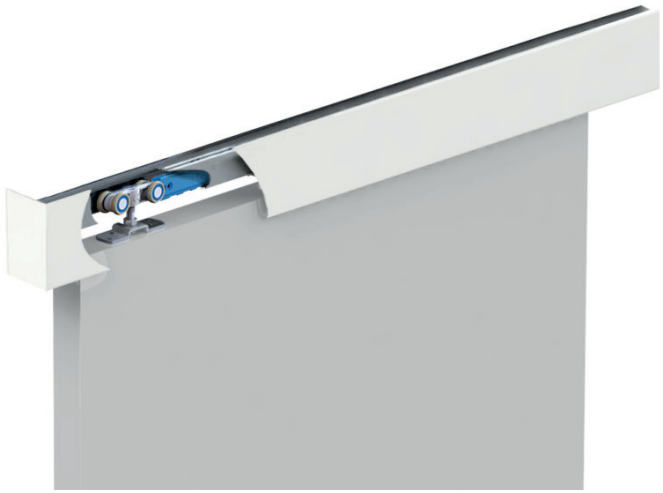
ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025

SLIDING TRACK SYSTEM FOR INTERIOR DOORS

HELAFORM



EPD HUB, XXXXX

Published on 16.4.2026, last updated on 16.4.2031, valid until 16.4.2031

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	Helaform Oy
Address	Koivulehdontie 13, 01510 Vantaa
Contact details	myynti@helaform.fi
Website	www.helaform.com

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 17610 Building hardware
Sector	Construction product
Category of EPD	Third party verified EPD
Scope of the EPD	Cradle to gate with options, A4-A5, and modules C1-C4, D
EPD author	Atloc Moncada
EPD verification	Independent verification of this EPD and data, according to ISO 14025: ☐ Internal verification ☒ External verification
EPD verifier	#VERIFIER#

This EPD is intended for business-to-business and/or business-to-consumer com-munication. The manufacturer has the sole ownership, liability, and responsibility for the EPD. EPDs within the same product category but from different prog-rams 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	Sliding track system for interior doors
Additional labels	75 Flow
Place(s) of raw material origin	Europe
Place of production	Finland
Place(s) of installation and use	Global
Period for data	Calendar year 2025
Averaging in EPD	No grouping
Variation in GWP-fossil for A1-A3 (%)	0
GTIN (Global Trade Item Number)	6417588133312
A1-A3 Specific data (%)	40

ENVIRONMENTAL DATA SUMMARY

Declared unit	One meter of sliding mechanism set
Declared unit mass	1,7 kg
Mass of packaging	0,19 kg
GWP-fossil, A1-A3 (kgCO2e)	7,92
GWP-total, A1-A3 (kgCO2e)	7,25
Secondary material, inputs (%)	2,09
Secondary material, outputs (%)	96,9
Total energy use, A1-A3 (kWh)	39,2
Net freshwater use, A1-A3 (m3)	0,10

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Headquartered in Helsinki, Finland, Helaform is a leading specialist and manufacturer of high-quality sliding and folding door sliding track systems for commercial, industrial, and residential applications. With decades of expertise, Helaform offers one of the most comprehensive selections of sliding track systems designed for effortless movement and durability. Helaform delivers a superior customer experience, providing architects and construction professionals with versatile, space-saving solutions and expert technical support that help them optimize floor plans and create functional, modern environments. The Helaform team is driven by Finnish engineering excellence and a commitment to sustainable manufacturing and long-lasting product lifecycles. Operating with a strong international presence, the Helaform brand is synonymous with reliability and innovation in opening solutions across the globe. Visit helaform.com for more information.

PRODUCT DESCRIPTION

The Series 75 Flow is a full sliding track system set suitable for interior sliding doors. The series is used typically in apartments, offices, nurseries, hospitals and care centers. Set includes all the necessary hardware including sliding track and cover plate for one sliding door installation. The product is available both with or without soft-close function for smooth and safe operation.

