E+02	1,50E+01	1,34E+00	ND	ND	ND	ND	ND	ND	ND	3,82E-01	2,28E+00	0,00E+00	1,33E-01	-1,83E+02
Human toxicity, cancer	CTUh	1,85E-10	1,07E-09	5,56E-09	6,82E-09	1,39E-09	1,13E-09	ND	ND	ND	ND	ND	ND	ND	7,98E-11	1,83E-10	0,00E+00	1,19E-11	-1,88E-08
Human tox. non-cancer	CTUh	9,49E-09	3,54E-08	1,36E-07	1,81E-07	7,18E-08	4,50E-09	ND	ND	ND	ND	ND	ND	ND	1,17E-09	1,04E-08	0,00E+00	2,73E-10	-6,33E-07
SQP <sup>7)</sup>	-	2,12E+00	2,88E+01	2,86E+01	5,95E+01	6,80E+01	2,10E+00	ND	ND	ND	ND	ND	ND	ND	5,56E-01	1,62E+01	0,00E+00	3,11E+00	-5,70E+02

6) EN 15804+A2 disclaimer for Ionizing radiation, human health. This impact category deals mainly with the eventual impact of low-dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator; 7) SQP = Land use related impacts/soil quality.

### USE OF NATURAL RESOURCES

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Renew. PER as energy <sup>8)</sup>	MJ	1,02E+00	1,00E+00	1,50E+02	1,52E+02	1,98E+00	1,57E-01	ND	ND	ND	ND	ND	ND	ND	7,97E-02	2,21E-01	0,00E+00	1,52E-02	-9,74E+01
Renew. PER as material	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Total use of renew. PER	MJ	1,02E+00	1,00E+00	1,50E+02	1,52E+02	1,98E+00	1,57E-01	ND	ND	ND	ND	ND	ND	ND	7,97E-02	2,21E-01	0,00E+00	1,52E-02	-9,74E+01
Non-re. PER as energy	MJ	1,11E+01	7,53E+01	6,34E+02	7,21E+02	1,14E+02	-4,37E+01	ND	ND	ND	ND	ND	ND	ND	7,66E+00	1,61E+01	0,00E+00	1,58E+00	-6,97E+02
Non-re. PER as material	MJ	6,02E-01	0,00E+00	4,33E+01	4,39E+01	0,00E+00	-4,34E+01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	-2,78E-02	-5,28E-01	0,00E+00
Total use of non-re. PER	MJ	1,17E+01	7,53E+01	6,78E+02	7,65E+02	1,14E+02	-8,70E+01	ND	ND	ND	ND	ND	ND	ND	7,66E+00	1,61E+01	-2,78E-02	1,05E+00	-6,97E+02
Secondary materials	kg	2,21E+02	3,51E-02	9,04E-01	2,22E+02	5,24E-02	8,86E-03	ND	ND	ND	ND	ND	ND	ND	5,49E-03	6,86E-03	0,00E+00	3,97E-04	-5,43E-01
Renew. secondary fuels	MJ	2,90E-05	2,88E-04	4,21E-04	7,39E-04	6,61E-04	4,74E-05	ND	ND	ND	ND	ND	ND	ND	8,97E-06	8,71E-05	0,00E+00	8,22E-06	-8,00E-02
Non-ren. secondary fuels	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of net fresh water	m <sup>3</sup>	5,16E-03	8,07E-03	6,32E-02	7,64E-02	1,54E-02	1,20E-03	ND	ND	ND	ND	ND	ND	ND	5,91E-04	2,38E-03	0,00E+00	1,64E-03	-1,58E-01

8) PER = Primary energy resources.

### END OF LIFE – WASTE

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste	kg	7,73E-02	1,04E-01	6,21E-01	8,03E-01	1,64E-01	2,59E-02	ND	ND	ND	ND	ND	ND	ND	1,33E-02	2,73E-02	0,00E+00	1,74E-03	-6,33E+00
Non-hazardous waste	kg	1,32E+00	1,89E+00	1,79E+01	2,11E+01	3,46E+00	5,91E-01	ND	ND	ND	ND	ND	ND	ND	1,84E-01	5,05E-01	0,00E+00	3,99E-02	-1,17E+02
Radioactive waste	kg	2,12E-05	1,74E-05	8,66E-05	1,25E-04	3,62E-05	2,64E-06	ND	ND	ND	ND	ND	ND	ND	1,54E-06	3,43E-06	0,00E+00	2,42E-07	-2,88E-04

### END OF LIFE – OUTPUT FLOWS

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Components for re-use	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for recycling	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	3,92E+02	0,00E+00	0,00E+00
Materials for energy rec	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy – Electricity	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy – Heat	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

