ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025

EPS GREY
Solupak Insulation Oy

EPD HUB, HUB-4670
Published on 12.12.2025, last updated on 20.02.2026, valid until 11.12.2030

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.

Created with One Click LCA

GENERAL INFORMATION

MANUFACTURER

Manufacturer	Solupak Insulation Oy
Address	Ahlströmintie 1 L 92400 Ruukki Finland
Contact details	heikki.aurio@solupak.fi
Website	www.solupak.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 EN 16783 Thermal insulation products
Sector	Construction product
Category of EPD	Third party verified EPD
Parent EPD number	-
Scope of the EPD	Cradle to gate with options, A4, and modules C1-C4, D
EPD author	Lassi Venäläinen, Safetyneer Oy
EPD verification	Independent verification of this EPD and data, according to ISO 14025: ☐ Internal verification ☑ External verification
EPD verifier	Vera Durão, as an authorised 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	EPS 80 GREY
Additional labels	-
Product reference	-
Place(s) of raw material origin	Netherlands
Place of production	Finland
Place(s) of installation and use	Finland
Period for data	Year 2024
Averaging in EPD	Multiple factories
Variation in GWP-fossil for A1-A3 (%)	< 2%
GTIN (Global Trade Item Number)	-
NOBB (Norwegian Building Product Database)	-
A1-A3 Specific data (%)	96,6

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 m² of EPS thermal insulation, thickness 100 mm (RD = 3.23 m²K/W)
Declared unit mass	1,7 kg
Mass of packaging	0,0166215 kg
GWP-fossil, A1-A3 ($kgCO_2e$)	3,83
GWP-total, A1-A3 ($kgCO_2e$)	3,85
Secondary material, inputs (%)	21,4
Secondary material, outputs (%)	0
Total energy use, A1-A3 (kWh)	21,4
Net freshwater use, A1-A3 (m^3)	0,08

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Solupak has a long history of EPS insulation production in Finland, starting in the 1970s in Tarvasjoki and expanding to Ruukki in 1987. High-quality, customer-tailored EPS boards are manufactured in various sizes and shapes, including fire-retardant and grey EPS. The modern Tarvasjoki facility, completed in 2006, and the Ruukki plant, located in a historic industrial area with buildings dating back to the 1850s, serve customers across Finland, ensuring consistent quality and reliable supply.

PRODUCT DESCRIPTION

Solupak EPS Grey Lattia / Seinä / Katto is a thermal insulation board made of expanded polystyrene (EPS) for use in building floor, wall, and roof insulation. It is using expandable polystyrene grades sourced from suppliers within the EU. The product consists of closed-cell expanded beads that provide excellent thermal insulation performance, compressive strength (≥80 kPa at 10% deformation), and good dimensional stability.

The thermal conductivity (λD) of EPS GREY is 0.031 W/m·K, and the density is approximately 17 kg/m³, while the other product in the scaling table (EPS 100 GREY) is 19 kg/m³. Solupak EPS Grey has a reaction to fire classification of Euroclass E (EN 13501-1), water absorption by volume 5 % (EN 12087), and dimensional stability ≤0.2% (EN 1603).

Further information can be found at:
www.solupak.fi

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	0	-
Minerals	0	-
Fossil materials	100	Netherlands
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 m² of EPS thermal insulation, thickness 100 mm (RD = 3.23 m²K/W)
Mass per declared unit	1,7 kg
Functional unit	-
Reference service life	50 years

SUBSTANCES, REACH - VERY HIGH CONCERN

Substances of very high concern	EC	CAS
none	-	-

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	ND	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

Not declared = ND.

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.

The manufacturing process begins with the sourcing and delivery of raw materials and auxiliary materials to the production facility. All significant upstream activities related to material acquisition are included. Transport of raw materials to the site is based on average supply chain data, corresponding to approximately 190 km by road and 1,880 km by sea. Packaging materials, such as low-density polyethylene (LDPE) film, are transported an average of 465 km by road and 265 km by sea. These distances represent typical transport conditions for EPS production and are modeled using “market for transport datasets that include average fuel mix and emission factors for both transport modes.