This EPD covers the whole hardware system for manual sliding interior doors, including components used to support and allow the opening and closing of the door by a sliding action. Reference length of the product used to obtain the results in this EPD is 2,1 m. The product can be used with multiple sliding door products and this EPD does not include the door along with the product would be installed to. The EPD was created according to the specifications of EN 15804+A2. Further information can be found at: www.helaform.com

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	94	EU
Minerals	0	-
Fossil materials	6	EU
Bio-based materials	0	-

BIOGENIC CARBON CONTENT

Biogenic carbon content in product, kg C	0
Biogenic carbon content in packaging, kg C	0,17

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	One meter of sliding mechanism set
Mass per declared unit	1,7 kg

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							X	X	X	X	X		
Raw materials	Transport	Manufacturing	Transport	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction/ dem-	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 final product, sliding door mechanism is a combination of multiple components. The overall manufacturing can be therefore be split into following steps: 1. Manufacturing of the finished components: starting from raw material extraction, further processed into components ready to be used as input to the manufacturing process. The manufacturing of these components is done by suppliers or by external contractors, e.g. manufacturing of metal parts, or applying powder coating. 2. Pre-assembly of modules (in the factory). 3. Final assembly and packaging of the final product (in the factory). After the final production step, the packaging materials made of cardboard and plastic are applied to the product for protection during transportation. The product can be sent either directly to the construction site, or to a warehouse. The product is stacked onto pallet along other products (max. 100 per pallet) and to shield the finished, individually packaged products during transportation phase, the whole stack is protected with additional plastic packaging materials to secure the stack onto the pallet.

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.

When considering this phase of the life-cycle, there is not only one place where the transportation from us would end, as our customers can have multiple locations between each other, thus causing variance to the transport distance and the needed vehicles. The travel distances used on the transportation data is then a theoretical value, a weighed average value for this product, which is calculated based on its previous transportation history. The assumed vehicle for the transportation is a lorry, with the vehicle capacity value of 1, meaning that the lorry is carrying a full load all around while transporting the goods, causing distortion to the results. However, when considering the overall results of the product life-cycle, the impact of the load variance among transportation can be considered negligible due having a low impact to the overall results. Empty returns are considered to be out of scope, as the transportation company is considered to be out of our use, when they are not having our goods on board, and serving their other customers or routes. Material loss is not expected to take place during transportation phase due to sufficient protective packaging of our products. The installation of the product is manual. The installing work consists of mounting and fastening, which can be done with hand tools. There is no extra materials needed to be used for the installing purposes, and no material loss expected to happen during installing phase nor such construction practices that would lead to material loss would be necessary.

The energy consumption for installing is then considered to be zero, due to the small size of the consumption and the impact it has on this life-cycle stage. However, upon installing the products, the packaging materials are removed, leading to generating packaging waste. The benefits from recycling and incinerating the packaging materials are under the module D, along the other benefits and loads outside of the system boundary.

