ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025

Foamit Foam Glass Aggregate Bulk
Uusioaines Oy

EPD HUB, EPD number HUB-3547
Published on 03.07.2025, last updated on 30.03.2026, valid until 02.07.2030

Life Cycle Assessment study has been performed in accordance with the requirements of EN 15804, EPD Hub PCR version 1.1 (5 Dec 2023) 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+A2:2019 and ISO 14025
PCR	EPD Hub Core PCR Version 1.1, 5 Dec 2023
Sector	Construction product
Category of EPD	Third party verified EPD
Parent EPD number	-
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: ☐ Internal verification ☑ External verification
PD verifier	Silvia Vilčeková, an authorized verifier acting for EPD Hub Limited

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 Bulk
Additional labels	Foamit
Product reference	Foamit
Place(s) of raw material origin	Finland, Denmark, Netherlands, United Kingdom, Germany, Norway, China
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 (%)	+0,3 / -1,4
GTIN (Global Trade Item Number)	-
NOBB (Norwegian Building Product Database)	-

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 m^3
Declared unit mass	206,24 kg
GWP-fossil, A1-A3 ($kgCO_2e$)	4,63E+01
GWP-total, A1-A3 ($kgCO_2e$)	4,63E+01
Secondary material, inputs (%)	107
Secondary material, outputs (%)	95
Total energy use, A1-A3 (kWh)	232
Net freshwater use, A1-A3 (m^3)	0,06

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, 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 bulk 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.

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	0	-
Minerals	100	Finland, Denmark, Netherlands, United Kingdom, 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 m^3
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		
×	×	×	×	×	ND	ND	ND	ND	ND	ND	ND	×	×	×	×	×		
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 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.

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) and the water consumed during the manufacturing process. It also considers the waste generated from the production process: the treatment and transport from the production plant to the waste manager. Foam glass aggregate in bulk form does not contain any packaging, and therefore this module does not include packaging materials.

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) include use in infrastructure and housebuilding. In installation, the use of bulldozers, cranes, vibrating plates and blowing machinery in different installation sites has been included.

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.

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/AC2021 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	Not applicable
Ancillary materials	Allocated by mass or volume
Manufacturing energy and waste	Allocated by mass or volume

AVERAGES AND VARIABILITY

Type of average	Multiple products
Averaging method	Averaged by shares of total volume
Variation in GWP-fossil for A1-A3 (%)	+0,3 / -1,4

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

LCA SOFTWARE AND BIBLIOGRAPHY

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

ENVIRONMENTAL IMPACT DATA

CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP – total[1)]	kg CO_2e	8,54E-01	5,49E+00	4,00E+01	4,63E+01	6,75E+00	4,47E+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_2e	8,53E-01	5,48E+00	4,00E+01	4,63E+01	6,75E+00	4,47E+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_2e	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
GWP – LULUC	kg CO_2e	9,99E-04	2,38E-03	4,85E-03	8,24E-03	2,41E-03	4,54E-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_{-11}e	1,26E-08	9,60E-08	1,61E-06	1,72E-06	1,33E-07	6,78E-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^+e	4,52E-03	7,95E-02	3,58E-02	1,20E-01	2,51E-02	1,99E-02	ND	ND	ND	ND	ND	ND	ND	5,11E-03	3,78E-03	0,00E+00	4,56E-04	-6,39E-01
EP-freshwater[2)]	kg Pe	2,47E-04	2,81E-04	1,35E-03	1,87E-03	4,42E-04	1,28E-04	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	2,06E-02	1,08E-02	3,22E-02	8,07E-03	8,66E-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	2,29E-01	1,14E-01	3,51E-01	8,80E-02	9,48E-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")[3)]	kg NMVOCe	2,91E-03	6,75E-02	7,10E-02	1,41E-01	3,57E-02	3,08E-02	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[4)]	kg Sbe	1,35E-05	1,25E-05	1,06E-04	1,32E-04	2,17E-05	1,59E-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	7,27E+01	6,01E+02	6,85E+02	9,45E+01	5,79E+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[5)]	m^3e depr.	1,89E-01	2,96E-01	1,77E+00	2,25E+00	4,60E-01	1,45E-01	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