Expanded polystyrene (EPS) beads are pre-expanded, stored in silos, and subsequently molded into blocks that are later cut to customer-specific dimensions. Production losses from cutting and shaping account for approximately 1–3% of total input mass. These losses are either reused internally or sent for energy recovery, depending on material quality. Auxiliary materials, such as LDPE wrapping film, pallets, and strapping, are also included in the process inventory.

Electricity consumption in the production stage is modelled using the Finnish residual electricity mix for 2024, as published by the Association of Issuing Bodies (AIB). The residual mix represents the correct market-based emission factor for electricity purchased without Guarantees of Origin and therefore accurately reflects the electricity profile used at the manufacturing sites.

Manufacturing generates small amounts of solid waste and wastewater. Waste treatment includes paperboard (0.000137 t/t), municipal solid waste (0.000128 t/t), and wastewater (0.06 m^3/t). Wastewater is pre-treated on-site before discharge and modeled using average market datasets and municipal solid waste treatment is the destination for production waste. Direct process emissions are limited to non-methane volatile organic compounds (NMVOCs), totaling approximately 0.000731 t/t of product.

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.

For transport, a conservative scenario assumes that all products are delivered from the production facility to the Helsinki metropolitan area. Transport is modeled using the “market for transport, freight, lorry >32 metric ton, EURO5 dataset, representing long-distance heavy-duty road transport with average European fuel mix and emission factors. Module A5 is excluded.

PRODUCT USE AND MAINTENANCE (B1-B7)

The Product Use and Maintenance stages (B1–B7) have been excluded from the life cycle assessment. This exclusion is justified because the declared product is a building insulation material that does not consume energy or require maintenance during its use stage, and therefore its impacts in these modules are considered negligible.
Air, soil, and water impacts during the use phase have not been studied.

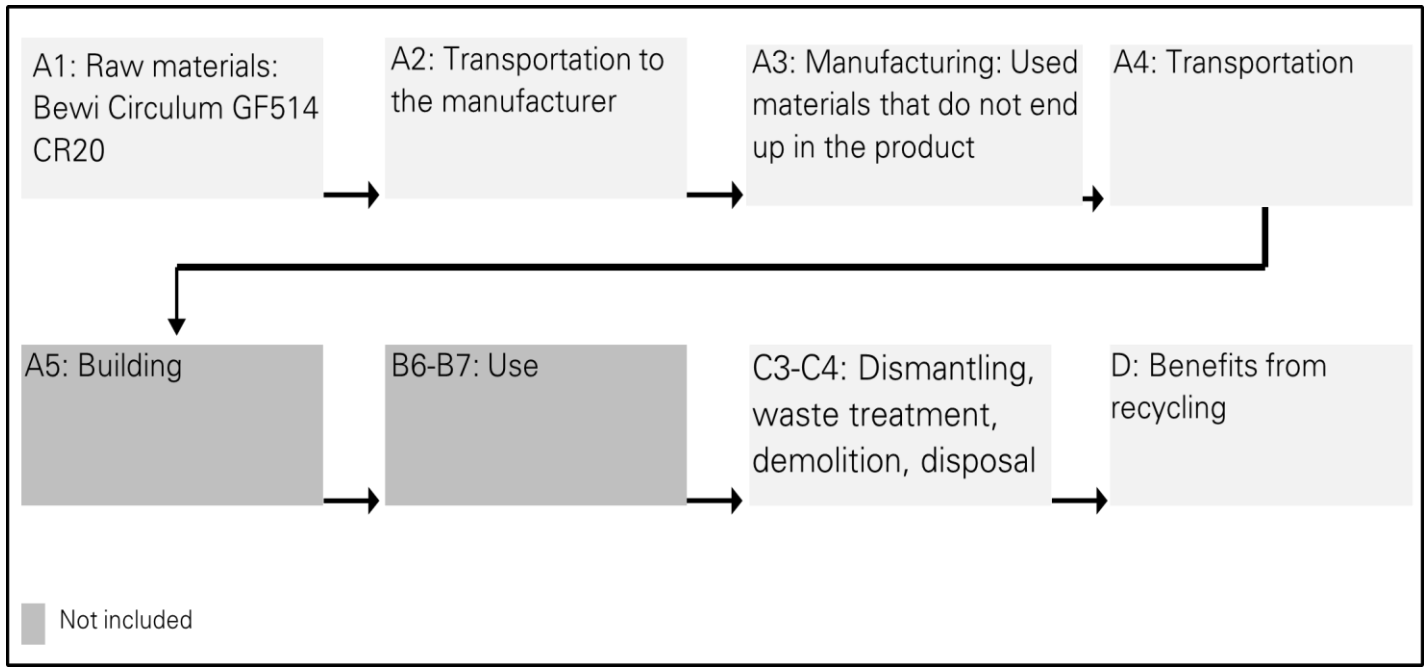
PRODUCT END OF LIFE (C1-C4, D)

