



ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025

Louvres - Metal coated steel
Bevent Rasch AB



EPD HUB, HUB-5865

Published on 27.03.2026, last updated on 27.03.2026, valid until 26.03.2031

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	Bevent Rasch AB
Address	Box 1739, 501 17, Borås, SE
Contact details	info.boras@bevent-rasch.se
Website	www.bevent-rasch.se

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	Tobias Jakobsson, Bevent Rasch AB
EPD verification	Independent verification of this EPD and data, according to ISO 14025: <input type="checkbox"/> Internal verification <input checked="" type="checkbox"/> External verification
EPD verifier	Vera Durão, as an authorised verifier acting for EPD Hub Limited

PRODUCT

Product name	Louvres - Metal coated steel
Additional labels	BRYH, BRYI, BRTR, BRYC, BRYL
Product reference	-
Place(s) of raw material origin	Europe
Place of production	Sweden, Motala
Place(s) of installation and use	Sweden
Period for data	Calendar year 2024
Averaging in EPD	Multiple products
Variation in GWP-fossil for A1-A3 (%)	-5,2
GTIN (Global Trade Item Number)	-
NOBB (Norwegian Building Product Database)	-
A1-A3 Specific data (%)	92,1

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.

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 kg of product
Declared unit mass	1 kg
Mass of packaging	0,355 kg
GWP-fossil, A1-A3 (kgCO₂e)	3,39
GWP-total, A1-A3 (kgCO₂e)	2,79
Secondary material, inputs (%)	12,6
Secondary material, outputs (%)	85
Total energy use, A1-A3 (kWh)	15,4
Net freshwater use, A1-A3 (m³)	0,09



PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Bevent Rasch is an industry-leading manufacturer of ventilation products in Sweden and the Nordic countries, with collaboration partners on the export market. Our products are at the forefront of development and have long set standards followed by the rest of the industry. With innovation, technology, and a long-term perspective as watchwords, we develop smart, high-tech solutions and safe installation methods, delivered with uncompromising timeliness.

PRODUCT DESCRIPTION

Bevent Rasch offers both rectangular and circular louvres used in ventilation systems, mainly on outer walls, for intake and exhaust of air; these are suitable for HVAC-systems as well as industrial applications, placements that are exposed to the elements, water-separation purposes, and sound absorption. The louvres BRYH, BRYI and BRYC are tested for water separation and pressure drop according to EN 13030:2001. The products included in this EPD are comprised of the same main materials and goes through the same manufacturing processes which gives that all the products have a similar environmental impact. The louvre BRYH has been used as the reference product in this EPD. The difference that has the most influence on the environmental impact is that the louvre BRYL contains a small amount of insulation which results in a slightly lower climate impact.

Bevent Rasch also manufacture protective louvres and access-protection measures. In terms of both functional aspects and appearance, our products are designed and produced based on our clients' needs. The products that are included in this EPD are BRYH, BRYI, BRTR, BRYC and BRYL.

Further information can be found at www.bevent-rasch.se

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PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	100	Europe
Minerals	-	-
Fossil materials	-	-
Bio-based materials	-	-

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	0,061

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 kg of product
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 raw materials and components (A1) are predominantly sourced from European suppliers, with a few minor components sourced from Asian countries. The final products manufacturing (A3) occurs in Motala, Sweden. Transportation of the raw materials and components have been modeled with the distance from the respective supplier to Motala, Sweden. For the steel sheets the transportation have been assumed to have two different transportation routes, with the first being 1400 km by freight train and 230 km by EUR5 lorry and the second being 2250 km by container ship and 260 km by EUR5 lorry. For the wire net the transportation have been assumed to be 165 km by EUR5 lorry and for the fasteners 19000 km by container ship and 260 km by EUR5 lorry.

