ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025

Stainless AMU®-US-Lintel System
Amutek Oy

EPD HUB, HUB-5706
Published on 13.03.2026, last updated on 13.03.2026, valid until 13.03.2031

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	Amutek Oy
Address	Pihkalantie 24, 01480 VANTAA
Contact details	amutek@amutek.fi
Website	https://amutek.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 modules A4-A5, C1-C4, D
EPD author	Juho Jaurakkajärvi
EPD verification	Independent verification of this EPD and data, according to ISO 14025: ☐ Internal verification ☑ External verification
EPD verifier	Yazan Badour as an authorized verifier for EPD Hub

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

PRODUCT

Product name	Stainless AMU®-US-Lintel System
Additional labels	
Product reference	e.g RE1302800B4021
Place(s) of raw material origin	Finland
Place of production	Viitasaari, Finland
Place(s) of installation and use	Finland
Period for data	Calendar year 2024
Averaging in EPD	Multiple products
Variation in GWP-fossil for A1-A3 (%)	< 10 %
GTIN (Global Trade Item Number)	-
NOBB (Norwegian Building Product Database)	-
A1-A3 Specific data (%)	64,3

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 kg
Declared unit mass	1 kg
Mass of packaging	0,023 kg
GWP-fossil, A1-A3 ($kgCO_2e$)	2,78
GWP-total, A1-A3 ($kgCO_2e$)	2,79
Secondary material, inputs (%)	38,1
Secondary material, outputs (%)	94,8
Total energy use, A1-A3 (kWh)	11,4
Net freshwater use, A1-A3 (m^3)	0,18

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Amutek designs, develops, manufactures, markets, and sells high-quality products for masonry construction. Founded in 1990 (with product development beginning in 1987), Amutek started from a need to make masonry work easier, faster, and more efficient while minimizing finishing work. Today, product development follows Eurocodes and standards and is carried out in cooperation with masons, contractors, material manufacturers, builders, designers, and other industry professionals.

PRODUCT DESCRIPTION

The STAINLESS AMU®-US Lintel system is lineal element supporting load over an opening in a masonry wall. Lintel system consists of length and load-bearing capacity dimensioned AMU®-US-profile and Stainless Bistål (0-7pcs). The profile is bent from structural stainless steel individually into different openings and Bistål consists of two longitudinal parallel bars with a circular cross-section joined by short transverse bars to create a ladder-like appearance. The profile and Bistål are installed in the horizontal joints during the masonry work.The visible surfaces of the profile are powder-coated in the desired color.

Further information can be found at:
https://amutek.fi/

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	99,49	Finland, EU
Minerals	0	
Fossil materials	0,51	Switzerland
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	0,18

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 kg
Mass per declared unit	1 kg
Functional unit	
Reference service life	100

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 cold rolled stainless steel sheets arrived at the factory by lorry. Sheets are mechanically cutted to specified shapes and bented in Maarla production site. Hydraulic oil is used during the process to reduce the wear of machines and to ensure stable cutting and bending conditions. The steel parts are powder coated with colour chosen by the customer, which requires liquified natural gas. The transport distance of steel, gas and oil is based on the information in the system. The final product is then packed on wooden pallets with reinforcement steel for masonry structure. The manufacturing process requires electricity for the different equipment as well as district heating. A market-based approach is used in modelling the electricity mix utilized in the factory. Local district heating plant is located next to the sawmill. 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. A wooden pallet, steel screws, cardboard and packaging plastics are used as a packaging material for transporting the product from the factory gate. The steel waste produced at the plant is sorted and directed to recycling. The loss of material is considered, as well as wastewater treatment. Wastewater is directed to the sewer and clean waste oil is delivered to for reuse.
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.

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. Average distance of transportation from production plant to building site is assumed as 325 km, which is the distance between the location of production site and the Capital city Helsinki. The product are mainly sold in Finland. The transportation method is assumed to be lorry. Vehicle capacity is assumed to be 100% which means full load. In reality, it may vary, but as role of transportation emissions in total results is small, the variety in load is assumed to be negligible. Transportation does not cause losses as product are packaged properly. Installation consumes 0.01 kWh of energy for assembling 1 kg of product.