In module C1, the product is dismantled using diesel-powered machinery, representing typical on-site demolition practices for EPS-based construction products in Finland. In module C2, it is assumed that dismantled material is transported an average distance of 50 kilometers by road to a treatment facility. The transport process is modeled using the “market for transport, freight, lorry >32 metric ton, EURO5 dataset to represent heavy-duty truck transport under average European conditions.

In module C4, it is assumed that 100% of the product is collected at the demolition site. After sorting, all material is incinerated without energy recovery, reflecting a conservative modelling approach.

No portion of the product is sent to landfill, in alignment with the EU Landfill Directive (1999/31/EC) and Finnish national waste regulations restricting the landfilling of recoverable plastic materials. Module D is not declared. Potential benefits from energy recovery are not considered in this assessment. All emissions from waste treatment are accounted for within module C4.

MANUFACTURING PROCESS



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.

A5 and the use and maintenance stages B1-B7 have been 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	Allocated by mass or volume
Ancillary materials	Allocated by mass or volume
Manufacturing energy and waste	Allocated by mass or volume

All significant assumptions and estimates used in the LCA are documented. All major raw materials, energy inputs, and waste flows are included, and the total excluded flows are below 5 % of energy or mass. Generic and background data were assessed for temporal, geographical, and technological representativeness. Minor simplifications for processes contributing less than 1 % to total mass or energy flows are documented. All assumptions are consistent with EN 15804+A2 and the applicable PCR.

PRODUCT & MANUFACTURING SITES GROUPING

Type of grouping	Multiple factories
Grouping method	Based on average results of product group - by total volume
Variation in GWP-fossil for A1-A3, %	< 2%

The emissions of the two factories only vary in terms of transport distances between the two manufacturing sites, and this has been taken into account in the calculations.

This EPD represents a single EPS product manufactured at two production sites: Ruukki and Tarvasjoki. The product's core manufacturing process is identical at both sites.

Product characteristics: Density and thermal insulation properties (U-value) are consistent across both sites.

Number of manufacturing plants: 2

Involved company: Solupak Insulation Oy

Geographical coverage: Finland (Ruukki and Tarvasjoki locations)

Range of products covered: EPS of the same product specification; minor differences in transportation distances between the two sites are accounted for.

Sampling / representativeness: Both sites are included in the EPD; no sites were excluded. The reported results are weighted by annual production volume, reflecting the overall environmental impact of the product group.

LCA SOFTWARE AND BIBLIOGRAPHY

This EPD has been created using One Click LCA EPD Generator for EPD Hub V3 and EPD Process Certification 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'.

ISO 14025:2010 Environmental labels and declarations – Type III environmental declarations Principles and
procedures.

ISO 14040:2006 Environmental management. Life cycle assessment. Principles and frameworks.

