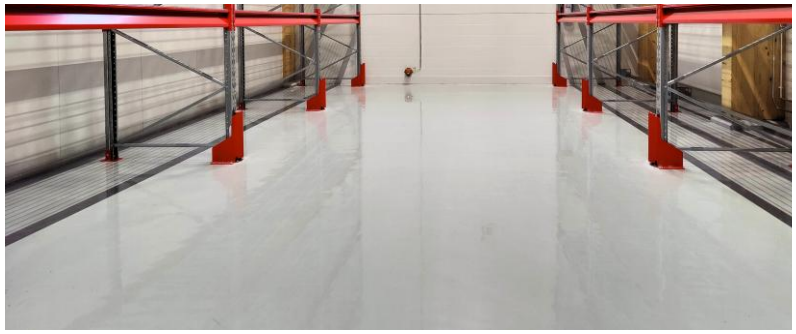
ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025

Nanten SL Bio ESD

Fescon Oy



EPD HUB, HUB-6854

Published on 01.07.2026, last updated on 01.07.2026, valid until 30.06.2031

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	Fescon Oy
Address	Hämeenkatu 9, 05820 Hyvinkää, Finland
Contact details	fescon@fescon.fi, nanten@fescon.fi
Website	www.fescon.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	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	Pirjo Isosaari, Fescon Oy
EPD verification	Independent verification of this EPD and data, according to ISO 14025: ☐ Internal verification ☑ External verification
EPD verifier	Elma Avdyli 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	Nanten SL Bio ESD
Additional labels	Nanten SL Bio Part A – Nanten ESD colour: light grey; Nanten SL Bio Part A – Nanten ESD colour: mid grey; Nanten SL Bio Part A – Nanten ESD colour: dark grey; Nanten SL Bio ESD Part B
Product reference	15000, 15001, 15002, 15088
Place(s) of raw material origin	Europe, Asia
Place of production	Fescon Oy Tuusula Factory, Tuusula, Finland
Place(s) of installation and use	Finland, Europe
Period for data	2025
Averaging in EPD	Multiple products
Variation in GWP-fossil for A1-A3 (%)	−4,5
GTIN (Global Trade Item Number)	-
A1-A3 Specific data (%)	9,67

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 kg of product (A+B)
Declared unit mass	1 kg
Mass of packaging	0,16 kg
GWP-fossil, A1-A3 ($kgCO_2e$)	4,24
GWP-total, A1-A3 ($kgCO_2e$)	4,24
Secondary material, inputs (%)	10,4
Total energy use, A1-A3 (kWh)	18,9
Net freshwater use, A1-A3 (m^3)	0,03

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Fescon is Finland's largest developer and manufacturer of mortar, sand, and coating products and a solution provider for the construction industry.

PRODUCT DESCRIPTION

Nanten SL Bio ESD is a two-component self-leveling coating designed for electrostatic discharge (ESD) control. It is used as a protective industrial and architectural coating on concrete floors. Part A (resin) of the product is a reactive polymer component based on epoxy resin. Part B (curing agent /hardener) is a crosslinking component based on polyamines.

Nanten SL Bio ESD is available in three colors: light grey (approx. RAL 7035), mid grey (approx. RAL 7040), and dark grey (approx. RAL 7046). This EPD covers all color variants.

TECHNICAL INFORMATION
Components: 1 kg of the product consists of ca. 0,81 kg of Part A and 0,19 kg of Part B.
Consumption: 1,5 liters /m^2
Film thickness: ca. 1,5 mm
Density: ca. 1,3 kg/l
Solids content: 94-95%
Abrasion resistance: < 3000 mg
Capillary absorption and permeability to water: w < 0,1 kg/m^2 x $h^{0,5}$
Impact resistance: Class I ≥ 4 Nm
Adhesion strength by pull-off test: ≥ 1,5 N/mm^2
Reaction to fire: Class Cfl–s1
VOC content (EU Decopaint Directive, 2004/42/EC): VOC ≤ 10 g/l
Bio-based materials: 5-10% of the product's mass, based on unverified supplier information.

PRODUCT STANDARDS
Nanten SL Bio ESD is a CE-marked construction product that complies with the principles defined in EN 1504-2 Products and systems for the protection and repair of concrete structures. Essential characteristics are notified on the Declaration of Performance of the product.

Nanten SL Bio ESD has low indoor air emissions, as proven by the Finnish M1 Emission Classification of Building Materials.

DELIVERY STATUS
Part A of Nanten SL Bio ESD is delivered in a tin-plated steel pail of 15 liters and Part B in a plastic jerry can of 5 liters (net contents).