Treatment of packaging material waste (wood, steel and plastic) is considered in this module. Waste treatment is assummed that Wooden pallets are recycled 32%, incinerated 30%, landfilled 38% - Cardboard are recycled 83%, incinerated 8 %, landfilled 9% - Plastic are recycled 40%, incinerated 37%, landfilled 23% - steel are recycled 81 %, landfilled 19%. Waste is delivered to the nearest (50 km) waste treatment facility. The distance of waste transport is estimated to be typical in the EU.

PRODUCT USE AND MAINTENANCE (B1-B7)

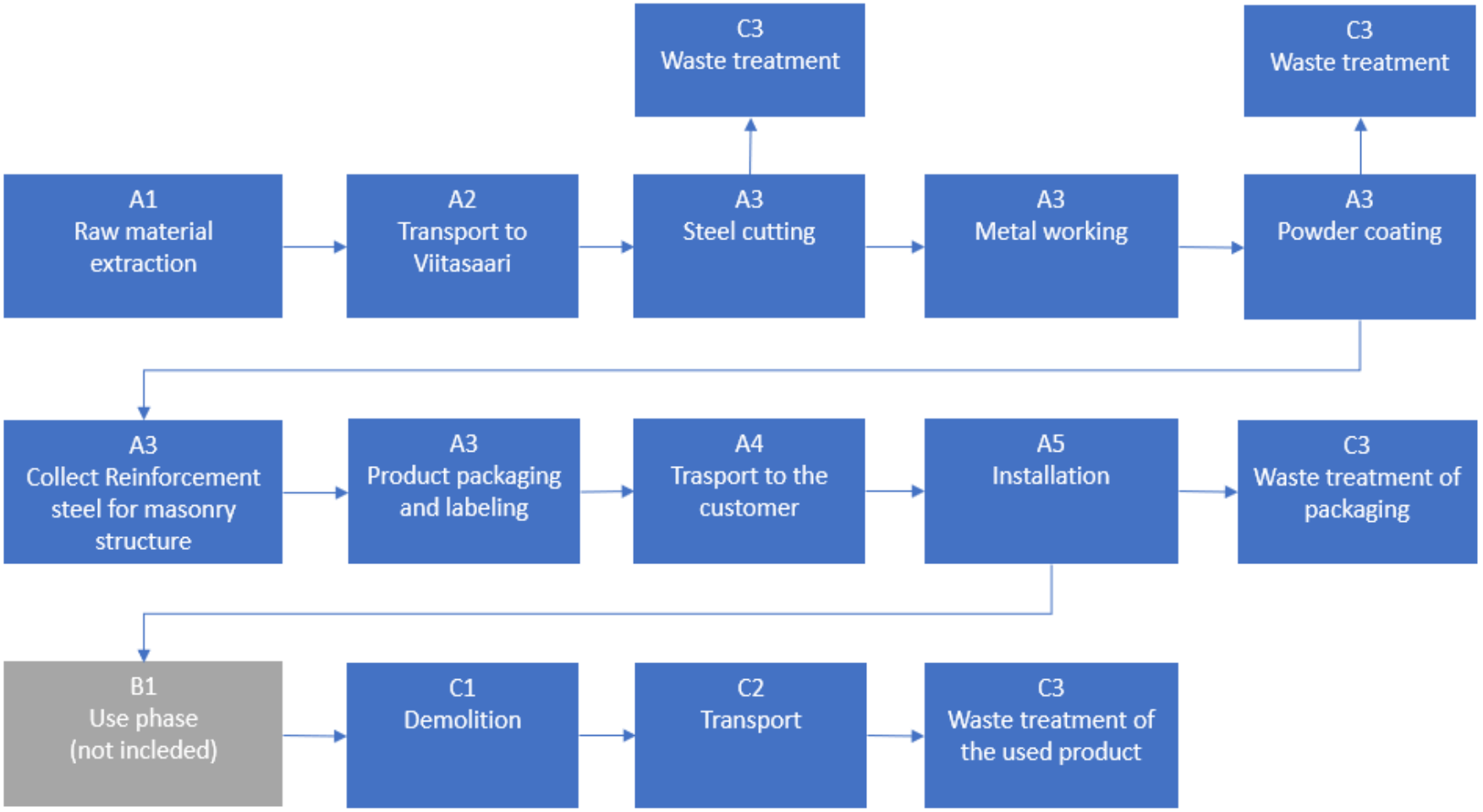
This EPD does not cover the use phase.
Air, soil, and water impacts during the use phase have not been studied.