The manufacturing process entails cutting and shaping of galvanized steel sheets, assembling, and packaging. The packaging materials used are wooden pallets, wooden slats, and plastic film. Transport for packaging have been assumed to be 16 km for wooden pallets and for all other 250 km by EUR5 lorry. Steel, wood and plastic waste generated at the factory is sent for recycling to a nearby facility with transport distance 50 km. The material loss in the manufacturing process for the main components is 25% and for secondary components 10%. All operations at the factory site are powered by fossil-free electricity, purchased electricity is modeled with 36% hydro and 64% nuclear. Approximately 30% of all consumed electricity is generated from on-site solar cells.

The use of renewable 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.

The assumed average transportation distance from the production plant to the building site is 250 km, utilizing lorries as the transportation method. It is assumed that the vehicle capacity utilization volume factor is 50%, taken into account empty returns. Although, this factor may vary, the impact of transportation emissions on the overall results is considered minor, thus variations in load are regarded as negligible for this study. As a conservative measure, empty returns are factored into this analysis, incorporated through an average load factor within the Ecoinvent transport datapoints. Proper packaging ensures that transportation does not incur losses for the products being transported. Installation loss of the product is estimated to be zero. The handling of packaging has been considered.

It is assumed that no energy is needed during the installation process, except for human labor. However, the impact arises from the waste treatment of the packaging materials. For wooden packaging material 32% is recycled, 30% is incinerated with energy recovery, and 38% is sent to landfill (EUROSTAT). For plastic packaging 40% is recycled, 37% is incinerated with energy recovery, and 23% is sent to landfill (EUROSTAT). The transportation of this waste is modeled using the transportation distance to treatment in Linköping, 50 km and the transportation method is assumed to be lorry.

PRODUCT USE AND MAINTENANCE (B1-B7)

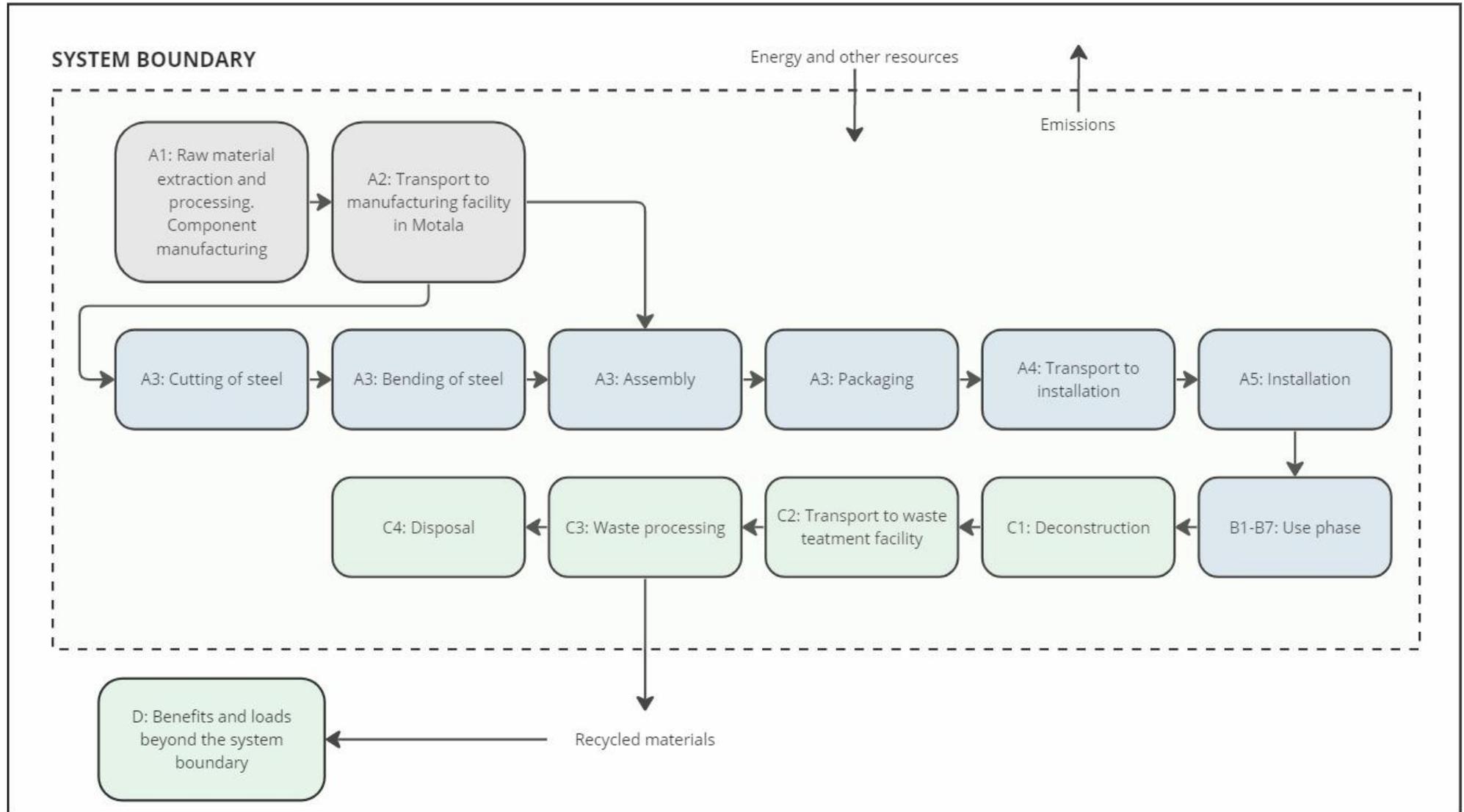
The product is assumed to have no environmental impacts during the use phase; therefore, these modules are not included in the analysis. Air, soil, and water impacts during the use phase have not been studied.