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

EN 15804:2012+A2:2019/AC:2021 Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products

Erlandsson, M., & Peterson, D. (2015). Klimatpåverkan för byggnader med olika
energiprestanda. Underlagsrapport till kontrollstation.

European Union. (1999). Council Directive 1999/31/EC of 26 April 1999 on the landfill of waste. Official Journal of the European Communities, L 182, 1–19. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:31999L0031

European Environment Agency (EEA). (2022). Electricity transmission and distribution losses in Europe. EEA Indicator ENER 37.

European Committee for Standardization (CEN). (2023). EN 15941:2023 – Data for environmental life cycle assessment of products and services. Brussels: CEN.

RTS PCR EN 15804:2019 RTS PCR in line with EN 15804+A2. Published by the Building Information
Foundation RTS 26.8.2020.

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[1)]	kg CO_2e	3,12E+00	6,90E-02	6,55E-01	3,85E+00	7,03E-02	ND	ND	ND	ND	ND	ND	ND	ND	2,61E-03	9,15E-03	0,00E+00	5,41E+00	0,00E+00
GWP – fossil	kg CO_2e	3,11E+00	6,90E-02	6,46E-01	3,83E+00	7,02E-02	ND	ND	ND	ND	ND	ND	ND	ND	2,61E-03	9,15E-03	0,00E+00	5,41E+00	0,00E+00
GWP – biogenic	kg CO_2e	1,20E-02	1,56E-05	8,41E-03	2,04E-02	1,59E-05	ND	ND	ND	ND	ND	ND	ND	ND	2,67E-07	2,07E-06	0,00E+00	-4,81E-05	0,00E+00
GWP – LULUC	kg CO_2e	1,04E-03	3,09E-05	1,23E-04	1,19E-03	3,14E-05	ND	ND	ND	ND	ND	ND	ND	ND	2,68E-07	4,09E-06	0,00E+00	1,65E-05	0,00E+00
Ozone depletion pot.	kg $CFC\text{-}_{11}$e	4,48E-08	1,02E-09	3,63E-08	8,22E-08	1,04E-09	ND	ND	ND	ND	ND	ND	ND	ND	4,00E-11	1,35E-10	0,00E+00	7,68E-10	0,00E+00
Acidification potential	mol H^+e	7,30E-03	2,35E-04	3,13E-03	1,07E-02	2,39E-04	ND	ND	ND	ND	ND	ND	ND	ND	2,36E-05	3,12E-05	0,00E+00	6,71E-04	0,00E+00
EP-freshwater[2)]	kg Pe	6,50E-05	5,37E-06	8,03E-05	1,51E-04	5,47E-06	ND	ND	ND	ND	ND	ND	ND	ND	7,54E-08	7,12E-07	0,00E+00	7,58E-06	0,00E+00
EP-marine	kg Ne	1,76E-03	7,73E-05	6,21E-04	2,46E-03	7,87E-05	ND	ND	ND	ND	ND	ND	ND	ND	1,09E-05	1,02E-05	0,00E+00	3,47E-04	0,00E+00
EP-terrestrial	mol Ne	1,93E-02	8,41E-04	5,35E-03	2,55E-02	8,56E-04	ND	ND	ND	ND	ND	ND	ND	ND	1,20E-04	1,12E-04	0,00E+00	3,41E-03	0,00E+00
POCP ("smog")[3)]	kg NMVOCe	7,36E-03	3,47E-04	7,62E-02	8,39E-02	3,53E-04	ND	ND	ND	ND	ND	ND	ND	ND	3,57E-05	4,60E-05	0,00E+00	8,46E-04	0,00E+00
ADP-minerals & metals[4)]	kg Sbe	1,13E-05	1,92E-07	4,52E-07	1,19E-05	1,96E-07	ND	ND	ND	ND	ND	ND	ND	ND	9,37E-10	2,55E-08	0,00E+00	1,43E-07	0,00E+00
ADP-fossil resources	MJ	1,05E+02	1,00E+00	1,49E+02	2,55E+02	1,02E+00	ND	ND	ND	ND	ND	ND	ND	ND	3,42E-02	1,33E-01	0,00E+00	5,19E-01	0,00E+00
Water use[5)]	m^3e depr.	1,14E+01	4,94E-03	3,66E+00	1,50E+01	5,03E-03	ND	ND	ND	ND	ND	ND	ND	ND	8,54E-05	6,56E-04	0,00E+00	1,09E-01	0,00E+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	5,58E-08	6,91E-09	1,72E-08	8,00E-08	7,03E-09	ND	ND	ND	ND	ND	ND	ND	ND	6,70E-10	9,16E-10	0,00E+00	3,36E-09	0,00E+00
Ionizing radiation[6)]	kBq U235e	8,06E-02	8,72E-04	2,83E-01	3,64E-01	8,87E-04	ND	ND	ND	ND	ND	ND	ND	ND	1,51E-05	1,16E-04	0,00E+00	6,24E-04	0,00E+00
Ecotoxicity (freshwater)	CTUe	4,83E+02	1,42E-01	8,40E+00	4,91E+02	1,44E-01	ND	ND	ND	ND	ND	ND	ND	ND	1,88E-03	1,88E-02	0,00E+00	2,77E+01	0,00E+00
Human toxicity, cancer	CTUh	2,35E-09	1,14E-11	7,61E-11	2,44E-09	1,16E-11	ND	ND	ND	ND	ND	ND	ND	ND	2,69E-13	1,51E-12	0,00E+00	3,24E-10	0,00E+00
Human tox. non-cancer	CTUh	5,34E-08	6,48E-10	9,16E-09	6,32E-08	6,60E-10	ND	ND	ND	ND	ND	ND	ND	ND	4,25E-12	8,60E-11	0,00E+00	1,33E-08	0,00E+00
SQP[7)]	-	1,05E+01	1,01E+00	1,07E+00	1,26E+01	1,03E+00	ND	ND	ND	ND	ND	ND	ND	ND	2,40E-03	1,34E-01	0,00E+00	1,43E-01	0,00E+00