PRODUCT END OF LIFE (C1-C4, D)

End of life scenario was assumed based on the common practices of construction products in Finland and product's market area in Finland. During the demolition phase C1, the entire final product is dismantled, using the mass of the final product as the input data. Demolition is assumed to consume 0,01 kWh/kg of product. The source of energy is diesel fuel used by construction machines (C1). It is assumed that 100% of the waste is collected and transported to the waste treatment centre. Waste transport distances (EU average estimates) 50 km to landfill, 150km to incineration, 250km to recycling and the transportation method is assumed to be lorry (C2). 95% of stainless steel and 85% of steel is assumed to be recycled. Powder coating is 100% incinerated (C3). It is assumed that the remaining 5% of stainless steel and 15% of steel is taken to landfill for final disposal. (C4).

D: The energy from the recycling process of the product has been taken into account in the calculation. The modelling of landfill and incineration impacts includes all environmental effects associated with these processes. The recycling process is modelled up to the end-of-waste state. The benefits of material recycling and incineration are reported in Module D. This product is intended for the Finland's market and its end of life occurs in Finland. Recycled materials are assumed to replace virgin materials, such as steel, or wood chips used for energy production and MDF manufacturing.

SYSTEM DIAGRAM



LIFE-CYCLE ASSESSMENT

CUT-OFF CRITERIA

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

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

VALIDATION OF DATA

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

ALLOCATION, ESTIMATES AND ASSUMPTIONS

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

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

PRODUCT & MANUFACTURING SITES GROUPING

Type of grouping	Multiple products
Grouping method	Based on a representative product
Variation in GWP-fossil for A1-A3, %	< 10 %

Products are manufactured in different sizes, the raw materials and methods are the same. The proportions may vary, but their effect is small. (min 0.2% and max 0.8%)
The size of the product does not affect the energy consumption of manufacturing.

LCA SOFTWARE AND BIBLIOGRAPHY

This EPD has been created using One Click LCA EPD Generator for EPD Hub V3 and EPD Process Certification v3.2.4. 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‘.

Waste management of packaging materials is based on EU statistical data (https://ec.europa.eu). Cardboard waste management of packaging materials is based on EU statistical data (https://ec.europa.eu/eurostat/databrowser/view/env_waspac__custom_8519259/default/table?lang=en) Wood waste management of packaging materials is based on EU statistical data (https://ec.europa.eu/eurostat/databrowser/view/env_waspac__custom_8519174/default/table?lang=en) Plastic waste management of packaging materials is based on EU statistical data (https://ec.europa.eu/eurostat/databrowser/view/env_waspac__custom_8519242/default/table?lang=en. Steel waste (https://worldsteel.org/wp-content/uploads/Life-cycle-inventory-LCI-study-2020-data-release.pdf). World Stainless 2024 https://www.worldstainless.org/about-stainless/environment/recycling/#:~:text=The%20analysis%20concluded%20that%20on,in%20English%2C%20German%20and%20Chinese. International Chromium Development Association (ICDA) 2023 https://www.icdacr.com/2023/06/27/95-of-stainless-steel-is-recycled-at-the-end-of-its-life/