PRODUCT END OF LIFE (C1-C4, D)

It is assumed that 100% of the waste is collected and transported to the waste treatment center. It is assumed that only manual labor is used for deconstruction (C1), as a conservative measure 0,01 kWh of Diesel burned in machine has been added. Transportation distance to treatment is assumed as 50 km and the transportation method is assumed to be lorry (C2). 85% of steel is assumed to be recycled based on global steel life cycle inventory data (worldsteel, 2020) (C3). It is assumed that the remaining 15% of steel is taken to landfill for final disposal (C4). Due to the recycling process, the end-of-life product is converted into recycled steel, while the wood and plastic packaging is in part recycled, landfilled and incinerated with energy recovery (D). The raw material, which contains 20% recycled steel, is deducted from the 85%. Thus, 68% of the net flow of steel is to be credited in Module D.



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:

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

PRODUCT & MANUFACTURING SITES GROUPING

Type of grouping	Multiple products
Grouping method	Based on worst-case results
Variation in GWP-fossil for A1-A3, %	-5,2%

All products are manufactured at the same site in Motala, Sweden, contains the same kind of materials and goes through the same processes. The products that are included in this EPD are BRYH, BRYI, BRTR, BRYC and BRYL.

The louvres manufactured are made from galvanized steel sheets, steel wire net, fasteners and in one product, insulation. The range of the percentage of steel sheet in these products is 43-95%. The reference product, which is a typical product, contains 94,6 % steel sheet, with the remainder being mainly wire net and a small amount of fasteners. The steel wire net and the steel sheet have a very similar impact; thus the variation does not affect the impact from the products included 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 v3.2.4. 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'.

EUROSTAT,
https://ec.europa.eu/eurostat/databrowser/view/env_waspac__custom_8519174/default/table?lang=en

<https://zerowasteeurope.eu/wp-content/uploads/2023/01/Debunking-Efficient-Recovery-Full-Report-EN.docx.pdf>

<https://worldsteel.org/wp-content/uploads/Life-cycle-inventory-LCI-study-2020-data-release.pdf>