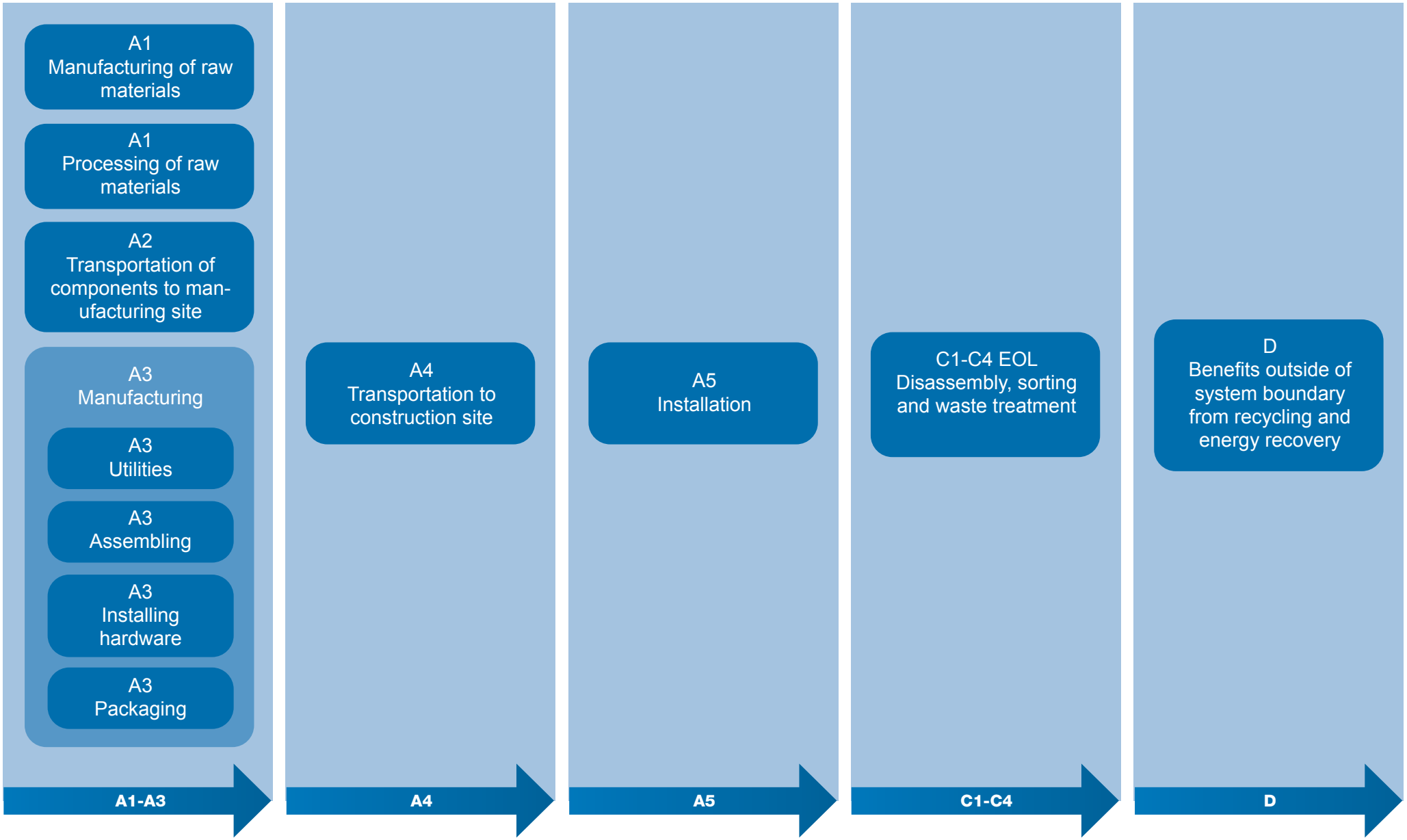
PRODUCT USE AND MAINTENANCE (B1-B7)

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

PRODUCT END OF LIFE (C1-C4, D)