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	2,51E+00	2,24E-01	5,75E-02	2,79E+00	3,58E-02	4,40E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	4,68E-02	2,14E-02	1,47E-02	-1,88E-01
GWP – fossil	kg CO_2e	2,45E+00	2,24E-01	9,89E-02	2,78E+00	3,57E-02	1,91E-03	ND	ND	ND	ND	ND	ND	ND	0,00E+00	4,68E-02	2,14E-02	1,47E-02	-1,79E-01
GWP – biogenic	kg CO_2e	4,88E-02	5,05E-05	-4,15E-02	7,31E-03	8,10E-06	4,21E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,02E-05	-4,55E-05	-1,41E-07	-8,70E-03
GWP – LULUC	kg CO_2e	2,48E-03	1,00E-04	1,58E-04	2,74E-03	1,60E-05	1,18E-06	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,07E-05	2,64E-05	2,15E-07	-1,74E-04
Ozone depletion pot.	kg CFC_{-11}e	1,89E-05	3,31E-09	5,86E-08	1,90E-05	5,28E-10	1,30E-11	ND	ND	ND	ND	ND	ND	ND	0,00E+00	6,55E-10	2,88E-10	1,15E-11	-1,25E-09
Acidification potential	mol H^+e	1,10E-02	8,04E-04	5,79E-04	1,24E-02	1,22E-04	4,47E-06	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,56E-04	2,55E-04	3,44E-06	-1,01E-03
EP-freshwater[2)]	kg Pe	5,69E-04	1,74E-05	1,45E-05	6,01E-04	2,78E-06	2,10E-07	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,64E-06	1,38E-05	4,58E-08	-5,46E-05
EP-marine	kg Ne	1,95E-03	2,61E-04	2,05E-04	2,41E-03	4,01E-05	4,70E-06	ND	ND	ND	ND	ND	ND	ND	0,00E+00	5,06E-05	5,65E-05	1,41E-06	-1,80E-04
EP-terrestrial	mol Ne	2,21E-02	2,84E-03	2,04E-03	2,70E-02	4,36E-04	1,82E-05	ND	ND	ND	ND	ND	ND	ND	0,00E+00	5,50E-04	6,38E-04	1,54E-05	-1,92E-03
POCP ("smog")[3)]	kg NMVOCe	7,55E-03	1,15E-03	7,31E-04	9,43E-03	1,80E-04	5,94E-06	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,17E-04	1,89E-04	4,89E-06	-6,16E-04
ADP-minerals & metals[4)]	kg Sbe	8,08E-05	6,23E-07	7,76E-07	8,22E-05	9,97E-08	2,38E-09	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,54E-07	1,52E-06	8,82E-10	-4,60E-06
ADP-fossil resources	MJ	2,50E+01	3,25E+00	1,49E+01	4,32E+01	5,19E-01	1,12E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	6,57E-01	2,87E-01	8,98E-03	-1,97E+00
Water use[5)]	m^3e depr.	1,74E+00	1,60E-02	1,51E-01	1,91E+00	2,56E-03	3,23E-04	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,05E-03	5,17E-03	2,10E-04	-5,17E-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	2,23E-08	2,23E-08	2,72E-08	7,19E-08	3,58E-09	7,75E-11	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,72E-09	3,46E-09	6,10E-11	-1,42E-08
Ionizing radiation[6)]	kBq U235e	1,13E-02	2,82E-03	2,17E-01	2,31E-01	4,52E-04	3,03E-05	ND	ND	ND	ND	ND	ND	ND	0,00E+00	5,31E-04	2,44E-03	7,58E-06	-8,30E-03
Ecotoxicity (freshwater)	CTUe	1,40E+01	4,58E-01	2,60E+00	1,70E+01	7,34E-02	4,42E-03	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,04E-01	1,68E-01	5,29E-03	-5,06E-01
Human toxicity, cancer	CTUh	6,24E-08	3,71E-11	9,45E-11	6,26E-08	5,90E-12	4,35E-13	ND	ND	ND	ND	ND	ND	ND	0,00E+00	7,96E-12	1,91E-11	1,79E-11	-1,60E-10
Human tox. non-cancer	CTUh	2,51E-08	2,10E-09	1,70E-09	2,89E-08	3,36E-10	2,28E-11	ND	ND	ND	ND	ND	ND	ND	0,00E+00	4,11E-10	1,30E-09	5,53E-11	-3,55E-09
SQP[7)]	-	1,71E+00	3,26E+00	1,30E+01	1,79E+01	5,22E-01	1,06E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,92E-01	5,60E-01	1,55E-02	-9,13E-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	3,12E+00	4,44E-02	2,44E+00	5,61E+00	7,11E-03	-3,27E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	9,00E-03	5,36E-02	1,15E-04	-4,05E-01
Renew. PER as material	MJ	0,00E+00	0,00E+00	3,63E-01	3,63E-01	0,00E+00	-3,63E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,60E-02
Total use of renew. PER	MJ	3,12E+00	4,44E-02	2,80E+00	5,97E+00	7,11E-03	-6,90E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	9,00E-03	5,36E-02	1,15E-04	-3,29E-01
Non-re. PER as energy	MJ	1,75E+01	3,25E+00	1,47E+01	3,55E+01	5,19E-01	-2,56E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	6,57E-01	2,87E-01	-5,19E-02	-1,97E+00
Non-re. PER as material	MJ	0,00E+00	0,00E+00	5,62E-02	5,62E-02	0,00E+00	-5,62E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,01E-02
Total use of non-re. PER	MJ	1,75E+01	3,25E+00	1,48E+01	3,55E+01	5,19E-01	-8,18E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	6,57E-01	2,87E-01	-5,19E-02	-1,95E+00
Secondary materials	kg	3,81E-01	1,38E-03	1,60E-03	3,84E-01	2,21E-04	8,70E-06	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,95E-04	3,51E-04	4,71E-06	2,11E-02
Renew. secondary fuels	MJ	6,69E-04	1,75E-05	9,58E-03	1,03E-02	2,81E-06	8,51E-08	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,76E-06	1,63E-05	5,12E-08	-4,87E-05
Non-ren. secondary fuels	MJ	3,64E-03	0,00E+00	1,01E-02	1,38E-02	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	1,79E-01	4,79E-04	3,44E-03	1,83E-01	7,67E-05	-2,82E-05	ND	ND	ND	ND	ND	ND	ND	0,00E+00	8,70E-05	1,53E-04	1,08E-05	-1,58E-03