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

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Minerals	37	Europe
Fossil materials	63	Europe, Asia

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	0,007

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 kg of product (A+B)
Mass per declared unit	1 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

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 main manufacturing processes of the product are mixing the ingredients in batch mode and packaging. The ingredients, consisting of epoxy resin, diluents, pigments, fillers, and additives, are loaded into an industrial high-speed disperser. The disperser is operated at different shear rates to obtain appropriate dispersing, milling, and mixing functions. Part B is mixed in a separate batch, using epoxy curing agent mixture, conductive agent, and additives as the main ingredients. Quality control tests are performed on each batch.

The finished Part A is filled into a tin-plated steel pail and Part B into a polyethylene jerry can. The packages are placed on a wooden pallet and wrapped in polyethylene film for transportation to the customer or building site. Production waste consists of a production loss of 1%. Loss of raw materials occurs mainly in charging and discharging operations, quality control, process failures, or due to deterioration during storage. Waste is sent to a licensed waste management provider and incinerated as hazardous waste.

The manufacturing processes comply with the quality standard ISO 9001:2015, environmental standard ISO 14001:2025, and occupational health and safety standard ISO 45001:2018. The provisions outlined in the relevant regulations are adhered to.

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.

The main delivery modes of the product to customers are truck transportation and self-pick-up. Products sent to the customer (or directly to the building site; 50% of sales) have an average transportation distance of 300 km. Products picked up by the customer (50% of sales) from the factory's warehouse are usually transported to the installation site by van. Transportation distance is assumed to be 50 km.

At the building site, Parts A and B are mixed at 3:1 (by volume), using a handheld mixing machine. The mixture is poured on the floor and leveled with an adjustable squeegee, then finished with a spike roller. The coating is allowed to cure and harden before use. An installation loss of 1% is assumed to result from improper draining of the product from containers. As a worst-case scenario, the lost product has not been properly hardened and needs to be incinerated as hazardous waste.

Installation consumables such as squeegees and mixing tools were excluded

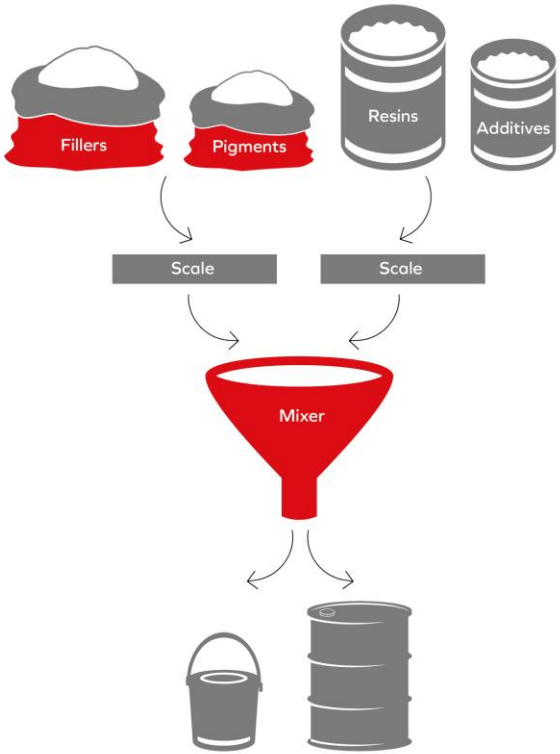
as they can be used multiple times or for multiple uses. Energy consumption in installation was considered negligible.

PRODUCT END OF LIFE (C1-C4, D)