The energy and use of natural resources upon demolition process are considered negligible. Assumptions regarding the waste management are given regarding the sorting practices and transport distance. The waste collecting vehicle is assumed to a lorry and the waste is assumed to be part of the mixed construction waste-fraction. The travel distance of the lorry carrying the waste from the demolition site to the waste handling site is assumed to be 50 kilometres. Upon arriving to the waste management plant, the recyclable material of the waste and/or the energy-recovery applicable materials are separated from the waste and diverted to correct use. End of life stage is modelled as defined in EN 15804. Module C3 accounts for energy and resource inputs for sorting and treating these waste streams for recycling and incineration with energy recovery. The EN 17610 end-of-life stage for building hardware further defines that as default, aluminium, steel, brass and zinc alloys have reached end-of-waste state, and as such act as raw material or product that can be freely traded and used in production once reaching the end of their current lifecycle (MRF). These materials are therefore modelled to go into recycling process in C3. The product-group specific percentages for recycling rates applied in the calculation are applied as defined in the EN 17213, Annex B. Per the end of life scenario of windows and doors (EN17213 Annex B), 5% of wood, 5% of metal, 5% of plastic and 5% of paint and glue waste goes to landfill. Additionally, hazardous waste that is incinerated is included in Module C4. As per EN 15804, the hazardous waste incineration is not included in Module D for benefits outside of the system boundary, as incineration is applied as disposal process. Regarding the wooden packaging sent to the waste treatment, according to the end of life scenario of timber windows and doorsets (EN17213 Annex B), 100% of sorted timber materials goes to incineration. The wooden pallet, wooden board, cardboard packaging and plastic packaging used during transportation are incinerated for energy recovery or recycled. The benefits and loads of incineration and recycling are included in Module D. Plastic and steel parts hold potential for recycling and material recovery for secondary material production purposes, that reduce the need for virgin raw materials (D) The wooden content (pallet) in the product packaging has great heating value and are applicable for energy production upon used as a fuel in the incineration process (D), decreasing the demand for virgin fuel production and use. As per EN 17610, substitution effects in Module D are calculated only for the net output flow. For building hardware, the rules are: - All production scrap and cuttings leaving Modules A1–B3 are sorted scrap without burdens from primary production and are considered material for recycling (MFR). - For avoiding double-counting the benefits from using recycled materials as raw materials for the product, the net metal outflows are calculated as: (MFR leaving in stages A1–C4) – (secondary material (SM) entering the system) - For materials made of two metals, no distinction is made between secondary input as separate metals (e.g., Cu, Zn, Sn) or as alloys.

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.

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:

Declared unit	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

PRODUCT & MANUFACTURING SITES GROUPING

Type of grouping	No grouping
Grouping method	Not applicable
Variation in GWP-fossil for A1-A3, %	0

This EPD is product and factory specific.

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'.

EN 15804 Sustainability of construction works - Environmental product declartions - Core rules for the product category of construction products. EN 17610 Building hardware - Environmental product declarations - Product category rules complementary to EN 15804 for building hardware EN 17213 Windows and doors. Environmental Product Declarations. Product category rules complementary to EN 15804 for windows and pedestrian doorsets.

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 – total1)	kg CO2e	4,43E+00	1,67E-01	2,65E+00	7,25E+00	2,60E-01	8,70E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,69E-02	4,84E-02	3,38E-02	-2,80E+00
GWP – fossil	kg CO2e	4,28E+00	1,67E-01	3,47E+00	7,92E+00	2,60E-01	3,10E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,69E-02	3,79E-02	3,38E-02	⊠1,94E+00
GWP – biogenic	kg CO2e	1,10E-01	3,24E-05	-8,38E-01	-7,28E-01	0,00E+00	8,39E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,34E-06	1,04E-02	-1,57E-06	-8,59E-01
GWP – LULUC	kg CO2e	4,23E-02	5,96E-05	1,71E-02	5,95E-02	9,19E-05	1,07E-05	ND	ND	ND	ND	ND	ND	ND	0,00E+00	5,96E-06	4,01E-05	1,64E-06	-1,92E-03
Ozone depletion pot.	kg CFC-11e	2,56E-07	3,31E-09	2,05E-07	4,64E-07	5,18E-09	4,50E-10	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,36E-10	2,83E-10	2,40E-10	3,35E-08
Acidification potential	mol H+e	2,86E-02	6,14E-04	1,84E-02	4,76E-02	8,14E-04	1,80E-04	ND	ND	ND	ND	ND	ND	ND	0,00E+00	5,27E-05	1,96E-04	2,71E-05	-1,21E-02
EP-freshwater2)	kg Pe	4,17E-02	1,10E-05	7,06E-04	4,24E-02	1,73E-05	3,90E-06	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,12E-06	1,42E-05	3,94E-07	-9,71E-04
EP-marine	kg Ne	3,60E-03	1,99E-04	3,42E-03	7,22E-03	2,74E-04	8,75E-05	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,78E-05	7,42E-05	1,50E-05	-2,20E-03
EP-terrestrial	mol Ne	4,19E-02	2,16E-03	3,18E-02	7,59E-02	2,98E-03	7,90E-04	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,93E-04	5,07E-04	6,00E-05	-2,34E-02
POCP (“smog”)3)	kg NMVOCe	1,38E-02	8,80E-04	9,16E-03	2,39E-02	1,28E-03	2,24E-04	ND	ND	ND	ND	ND	ND	ND	0,00E+00	8,27E-05	1,49E-04	3,60E-05	-8,34E-03
ADP-minerals & metals4)	kg Sbe	6,98E-05	5,39E-07	2,76E-06	7,32E-05	8,51E-07	9,14E-08	ND	ND	ND	ND	ND	ND	ND	0,00E+00	5,52E-08	8,41E-07	1,31E-08	-2,91E-05
ADP-fossil resources	MJ	4,94E+01	2,34E+00	4,52E+01	9,70E+01	3,65E+00	2,91E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,37E-01	3,20E-01	1,62E-01	-2,75E+01
Water use5)	m3e depr.	1,78E+00	1,14E-02	3,78E+01	3,96E+01	1,80E-02	3,63E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,16E-03	8,41E-03	6,36E-04	-6,01E-01