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 ₂ e	3,15E+00	1,08E-01	-4,61E-01	2,79E+00	3,51E-02	6,28E-01	ND	0,00E+00	4,30E-02	1,92E-02	9,37E-04	-1,15E+00						
GWP – fossil	kg CO ₂ e	3,14E+00	1,08E-01	1,42E-01	3,39E+00	3,50E-02	2,10E-02	ND	0,00E+00	4,30E-02	1,92E-02	9,36E-04	-1,18E+00						
GWP – biogenic	kg CO ₂ e	2,42E-03	5,10E-05	-6,07E-01	-6,04E-01	7,65E-06	6,07E-01	ND	0,00E+00	9,38E-06	-4,08E-05	-2,98E-07	3,88E-02						
GWP – LULUC	kg CO ₂ e	1,54E-03	8,43E-05	3,89E-03	5,51E-03	1,36E-05	1,83E-05	ND	0,00E+00	1,90E-05	2,37E-05	5,35E-07	-1,92E-03						
Ozone depletion pot.	kg CFC ₋₁₁ e	4,60E-10	1,41E-09	4,09E-09	5,96E-09	7,31E-10	2,00E-10	ND	0,00E+00	6,01E-10	2,58E-10	2,71E-11	-5,06E-09						
Acidification potential	mol H ⁺ e	7,77E-03	9,50E-04	7,75E-04	9,50E-03	8,27E-05	6,78E-05	ND	0,00E+00	1,43E-04	2,29E-04	6,64E-06	-5,83E-03						
EP-freshwater ²⁾	kg Pe	2,33E-05	1,41E-05	5,05E-05	8,79E-05	2,45E-06	3,21E-06	ND	0,00E+00	3,34E-06	1,24E-05	7,70E-08	-5,80E-04						
EP-marine	kg Ne	1,98E-03	3,25E-04	2,38E-04	2,54E-03	2,17E-05	7,18E-05	ND	0,00E+00	4,64E-05	5,06E-05	2,53E-06	-1,09E-03						
EP-terrestrial	mol Ne	2,15E-02	3,55E-03	2,25E-03	2,73E-02	2,35E-04	2,76E-04	ND	0,00E+00	5,05E-04	5,72E-04	2,76E-05	-1,19E-02						
POCP (“smog”) ³⁾	kg NMVOCe	6,75E-03	1,07E-03	9,05E-04	8,72E-03	1,44E-04	9,05E-05	ND	0,00E+00	1,99E-04	1,69E-04	9,90E-06	-4,07E-03						
ADP-minerals & metals ⁴⁾	kg Sbe	3,92E-05	2,70E-07	1,97E-06	4,15E-05	1,00E-07	3,42E-08	ND	0,00E+00	1,41E-07	1,36E-06	1,49E-09	-7,80E-05						
ADP-fossil resources	MJ	2,94E+01	1,42E+00	1,46E+01	4,54E+01	5,26E-01	1,73E-01	ND	0,00E+00	6,03E-01	2,58E-01	2,30E-02	-1,14E+01						
Water use ⁵⁾	m ³ e depr.	4,48E-01	1,15E-02	3,86E-01	8,45E-01	2,69E-03	4,79E-03	ND	0,00E+00	2,80E-03	4,64E-03	6,63E-05	-3,45E-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	1,58E-08	1,21E-08	1,41E-08	4,20E-08	3,42E-09	1,19E-09	ND	0,00E+00	3,41E-09	3,10E-09	1,51E-10	-7,72E-08						
Ionizing radiation ⁶⁾	kBq 11235e	4,00E-03	2,89E-03	1,02E+00	1,03E+00	6,34E-04	4,54E-04	ND	0,00E+00	4,88E-04	2,19E-03	1,44E-05	2,41E-02						
Ecotoxicity (freshwater)	CTUe	4,83E-01	2,48E-01	7,40E-01	1,47E+00	6,20E-02	6,00E-02	ND	0,00E+00	9,53E-02	1,50E-01	1,93E-03	-2,10E+01						
Human toxicity, cancer	CTUh	1,16E-10	2,32E-11	4,06E-10	5,45E-10	5,84E-12	6,25E-12	ND	0,00E+00	7,31E-12	1,72E-11	1,73E-13	-6,66E-10						
Human tox. non-cancer	CTUh	9,50E-10	7,64E-10	2,44E-09	4,16E-09	3,40E-10	3,35E-10	ND	0,00E+00	3,77E-10	1,17E-09	3,97E-12	-2,11E-08						
SQP ⁷⁾	-	2,63E-01	1,01E+00	5,09E+01	5,22E+01	5,30E-01	1,62E-01	ND	0,00E+00	3,60E-01	5,02E-01	4,52E-02	-3,77E+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	1,66E+00	4,71E-02	8,70E+00	1,04E+01	8,57E-03	-5,10E+00	ND	0,00E+00	8,27E-03	4,81E-02	2,22E-04	-3,33E-01						
Renew. PER as material	MJ	0,00E+00	0,00E+00	4,54E+00	4,54E+00	0,00E+00	-4,54E+00	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,00E-01						