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	1,05E+00	1,37E-02	6,24E-02	1,13E+00	1,40E-02	ND	ND	ND	ND	ND	ND	ND	ND	2,17E-04	1,82E-03	0,00E+00	1,35E-02	0,00E+00
Renew. PER as material	MJ	2,87E+00	0,00E+00	0,00E+00	2,87E+00	0,00E+00	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	-2,87E+00	0,00E+00	0,00E+00
Total use of renew. PER	MJ	3,92E+00	1,37E-02	6,24E-02	4,00E+00	1,40E-02	ND	ND	ND	ND	ND	ND	ND	ND	2,17E-04	1,82E-03	-2,87E+00	1,35E-02	0,00E+00
Non-re. PER as energy	MJ	6,69E+01	1,00E+00	8,13E+00	7,60E+01	1,02E+00	ND	ND	ND	ND	ND	ND	ND	ND	3,42E-02	1,33E-01	0,00E+00	-5,43E+01	0,00E+00
Non-re. PER as material	MJ	4,71E+01	0,00E+00	0,00E+00	4,71E+01	0,00E+00	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	-4,71E+01	0,00E+00	0,00E+00
Total use of non-re. PER	MJ	1,14E+02	1,00E+00	8,13E+00	1,23E+02	1,02E+00	ND	ND	ND	ND	ND	ND	ND	ND	3,42E-02	1,33E-01	-4,71E+01	-5,43E+01	0,00E+00
Secondary materials	kg	3,64E-01	4,26E-04	1,46E-03	3,66E-01	4,34E-04	ND	ND	ND	ND	ND	ND	ND	ND	1,42E-05	5,65E-05	0,00E+00	6,55E-04	0,00E+00
Renew. secondary fuels	MJ	1,80E-02	5,41E-06	5,99E-04	1,86E-02	5,51E-06	ND	ND	ND	ND	ND	ND	ND	ND	3,71E-08	7,18E-07	0,00E+00	4,90E-06	0,00E+00
Non-ren. secondary fuels	MJ	9,78E-03	0,00E+00	0,00E+00	9,78E-03	0,00E+00	ND	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	7,15E-02	1,48E-04	5,81E-03	7,75E-02	1,51E-04	ND	ND	ND	ND	ND	ND	ND	ND	2,26E-06	1,96E-05	0,00E+00	1,53E-03	0,00E+00