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	3,03E-07	1,30E-08	8,30E-08	3,99E-07	2,05E-08	2,24E-09	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,33E-09	3,50E-09	3,53E-10	-2,90E-07
Ionizing radiation6)	kBq U235e	3,68E-01	2,95E-03	2,76E+00	3,13E+00	4,66E-03	5,02E-04	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,02E-04	3,80E-03	1,32E-04	-1,67E-01
Ecotoxicity (freshwater)	CTUe	7,40E+01	3,05E-01	8,57E+00	8,28E+01	4,80E-01	7,42E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,11E-02	3,20E-01	5,59E-02	-1,06E+01
Human toxicity, cancer	CTUh	2,69E-08	2,86E-11	5,31E-10	2,75E-08	4,44E-11	4,12E-11	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,87E-12	4,89E-11	6,20E-11	2,80E-09
Human tox. non-cancer	CTUh	1,18E-07	1,45E-09	1,79E-08	1,38E-07	2,29E-09	1,78E-09	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,49E-10	1,06E-09	1,12E-10	-9,60E-09
SQP7)	-	5,32E+00	1,37E+00	3,66E+01	4,33E+01	2,18E+00	1,51E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,41E-01	1,37E+00	3,79E-02	-4,25E+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 energy8)	MJ	1,75E+01	4,01E-02	3,50E+00	2,10E+01	6,32E-02	-1,01E+01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	4,09E-03	5,63E-02	1,52E-03	-1,14E+01
Renew. PER as material	MJ	0,00E+00	0,00E+00	7,22E+00	7,22E+00	0,00E+00	-7,22E+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	1,75E+01	4,01E-02	1,07E+01	2,82E+01	6,32E-02	-1,73E+01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	4,09E-03	5,63E-02	1,52E-03	-1,14E+01
Non-re. PER as energy	MJ	5,62E+01	2,34E+00	6,15E+01	1,20E+02	3,65E+00	-5,58E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,37E-01	-3,57E+00	-1,92E-01	-2,76E+01
Non-re. PER as material	MJ	0,00E+00	0,00E+00	1,00E+00	1,00E+00	0,00E+00	-1,00E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	9,85E-03	0,00E+00
Total use of non-re. PER	MJ	5,62E+01	2,34E+00	6,25E+01	1,21E+02	3,65E+00	-1,56E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,37E-01	-3,57E+00	-1,82E-01	-2,76E+01
Secondary materials	kg	3,55E-02	1,07E-03	4,03E-01	4,39E-01	1,67E-03	3,37E-04	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,08E-04	7,65E-04	6,36E-05	4,22E-01
Renew. secondary fuels	MJ	2,06E-04	1,33E-05	1,08E-01	1,09E-01	2,11E-05	3,90E-06	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,37E-06	3,90E-05	1,60E-07	-1,03E-04
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	m3	5,17E-02	3,12E-04	4,69E-02	9,90E-02	4,92E-04	5,29E-04	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,19E-05	1,68E-04	1,10E-05	-2,49E-02