Total use of renew. PER	MJ	1,66E+00	4,71E-02	1,32E+01	1,49E+01	8,57E-03	-9,64E+00	ND	0,00E+00	8,27E-03	4,81E-02	2,22E-04	-3,22E-02						
Non-re. PER as energy	MJ	2,95E+01	1,42E+00	1,41E+01	4,50E+01	5,26E-01	-1,27E-01	ND	0,00E+00	6,03E-01	2,58E-01	2,30E-02	-1,14E+01						
Non-re. PER as material	MJ	0,00E+00	0,00E+00	5,38E-01	5,38E-01	0,00E+00	-5,38E-01	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,22E-01						
Total use of non-re. PER	MJ	2,95E+01	1,42E+00	1,46E+01	4,55E+01	5,26E-01	-6,65E-01	ND	0,00E+00	6,03E-01	2,58E-01	2,30E-02	-1,12E+01						
Secondary materials	kg	1,26E-01	1,36E-03	1,39E-02	1,41E-01	2,28E-04	1,24E-04	ND	0,00E+00	2,71E-04	3,15E-04	5,78E-06	6,41E-01						
Renew. secondary fuels	MJ	1,05E-05	6,90E-06	1,14E-01	1,14E-01	2,87E-06	1,23E-06	ND	0,00E+00	3,45E-06	1,46E-05	1,20E-07	-9,18E-05						
Non-ren. secondary fuels	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00						
Use of net fresh water	m ³	8,45E-02	2,96E-04	9,12E-03	9,39E-02	7,77E-05	-4,44E-04	ND	0,00E+00	7,99E-05	1,37E-04	2,39E-05	-6,37E-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	1,50E-02	4,78E-03	1,44E-02	3,42E-02	7,61E-04	1,17E-03	ND	0,00E+00	1,05E-03	1,69E-03	2,54E-05	-3,57E-01						
Non-hazardous waste	kg	2,30E-01	8,24E-02	4,30E-01	7,43E-01	1,52E-02	7,84E-01	ND	0,00E+00	1,97E-02	6,09E-02	5,80E-04	-3,15E+00						
Radioactive waste	kg	2,30E-04	7,05E-07	2,13E-04	4,44E-04	1,57E-07	1,13E-07	ND	0,00E+00	1,20E-07	5,60E-07	3,52E-09	6,19E-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	0,00E+00	0,00E+00	0,00E+00	0,00E+00	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	2,41E-01	2,41E-01	0,00E+00	1,14E-01	ND	0,00E+00	0,00E+00	8,50E-01	0,00E+00	0,00E+00						
Materials for energy rec	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	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	5,99E-01	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	2,53E-01	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	3,46E-01	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 ₂ e	3,12E+00	1,07E-01	1,45E-01	3,37E+00	3,48E-02	2,85E-02	ND	0,00E+00	4,27E-02	1,92E-02	9,28E-04	-1,18E+00						
Ozone depletion Pot.	kg CFC ₁₁ e	4,25E-10	1,13E-09	3,64E-09	5,19E-09	5,82E-10	1,61E-10	ND	0,00E+00	4,80E-10	2,13E-10	2,15E-11	-5,20E-09						
Acidification	kg SO ₂ e	6,21E-03	7,20E-04	6,05E-04	7,54E-03	6,56E-05	5,04E-05	ND	0,00E+00	1,10E-04	1,84E-04	4,91E-06	-4,80E-03						
Eutrophication	kg PO ₄ ³ e	7,17E-04	1,32E-04	3,26E-03	4,11E-03	1,64E-05	1,81E-05	ND	0,00E+00	2,67E-05	2,66E-05	1,56E-06	-7,56E-04						
POCP (“smog”)	kg C ₂ H ₄ e	1,09E-03	4,92E-05	8,06E-05	1,22E-03	6,69E-06	5,72E-06	ND	0,00E+00	9,83E-06	1,09E-05	4,65E-07	-6,13E-04						
ADP-elements	kg Sbe	3,92E-05	2,64E-07	1,98E-06	4,15E-05	9,79E-08	3,28E-08	ND	0,00E+00	1,38E-07	1,36E-06	1,46E-09	-7,80E-05						
ADP-fossil	MJ	8,78E+02	1,38E+00	2,09E+00	8,82E+02	5,16E-01	1,65E-01	ND	0,00E+00	5,95E-01	2,20E-01	2,28E-02	-1,19E+01						