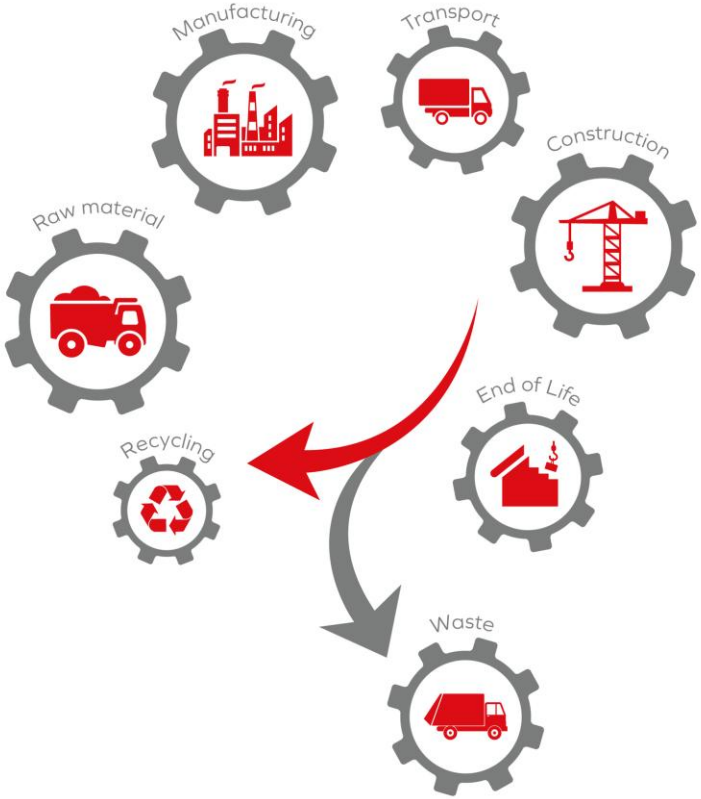
After application, solvents volatilize from the coating's surface and pores. At the end of the product life cycle, the remaining solid coating is strongly attached to the substrate and cannot be separated without great effort. Hence, the product is assumed to be demolished and crushed with concrete. As a conservative approach and to simplify the calculation, no recycling or reuse is assumed but 100% of the coating is landfilled as inert waste. Benefits included in Module D are obtained from recycling and incineration of the packaging materials.

MANUFACTURING PROCESS

Manufacturing process - Coating products



Product life-cycle



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	Physical Properties
Ancillary materials	Not applicable
Manufacturing energy and waste	Physical Properties

Waste treatment scenarios for packaging waste were based on the most recent averages of European Union, covering the calendar year 2023 (Eurostat, 2023).

PRODUCT & MANUFACTURING SITES GROUPING

Type of grouping	Multiple products
Grouping method	Based on worst-case results
Variation in GWP-fossil for A1-A3, %	−4,5

This is an EPD of multiple products, based on the worst product. It covers the color variants of Nanten SL Bio ESD: light grey (approx. RAL 7035), mid grey (approx. RAL 7040), and dark grey (approx. RAL 7046). The variants consist of similar raw materials, and they are manufactured at the same factory and with the same processes.

The life-cycle impacts in the EPD are based on the product variant with the highest GWP fossil for A1-A3: light grey (worst product). The GWP fossil of the best variant is 4,5% lower than the worst case GWP. Contribution of the other modules (A4-A5, C1-C4) to the GWP fossil is less than 3% in each product; hence, variation in A1-A3 represents the entire life-cycle and product group covered in the EPD.