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	9,65E-01	3,35E-03	3,09E-02	1,00E+00	5,24E-03	9,19E-03	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,40E-04	3,58E-03	6,43E-04	-4,42E-01
Non-hazardous waste	kg	6,70E+00	7,04E-02	1,25E+00	8,02E+00	1,11E-01	6,15E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	7,17E-03	1,67E-01	2,53E-02	-3,09E+00
Radioactive waste	kg	2,15E-04	7,33E-07	2,92E-04	5,08E-04	1,16E-06	1,27E-07	ND	ND	ND	ND	ND	ND	ND	0,00E+00	7,51E-08	9,74E-07	3,33E-08	9,42E-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	1,01E-12	1,01E-12	0,00E+00	2,00E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	1,65E+00	0,00E+00	0,00E+00
Materials for energy rec	kg	0,00E+00	0,00E+00	3,00E-04	3,00E-04	0,00E+00	5,76E-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	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	MU	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

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-GHG9)	kg CO2e	4,32E+00	1,67E-01	3,49E+00	7,98E+00	2,60E-01	3,10E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,69E-02	3,79E-02	3,38E-02	-1,94E+00

SCENARIO DOCUMENTATION

MANUFACTURING ENERGY SCENARIO DOCUMENTATION

Scenario parameter	Value
Electricity data source and quality	Electricity, Finland, residual mix, 2024, Finland (One Click LCA)
Electricity CO_{2e} / kWh	0.55
Electricity data source and quality	Electricity, Finland, residual mix, 2024, Finland (One Click LCA)
District heating data source and quality	Heat production, untreated waste wood, at furnace 1000-5000 kW, World, Ecoinvent
District heating CO_{2e} / kWh	0.14 kg

TRANSPORT SCENARIO DOCUMENTATION A4 (Transport resources)

Scenario parameter	Value
Electricity data source and quality	Transport, freight, lorry 16-32 metric ton, EURO5
Electricity CO2e / kWh	450 km
Electricity data source and quality	Transport, freight, lorry 16-32 metric ton, EURO5
Electricity CO2e / kWh	125 km

TRANSPORT SCENARIO DOCUMENTATION A4

Scenario parameter	Value
Capacity utilization (including empty return) %	36
Bulk density of transported products	9,00E+01
Volume capacity utilization factor	1

INSTALLATION SCENARIO DOCUMENTATION - A5 (Installation waste)

Scenario information	Value
Treatment of waste wood, untreated, municipal incineration, Ecoinvent, Materials for energy recovery	0.17647059 kg
Treatment of waste paperboard, municipal incineration, Ecoinvent, Materials for energy recovery	9,00E+01
Treatment of waste polyethylene, for recycling, unsorted, sorting, Ecoinvent, Materials for recycling	0.02 kg

END-OF-LIFE SCENARIO DOCUMENTATION - C1-C4 (Data source)

Scenario information	Value
Market for electricity, medium voltage, Ecoinvent	0.0 kWh
Treatment of metal scrap, mixed, for recycling, unsorted, sorting, Ecoinvent, Materials for recycling	1.41337 kg
Sorting and pressing of iron scrap, Ecoinvent, Materials for recycling	0.1472 kg
Treatment of scrap steel, inert material landfill, Ecoinvent	0.0821 kg
Treatment of waste polyethylene, for recycling, unsorted, sorting, Ecoinvent, Materials for energy recovery	0.08745 kg
Treatment of waste plastic, mixture, sanitary landfill, Ecoinvent	0.0046 kg
Treatment of waste paint on wall, sorting plant, Ecoinvent	0.009 kg
Treatment of waste paint, hazardous waste incineration, Ecoinvent	0.009 kg
Treatment of waste paint, hazardous waste incineration, Ecoinvent	5.0E-4 kg

Scenario information	Value
Scenario assumptions e.g. transportation	as per EN 17610, material recovery and recycling percentages as per EN 17213 Annex B

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