### ENVIRONMENTAL IMPACTS – EN 15804+A1, CML

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Global Warming Pot.	kg CO <sub>2</sub> e	8,49E-01	5,65E+00	4,28E+01	4,93E+01	8,09E+00	1,05E+00	ND	ND	ND	ND	ND	ND	ND	5,90E-01	1,10E+00	0,00E+00	6,38E-02	-7,90E+01
Ozone depletion Pot.	kg CFC <sub>11</sub> e	1,05E-08	7,88E-08	1,37E-06	1,46E-06	1,29E-07	1,06E-08	ND	ND	ND	ND	ND	ND	ND	8,86E-09	1,31E-08	0,00E+00	1,48E-09	-1,81E-07
Acidification	kg SO <sub>2</sub> e	3,77E-03	6,68E-02	3,60E-02	1,07E-01	1,93E-02	3,56E-03	ND	ND	ND	ND	ND	ND	ND	3,60E-03	2,89E-03	0,00E+00	3,38E-04	-5,44E-01
Eutrophication	kg PO <sub>4</sub> <sup>3</sup> e	9,39E-04	8,42E-03	9,80E-02	1,07E-01	4,92E-03	8,43E-04	ND	ND	ND	ND	ND	ND	ND	8,38E-04	7,04E-04	0,00E+00	1,07E-04	-7,40E-02
POCP (“smog”)	kg C <sub>2</sub> H <sub>4</sub> e	2,78E-04	3,65E-03	4,73E-03	8,66E-03	1,84E-03	3,99E-04	ND	ND	ND	ND	ND	ND	ND	2,76E-04	2,58E-04	0,00E+00	3,19E-05	-3,22E-02
ADP-elements	kg Sbe	1,34E-05	1,25E-05	1,17E-04	1,43E-04	2,60E-05	1,07E-06	ND	ND	ND	ND	ND	ND	ND	2,60E-07	3,02E-06	0,00E+00	1,00E-07	-1,30E-04
ADP-fossil	MJ	1,05E+01	7,41E+01	6,72E+02	7,57E+02	1,12E+02	1,14E+01	ND	ND	ND	ND	ND	ND	ND	7,55E+00	1,59E+01	0,00E+00	1,56E+00	-6,78E+02

### ADDITIONAL INDICATOR – GWP-GHG

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-GHG <sup>9)</sup>	kg CO <sub>2</sub> e	8,54E-01	5,69E+00	4,31E+01	4,96E+01	8,14E+00	1,06E+00	ND	ND	ND	ND	ND	ND	ND	5,94E-01	1,11E+00	0,00E+00	6,44E-02	-7,93E+01

9) This indicator includes all greenhouse gases excluding biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. In addition, the characterisation factors for the flows – CH<sub>4</sub> fossil, CH<sub>4</sub> biogenic and Dinitrogen monoxide – were updated. This indicator is identical to the GWP-total of EN 15804:2012+A2:2019 except that the characterisation factor for biogenic CO<sub>2</sub> is set to zero.

## SCENARIO DOCUMENTATION, DATA SOURCES

### Manufacturing energy scenario documentation

1. Electricity production, wind, >3MW turbine, onshore, Sweden, Ecoinvent, 0.0285 kgCO<sub>2</sub>e/kWh
2. Electricity production, wind, >3MW turbine, onshore, Finland, Ecoinvent, 0.0318 kgCO<sub>2</sub>e/kWh
3. Electricity production, wind, 1-3MW turbine, offshore, Finland, Ecoinvent, 0.0168 kgCO<sub>2</sub>e/kWh
4. Electricity production, hydro, reservoir, alpine region, Norway, Ecoinvent, 0.0065 kgCO<sub>2</sub>e/kWh
5. Light fuel oil, World, One Click LCA, 3.10 kgCO<sub>2</sub>e/l
6. Heat production, natural gas, at industrial furnace >100kW, Finland, Ecoinvent, 0.0773 kgCO<sub>2</sub>e/MJ

### Transport scenario documentation - A4 (Transport resources)

1. Transport, freight, lorry 16-32 metric ton, EURO5, 202,8 km

### Transport scenario documentation A4

Scenario parameter	Value
Capacity utilization (including empty return) %	50
Bulk density of transported products	2,08E+02
Volume capacity utilization factor	-

### Installation scenario documentation - A5 (Installation resources)

1. Machine operation, diesel, < 18.64 kW, steady-state, Ecoinvent, 0.17 h

### Installation scenario documentation - A5 (Installation waste)

1. Treatment of waste polyethylene, for recycling, unsorted, sorting, Ecoinvent, 1.3 kg

## EOL scenario documentation - C1-C4 (Data source)

1. Excavation, hydraulic digger, Ecoinvent, 1.0 m<sup>3</sup>
2. Treatment of inert waste, inert material landfill, Ecoinvent, 10.312 kg
3. Materials for recycling, Ecoinvent, Materials for recycling, 195.928 kg

Scenario information	Value
Scenario assumptions e.g. transportation	50 km

## THIRD-PARTY VERIFICATION STATEMENT

EPD Hub declares that this EPD is verified in accordance with ISO 14025 by an independent, third-party verifier. The project report on the Life Cycle Assessment and the report(s) on features of environmental relevance are filed at EPD Hub. EPD Hub PCR and ECO Platform verification checklist are used.

EPD Hub is not able to identify any unjustified deviations from the PCR and EN 15804+A2 in the Environmental Product Declaration and its project report.

EPD Hub maintains its independence as a third-party body; it was not involved in the execution of the LCA or in the development of the declaration and has no conflicts of interest regarding this verification.

The company-specific data and upstream and downstream data have been examined as regards plausibility and consistency. The publisher is responsible for ensuring the factual integrity and legal compliance of this declaration.

The software used in creation of this LCA and EPD is verified by EPD Hub to conform to the procedural and methodological requirements outlined in ISO 14025:2010, ISO 14040/14044, EN 15804+A2, and EPD Hub Core Product Category Rules and General Program Instructions.

### Verified tools

Tool verifier: Magaly Gonzalez Vazquez

Tool verification validity: 27 March 2025 - 26 March 2028

Yazan Badour as an authorized verifier for EPD Hub Limited 05.12.2025