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	3,15E-07	2,71E-07	6,23E-07	5,23E-07	2,71E-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[6)]	kBq U235e	7,45E-02	6,88E-02	2,73E-01	4,16E-01	1,19E-01	2,57E-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	7,88E+00	2,52E+01	3,49E+01	1,23E+01	3,19E+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	1,03E-09	5,02E-09	6,24E-09	1,16E-09	2,65E-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	3,45E-08	1,17E-07	1,61E-07	5,86E-08	1,02E-08	ND	ND	ND	ND	ND	ND	ND	1,17E-09	1,04E-08	0,00E+00	2,73E-10	-6,33E-07
SQP[7)]	-	2,12E+00	2,82E+01	2,15E+01	5,19E+01	5,53E+01	4,06E+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[8)]	MJ	1,02E+00	9,77E-01	1,48E+02	1,50E+02	1,62E+00	3,67E-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	9,77E-01	1,48E+02	1,50E+02	1,62E+00	3,67E-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	7,27E+01	6,01E+02	6,85E+02	9,45E+01	5,79E+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	-4,66E-02	5,56E-01	0,00E+00	0,00E+00	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	7,27E+01	6,01E+02	6,85E+02	9,45E+01	5,79E+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	3,39E-02	1,33E-01	2,21E+02	4,33E-02	2,41E-02	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	2,83E-04	3,52E-04	6,64E-04	5,37E-04	6,29E-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^3	5,16E-03	7,85E-03	4,91E-02	6,21E-02	1,26E-02	3,83E-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	1,01E-01	4,09E-01	5,87E-01	1,35E-01	6,45E-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	1,84E+00	7,64E+00	1,08E+01	2,84E+00	8,80E-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	1,70E-05	6,72E-05	1,05E-04	2,96E-05	6,30E-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_2e	8,49E-01	5,45E+00	3,97E+01	4,60E+01	6,70E+00	4,45E+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 $CFC_{-11}e$	1,05E-08	7,63E-08	1,31E-06	1,40E-06	1,06E-07	5,37E-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_2e	3,77E-03	6,31E-02	2,79E-02	9,48E-02	1,93E-02	1,42E-02	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_4^3e	9,39E-04	8,00E-03	6,16E-03	1,51E-02	4,38E-03	3,26E-03	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_2H_4e	2,78E-04	3,47E-03	3,96E-03	7,70E-03	1,67E-03	1,34E-03	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	1,22E-05	1,03E-04	1,28E-04	2,12E-05	1,54E-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	7,16E+01	5,97E+02	6,79E+02	9,25E+01	5,75E+01	ND	ND	ND	ND	ND	ND	ND	7,55E+00	1,59E+01	0,00E+00	1,56E+00	-6,78E+02

ENVIRONMENTAL IMPACTS – GWP-GHG - THE INTERNATIONAL EPD SYSTEM

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-GHG[9)]	kg CO_2e	8,54E-01	5,49E+00	4,00E+01	4,63E+01	6,75E+00	4,47E+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 as defined by IPCC AR 5 (IPCC 2013). In addition, the characterisation factors for the flows - CH4 fossil, CH4 biogenic and Dinitrogen monoxide - were updated in line with the guidance of IES PCR 1.2.5 Annex 1. This indicator is identical to the GWP-total of EN 15804:2012+A2:2019 except that the characterization factor for biogenic CO2 is set to zero.

SCENARIO DOCUMENTATION

Manufacturing energy scenario documentation

Scenario parameter	Value
Electricity data source and quality	Ecoinvent 3.10.1: Electricity production, wind, >3MW turbine, onshore (Sweden); Electricity production, wind, >3MW turbine, onshore (Finland); Electricity production, wind, 1-3MW turbine, offshore (Finland); Electricity production, hydro, reservoir, alpine region (Norway)
Electricity CO2e / kWh	0,93
District heating data source and quality	-
District heating CO2e / kWh	0

Transport scenario documentation A4

Scenario parameter	Value
Specific transport CO2e emissions, kg CO2e / tkm	Diesel powered truck; Container ship
Average transport distance, km	237,57
Capacity utilization (including empty return) %	50
Bulk density of transported products	206,24
Volume capacity utilization factor	-

Installation scenario documentation A5

Scenario information	Value
Ancillary materials for installation (specified by material) / kg or other units as appropriate	0
Water use / m³	0
Other resource use / kg	0
Quantitative description of energy type (regional mix) and consumption during the installation process / kWh or MJ	16,2
Waste materials on the building site before waste processing, generated by the product's installation (specified by type) / kg	0
Output materials (specified by type) as result of waste processing at the building site e.g. collection for recycling, for energy recovery, disposal (specified by route) / kg	0
Direct emissions to ambient air, soil and water / kg	0

End of life scenario documentation

Scenario information	Value
Collection process – kg collected separately	195,928
Collection process – kg collected with mixed waste	10,312
Recovery process – kg for re-use	195,928
Recovery process – kg for recycling	0
Recovery process – kg for energy recovery	0
Disposal (total) – kg for final deposition	10,312
Scenario assumptions e.g. transportation	50 km

VERIFICATION STATEMENT

EPD Hub declares that this EPD is verified in accordance with ISO 14025 by an independent, third-party verifier and has been generated using a pre-verified tool. 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, by the Environmental Product Declaration and by its project report from the requirements outlined in the corresponding product category regulations based on EN 15804+A2.

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. EPD Hub confirms that it possesses sufficient knowledge and experience in construction products and the relevant standards to carry the verification.

The company-specific data and upstream and downstream data have been examined as regards plausibility and consistency; the manufacturer(s) or group of manufacturers are responsible for its factual integrity.

EPD Hub has performed a detailed examination of the pre-verified tool and underlying data to ensure that there are no deviations in the studied Environmental Product Declaration (EPD), its Life Cycle Assessment (LCA), and project report. The tool is implemented according to the procedural and methodological requirements outlined in ISO 14025:2010, ISO 14040/14044, EN 15804+A2, and EPD Hub Core Product Category Rules version 1.1 and General Program Instructions version 1.2.

Tool verifier: Hai Ha Nguyen
Tool verification validity: 20 Dec 2024 - 19 Dec 2027

Silvia Vilčeková, an authorized verifier acting for EPD Hub Limited
03.07.2025