LCA SOFTWARE AND BIBLIOGRAPHY

This EPD has been created using One Click LCA EPD Generator for EPD Hub V3 and EPD Process Certification v3.2.5. The LCA and EPD have been prepared according to the reference standards and ISO 14040/14044. The EPD Generator uses Ecoinvent v3.10.1/3.11/3.12 and One Click LCA databases as sources of environmental data. Allocation used in Ecoinvent 3.10.1/3.11/3.12 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[1)]	kg CO_2e	3,46E+00	1,88E-01	5,88E-01	4,24E+00	3,17E-02	1,01E-01	ND	ND	ND	ND	ND	ND	ND	3,41E-03	5,22E-03	0,00E+00	5,89E-03	-1,15E-01
GWP – fossil	kg CO_2e	3,45E+00	1,88E-01	6,08E-01	4,24E+00	3,16E-02	7,75E-02	ND	ND	ND	ND	ND	ND	ND	3,41E-03	5,22E-03	0,00E+00	5,88E-03	-1,15E-01
GWP – biogenic	kg CO_2e	1,39E-02	8,45E-06	-2,04E-02	-6,47E-03	4,51E-06	2,35E-02	ND	ND	ND	ND	ND	ND	ND	6,48E-07	1,20E-06	0,00E+00	8,73E-06	4,03E-04
GWP – LULUC	kg CO_2e	2,37E-03	8,86E-05	4,44E-04	2,90E-03	1,43E-05	3,55E-05	ND	ND	ND	ND	ND	ND	ND	3,49E-07	2,32E-06	0,00E+00	3,37E-06	-2,38E-05
Ozone depletion pot.	kg $CFC\text{-}_{11}$e	1,27E-07	2,83E-09	6,12E-09	1,36E-07	5,89E-10	1,65E-09	ND	ND	ND	ND	ND	ND	ND	5,05E-11	7,59E-11	0,00E+00	1,64E-10	-7,76E-10
Acidification potential	mol H^+e	1,44E-02	2,09E-03	3,19E-03	1,97E-02	8,44E-05	2,46E-04	ND	ND	ND	ND	ND	ND	ND	3,04E-05	1,81E-05	0,00E+00	4,12E-05	-4,91E-04
EP-freshwater[2)]	kg Pe	9,25E-04	1,29E-05	4,35E-04	1,37E-03	3,88E-06	2,20E-05	ND	ND	ND	ND	ND	ND	ND	1,10E-07	5,66E-07	0,00E+00	5,15E-07	-7,74E-05
EP-marine	kg Ne	3,60E-03	8,34E-04	5,65E-04	5,00E-03	1,94E-05	6,50E-05	ND	ND	ND	ND	ND	ND	ND	1,42E-05	6,00E-06	0,00E+00	1,58E-05	-1,02E-04
EP-terrestrial	mol Ne	3,10E-02	9,20E-03	5,90E-03	4,61E-02	2,08E-04	5,89E-04	ND	ND	ND	ND	ND	ND	ND	1,55E-04	6,49E-05	0,00E+00	1,73E-04	-1,11E-03
POCP ("smog")[3)]	kg NMVOCe	1,34E-02	2,60E-03	1,93E-03	1,79E-02	1,18E-04	2,26E-04	ND	ND	ND	ND	ND	ND	ND	4,64E-05	2,66E-05	0,00E+00	6,01E-02	-3,99E-04
ADP-minerals & metals[4)]	kg Sbe	3,47E-05	3,78E-07	8,90E-06	4,40E-05	1,97E-07	6,11E-07	ND	ND	ND	ND	ND	ND	ND	1,22E-09	1,49E-08	0,00E+00	8,76E-09	-1,12E-06
ADP-fossil resources	MJ	6,72E+01	2,51E+00	7,33E+00	7,70E+01	4,42E-01	9,23E-01	ND	ND	ND	ND	ND	ND	ND	4,44E-02	7,45E-02	0,00E+00	1,44E-01	-1,26E+00
Water use[5)]	m^3e depr.	1,12E+00	1,04E-02	1,82E-01	1,31E+00	2,99E-03	1,57E-02	ND	ND	ND	ND	ND	ND	ND	1,14E-04	4,35E-04	0,00E+00	6,33E-03	-2,56E-02

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	1,39E-07	1,07E-08	4,15E-08	1,91E-07	2,39E-09	2,64E-09	ND	ND	ND	ND	ND	ND	ND	8,69E-10	5,11E-10	0,00E+00	9,47E-10	-8,05E-09
Ionizing radiation[6)]	kBq U235e	2,37E-01	1,53E-03	4,80E-02	2,86E-01	4,80E-04	3,66E-03	ND	ND	ND	ND	ND	ND	ND	1,89E-05	6,25E-05	0,00E+00	8,62E-05	1,89E-03
Ecotoxicity (freshwater)	CTUe	1,41E+02	4,03E-01	2,66E+01	1,68E+02	1,13E-01	2,32E+00	ND	ND	ND	ND	ND	ND	ND	2,53E-02	1,55E-02	0,00E+00	6,13E-01	-4,80E+00
Human toxicity, cancer	CTUh	8,36E-09	3,20E-11	5,41E-10	8,93E-09	6,85E-12	1,19E-10	ND	ND	ND	ND	ND	ND	ND	3,47E-13	8,20E-13	0,00E+00	1,07E-12	-1,69E-11
Human tox. non-cancer	CTUh	3,37E-08	1,07E-09	8,23E-09	4,30E-08	2,69E-10	6,21E-10	ND	ND	ND	ND	ND	ND	ND	5,46E-12	4,63E-11	0,00E+00	3,76E-09	-7,76E-10
SQP[7)]	-	1,15E+01	1,35E+00	4,87E+00	1,77E+01	3,37E-01	2,52E-01	ND	ND	ND	ND	ND	ND	ND	2,93E-03	7,43E-02	0,00E+00	2,83E-01	-3,83E-01