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	3,76E-01	5,50E-03	6,50E-03	3,88E-01	8,79E-04	8,19E-05	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,14E-03	1,88E-03	3,08E-04	-1,73E-01
Non-hazardous waste	kg	1,05E+00	1,02E-01	8,20E-01	1,98E+00	1,63E-02	5,03E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,15E-02	6,79E-02	6,61E-03	-3,73E-01
Radioactive waste	kg	1,36E-03	6,91E-07	1,64E-04	1,53E-03	1,11E-07	7,57E-09	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,30E-07	6,24E-07	1,88E-09	-2,05E-06

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	3,30E-03	3,30E-03	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	1,44E-01	0,00E+00	8,91E-01	1,03E+00	0,00E+00	7,67E-03	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	9,48E-01	0,00E+00	0,00E+00
Materials for energy rec	kg	2,14E-04	0,00E+00	0,00E+00	2,14E-04	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	3,71E-04	0,00E+00	0,00E+00	3,71E-04	0,00E+00	4,05E-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 – Electricity	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,74E-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	2,32E-02	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	2,51E+00	2,23E-01	9,80E-02	2,83E+00	3,56E-02	2,41E-03	ND	ND	ND	ND	ND	ND	ND	0,00E+00	4,66E-02	2,14E-02	1,47E-02	-1,79E-01
Ozone depletion Pot.	kg $CFC_{-11}e$	1,09E-07	2,64E-09	9,69E-08	2,09E-07	4,21E-10	1,05E-11	ND	ND	ND	ND	ND	ND	ND	0,00E+00	5,23E-10	2,37E-10	9,17E-12	-1,06E-09
Acidification	kg SO_2e	1,72E-02	6,15E-04	4,37E-04	1,82E-02	9,31E-05	3,32E-06	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,19E-04	2,05E-04	2,50E-06	-8,36E-04
Eutrophication	kg PO_4^3e	1,73E-03	1,45E-04	4,22E-04	2,29E-03	2,27E-05	1,23E-06	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,91E-05	2,97E-05	8,32E-07	-1,15E-04
POCP (“smog”)	kg C_2H_4e	1,15E-03	5,34E-05	5,18E-05	1,25E-03	8,30E-06	3,81E-07	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,07E-05	1,22E-05	2,19E-07	-5,09E-05
ADP-elements	kg Sbe	5,83E-05	6,07E-07	7,69E-07	5,96E-05	9,73E-08	2,29E-09	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,50E-07	1,51E-06	7,63E-10	-4,60E-06
ADP-fossil	MJ	2,71E+01	3,21E+00	1,49E+01	4,52E+01	5,12E-01	1,07E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	6,48E-01	2,45E-01	8,86E-03	-1,84E+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	2,46E+00	2,24E-01	9,90E-02	2,78E+00	3,58E-02	1,91E-03	ND	ND	ND	ND	ND	ND	ND	0,00E+00	4,68E-02	2,15E-02	1,47E-02	-1,79E-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. Heat production, light fuel oil, at industrial furnace 1MW, World, Ecoinvent, 0.0993 kgCO2e/MJ
2. Heat production, light fuel oil, at industrial furnace 1MW, World, Ecoinvent, 0.0993 kgCO2e/MJ
3. Heat production, softwood chips from forest, at furnace 1000kW, World, Ecoinvent, 0.0096 kgCO2e/MJ
4. Nuclear power, World, One Click LCA, 0.0111 kgCO2e/kWh