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 ₂ e	3,14E+00	1,08E-01	1,45E-01	3,40E+00	3,51E-02	2,10E-02	ND	0,00E+00	4,30E-02	1,92E-02	9,37E-04	-1,19E+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. Electricity production, nuclear, boiling water reactor, Sweden, Ecoinvent, 0.0077 kgCO_{2e}/kWh
2. Electricity production, hydro, run-of-river, Sweden, Ecoinvent, 0.0044 kgCO_{2e}/kWh
3. Electricity production, photovoltaic, 570kWp open ground installation, multi-Si, Sweden, Ecoinvent, 0.0829 kgCO_{2e}/kWh
4. Electricity voltage transformation from high to medium voltage, Sweden, Ecoinvent, 0.0258 kgCO_{2e}/kWh

Transport scenario documentation - A4 (Transport resources)

1. Market for transport, freight, lorry >32 metric ton, EURO6, 250 km

Transport scenario documentation A4

Scenario parameter	Value
Capacity utilization (including empty return) %	50
Bulk density of transported products	9,03E+01
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, 0.071 kg
2. Treatment of waste wood, post-consumer, sorting and shredding, Ecoinvent, Materials for recycling, 0.04 kg
3. Treatment of waste wood, untreated, municipal incineration, Ecoinvent, 0.067 kg
4. Treatment of waste wood, untreated, municipal incineration, Ecoinvent, 0.037 kg
5. Exported Energy: Electricity, Ecoinvent, 0.15 MJ
6. Exported Energy: Electricity, Ecoinvent, 0.084 MJ
7. Exported Energy: Electricity, Ecoinvent, 0.019 MJ
8. Exported Energy: Thermal, Ecoinvent, 0.21 MJ
9. Exported Energy: Thermal, Ecoinvent, 0.11 MJ
10. Exported Energy: Thermal, Ecoinvent, 0.026 MJ
11. Treatment of waste wood, untreated, sanitary landfill, Ecoinvent, 0.085 kg
12. Treatment of waste wood, untreated, sanitary landfill, Ecoinvent, 0.047 kg
13. Treatment of waste polyethylene, for recycling, unsorted, sorting, Ecoinvent, Materials for recycling, 0.003 kg
14. Treatment of waste polyethylene, municipal incineration, Ecoinvent, 0.0027 kg
15. Treatment of waste polyethylene, sanitary landfill, Ecoinvent, 0.0017 kg

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

1. Market for diesel, burned in building machine, Ecoinvent, 0.01 kWh
2. Sorting and pressing of iron scrap, Ecoinvent, Materials for recycling, 0.85 kg
3. Treatment of scrap steel, inert material landfill, Ecoinvent, 0.15 kg

Scenario information	Value
Scenario assumptions e.g. transportation	250km for recycling, 50km for landfill, by lorry

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
27.03.2026