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	3,02E+00	2,62E-02	1,37E+00	4,42E+00	8,50E-03	-1,03E-01	ND	ND	ND	ND	ND	ND	ND	2,78E-04	1,04E-03	0,00E+00	1,35E-03	-4,87E-02
Renew. PER as material	MJ	8,53E-03	0,00E+00	2,33E-01	2,41E-01	0,00E+00	-2,33E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	-8,45E-03	0,00E+00
Total use of renew. PER	MJ	3,03E+00	2,62E-02	1,61E+00	4,66E+00	8,50E-03	-3,36E-01	ND	ND	ND	ND	ND	ND	ND	2,78E-04	1,04E-03	0,00E+00	-7,10E-03	-4,87E-02
Non-re. PER as energy	MJ	5,43E+01	2,51E+00	6,83E+00	6,36E+01	4,42E-01	3,14E-01	ND	ND	ND	ND	ND	ND	ND	4,44E-02	7,45E-02	0,00E+00	1,44E-01	-1,26E+00
Non-re. PER as material	MJ	1,30E+01	0,00E+00	2,01E-01	1,32E+01	0,00E+00	-3,30E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	-1,29E+01	0,00E+00
Total use of non-re. PER	MJ	6,73E+01	2,51E+00	7,03E+00	7,68E+01	4,42E-01	-1,57E-02	ND	ND	ND	ND	ND	ND	ND	4,44E-02	7,45E-02	0,00E+00	-1,27E+01	-1,26E+00
Secondary materials	kg	1,04E-01	1,08E-03	4,00E-02	1,45E-01	2,71E-04	1,53E-03	ND	ND	ND	ND	ND	ND	ND	1,84E-05	3,12E-05	0,00E+00	3,58E-05	5,92E-02
Renew. secondary fuels	MJ	3,25E-04	8,12E-06	8,05E-03	8,39E-03	2,85E-06	8,57E-05	ND	ND	ND	ND	ND	ND	ND	4,81E-08	4,07E-07	0,00E+00	7,48E-07	-9,08E-06
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	2,70E-02	2,50E-04	4,10E-03	3,14E-02	7,06E-05	3,43E-04	ND	ND	ND	ND	ND	ND	ND	2,84E-06	1,07E-05	0,00E+00	1,49E-04	-4,36E-04

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	4,37E-01	1,35E-02	3,44E-01	7,95E-01	4,92E-03	1,24E-02	ND	ND	ND	ND	ND	ND	ND	4,97E-05	4,76E-04	0,00E+00	1,64E-04	-3,38E-02
Non-hazardous waste	kg	8,57E+00	1,82E-01	2,48E+00	1,12E+01	4,94E-02	1,58E-01	ND	ND	ND	ND	ND	ND	ND	7,24E-04	9,41E-03	0,00E+00	3,79E-03	-4,86E-01
Radioactive waste	kg	6,13E-05	3,64E-07	1,18E-05	7,35E-05	1,16E-07	9,45E-07	ND	ND	ND	ND	ND	ND	ND	4,63E-09	1,49E-08	0,00E+00	2,10E-08	4,90E-07

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	6,88E-02	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	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,10E-03	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	1,41E-01	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	2,12E-02	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	1,19E-01	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	3,45E+00	1,88E-01	6,09E-01	4,25E+00	3,17E-02	7,75E-02	ND	ND	ND	ND	ND	ND	ND	3,41E-03	5,22E-03	0,00E+00	5,88E-03	-1,15E-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 – 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. Electricity, medium voltage, residual mix, Finland, Ecoinvent, 0.71 kgCO2e/kWh
2. Market for heat, district or industrial, other than natural gas, Albania, Ecoinvent, 0.0715 kgCO2e/MJ

Transport scenario documentation - A4 (Transport resources)

1. Market for transport, freight, lorry, >32 metric ton, diesel, EURO 6, 300 km
2. Market for transport, passenger, car, petrol, large size, EURO 5, 50 km

Transport to the building site (A4) - Scenario documentation

Scenario parameter	Value
Capacity utilization (including empty return) %	100
Bulk density of transported products	634
Volume capacity utilization factor	1

Installation at the building site (A5) - Scenario documentation

Scenario parameter	Value
Energy: type and consumption (MJ or kWh)	-
Water use (m^3)	-
Ancillary materials: type and mass (kg)	-
Waste materials: type and mass (kg)	Steel packages: 0,0714 kg; Polyethylene packages: 0,0075 kg; Wood pallet: 0,0149 kg; Hazardous waste from the product: 0,01 kg.
Waste materials: output routes	Steel: recycling 0,0600 kg, landfill 0,014 kg; Wood: recycling 0,0056 kg, incineration with energy recovery 0,0045 kg, landfill 0,0048 kg; Polyethylene: recycling 0,0032 kg, incineration with energy recovery 0,0026 kg, landfill 0,0017 kg; Hazardous waste: incineration without energy recovery 0,01 kg.
Direct emissions (kg)	-

End of life (C1-C4) - Scenario documentation

Scenario information	Value
Collection process: collected separately (kg)	0,94
Disposal (kg)	0,94
Scenario assumptions e.g. transportation (mode, km) & other	0,06 kg of solvents evaporated after installation. 50 km truck transportation to disposal.

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

Elma Avdyli as an authorized verifier for EPD Hub Limited 01.07.2026