Transport scenario documentation - A4 (Transport resources)

1. Market for transport, freight, lorry >32 metric ton, EURO5, 325.0 km

Transport scenario documentation A4

Scenario parameter	Value
Capacity utilization (including empty return) %	100
Bulk density of transported products	1,02E+03
Volume capacity utilization factor	<1

Installation scenario documentation - A5 (Installation waste)

1. Treatment of waste wood, post-consumer, sorting and shredding, Ecoinvent, Materials for recycling, 0.007 kg
2. Treatment of waste wood, untreated, municipal incineration, Ecoinvent, 0.0066 kg
3. Exported Energy: Electricity, Ecoinvent, 0.015 MJ
4. Exported Energy: Electricity, Ecoinvent, 0.0023 MJ
5. Exported Energy: Electricity, Ecoinvent, 5.1E-5 MJ
6. Exported Energy: Thermal, Ecoinvent, 0.02 MJ
7. Exported Energy: Thermal, Ecoinvent, 0.0031 MJ
8. Exported Energy: Thermal, Ecoinvent, 7.4E-5 MJ
9. Treatment of waste wood, untreated, sanitary landfill, Ecoinvent, 0.0083 kg
10. Treatment of metal scrap, mixed, for recycling, unsorted, sorting, Ecoinvent, Materials for recycling, 4.3E-5 kg
11. Treatment of scrap steel, inert material landfill, Ecoinvent, 1.0E-5 kg
12. Treatment of waste polyethylene, for recycling, unsorted, sorting, Ecoinvent, Materials for recycling, 3.6E-4 kg
13. Treatment of waste polyethylene, municipal incineration, Ecoinvent, 3.4E-4 kg
14. Treatment of waste polyethylene, sanitary landfill, Ecoinvent, 2.1E-4 kg
15. Treatment of waste paperboard, unsorted, sorting, Ecoinvent, Materials for recycling, 2.7E-4 kg
16. Treatment of waste packaging paper, municipal incineration, Ecoinvent, 2.6E-5 kg
17. Treatment of waste packaging paper, sanitary landfill, Ecoinvent, 2.9E-5 kg

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

1. Sorting and pressing of iron scrap, Ecoinvent, Materials for recycling, 0.038 kg
2. Sorting and pressing of iron scrap, Ecoinvent, Materials for recycling, 0.91 kg
3. Treatment of scrap steel, inert material landfill, Ecoinvent, 0.002 kg
4. Treatment of scrap steel, inert material landfill, Ecoinvent, 0.048 kg
5. Treatment of waste paint, municipal incineration, Ecoinvent, 0.006 kg
6. Steel production, electric, low-alloyed, Ecoinvent, -0.038 kg
7. Steel production, chromium steel 18/8, hot rolled, Ecoinvent, 0.038 kg

Scenario information	Value
Scenario assumptions e.g. transportation	95 % Recyled 5 % Landfill

THIRD-PARTY VERIFICATION STATEMENT

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

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

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

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

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

Verified tools

Tool verifier: Magaly Gonzalez Vazquez
Tool verification validity: 27 March 2025 - 26 March 2028

Yazan Badour as an authorized verifier for EPD Hub Limited 13.03.2026

VERIFIED ISO 14025