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	1,16E-02	1,70E-03	8,77E-03	2,20E-02	1,73E-03	ND	ND	ND	ND	ND	ND	ND	ND	3,81E-05	2,25E-04	0,00E+00	5,04E-02	0,00E+00
Non-hazardous waste	kg	4,13E-01	3,14E-02	6,71E+00	7,16E+00	3,19E-02	ND	ND	ND	ND	ND	ND	ND	ND	5,19E-04	4,16E-03	0,00E+00	1,81E+00	0,00E+00
Radioactive waste	kg	2,52E-05	2,13E-07	3,03E-05	5,58E-05	2,17E-07	ND	ND	ND	ND	ND	ND	ND	ND	3,72E-09	2,83E-08	0,00E+00	1,57E-07	0,00E+00

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	ND	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	3,63E-02	0,00E+00	1,03E-13	3,63E-02	0,00E+00	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for energy rec	kg	1,18E-02	0,00E+00	5,37E-22	1,18E-02	0,00E+00	ND	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	2,35E-01	0,00E+00	0,00E+00	2,35E-01	0,00E+00	ND	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	ND	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	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

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[9)]	kg CO_2e	3,11E+00	6,90E-02	6,47E-01	3,83E+00	7,02E-02	ND	ND	ND	ND	ND	ND	ND	ND	2,61E-03	9,15E-03	0,00E+00	5,41E+00	0,00E+00

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 – CH4 fossil, CH4 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 CO2 is set to zero.

SCENARIO DOCUMENTATION

DATA SOURCES

Manufacturing energy scenario documentation

1. Market for liquefied petroleum gas, Albania, Ecoinvent, 1.09 kgCO2e/kg
2. Electricity, Finland, residual mix, 2024, Finland, One Click LCA, 0.55 kgCO2e/kWh

Transport scenario documentation - A4 (Transport resources)

1. Market for transport, freight, lorry >32 metric ton, EURO5, 380 km

Transport scenario documentation A4

Scenario parameter	Value
Capacity utilization (including empty return) %	100
Bulk density of transported products	0,00E+00
Volume capacity utilization factor	1

End-of-life scenario documentation - C1-C4 (Data source)

1. Diesel, burned in building machine, Ecoinvent, 0.00725 kWh
2. Treatment of waste expanded polystyrene, municipal incineration, Ecoinvent, 1.7 kg

Scenario information	Value
Scenario assumptions e.g. transportation	Deconstruction (C1) is performed mechanically using diesel-powered equipment. Waste is transported 50 km by lorry (EURO5) to a waste treatment facility (C2). In C4, 100% of the collected EPS waste is assumed to be incinerated without energy recovery. No disposal in landfill is assumed.

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

Vera Durão, as an authorised verifier acting for EPD Hub Limited

20.02.2026

ANNEX 1: SCALING TABLE

Impact category		Unit	A1-A3	A1-A3
Product Weight		**kg/DU**	**1,7**	**1,9**
Product name			**EPS 80 Grey**	**EPS 100 Grey**
EN 15804+A2	GWP – total	kg CO_2e	3,85E+00	4,22E+00
	GWP – fossil	kg CO_2e	3,83E+00	4,20E+00
	GWP – biogenic	kg CO_2e	2,04E-02	2,18E-02
	GWP – luluc	kg CO_2e	1,19E-03	1,32E-03