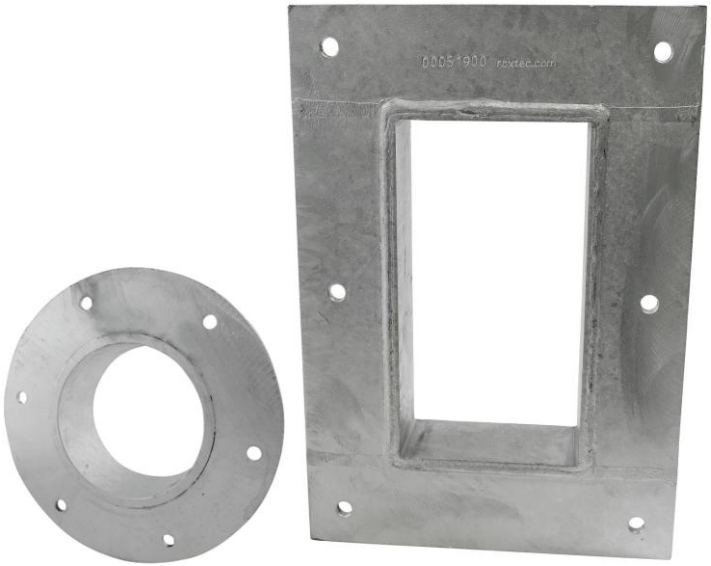
ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025

Roxtec GALV frames and sleeves

Roxtec International AB



EPD HUB, HUB 6209

Published on 06.05.2026, last updated on 06.05.2026, valid until 06.05.2031

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	Roxtec International AB
Address	Verkövägen 96 371 65 Lyckeby Sweden
Contact details	info@roxtec.com
Website	www.roxtec.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
Sector	Construction product
Category of EPD	Third party verified EPD
Scope of the EPD	Cradle to gate with modules C1-C4, D
EPD author	Jörgen Landqvist, Roxtec International AB
EPD verification	Independent verification of this EPD and data, according to ISO 14025: ☐ Internal verification ☑ External verification
EPD verifier	Elena Antuña-Bernardo 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	Roxtec GALV frames and sleeves
Product reference	B...frames, G...frames, S...frames, SL...sleeves
Place(s) of raw material origin	Europe
Place of production	Karlskrona, Sweden
Place(s) of installation and use	World
Period for data	Calendar year 2025
Averaging in EPD	Multiple products
Variation in GWP-fossil for A1-A3 (%)	<10%
A1-A3 Specific data (%)	2,37

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 kg of product
Declared unit mass	1 kg
Mass of packaging	0,04 kg
GWP-fossil, A1-A3 (CO_2e)	2,56 kg
GWP-total, A1-A3 (CO_2e)	2,57 kg
Secondary material, inputs (%)	40,8
Total energy use, A1-A3 (kWh)	9,35
Net freshwater use, A1-A3 (m^3)	0,02

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Roxtec – a global safety solution provider

Roxtec is a global developer, manufacturer, and supplier of certified modular-based sealing solutions for cable, pipe, and conduit penetrations. The company is a value-adding partner supporting customers with technical expertise.

Protecting life and assets

Headquartered in Sweden, the global Roxtec group is built on customer focus and an entrepreneurial spirit. The mindset is to help protect life and assets and make our world a safe and sustainable place. Roxtec has extensive research and development resources, a fire test lab and further testing capabilities for use in the product development and pre-certification process as well as customization of seals. The group has its centralized production and distribution facilities in Sweden, but also offices, production facilities and distribution centers strategically located around the world.

PRODUCT DESCRIPTION

Roxtec galvanized (GALV) frames and sleeves are structural steel components forming the interface between a building structure and the Roxtec sealing system. Manufactured from galvanized mild steel, they provide durable, corrosion-protected openings for routing and sealing cables and pipes.

The frames and sleeves are permanently installed in walls, floors, decks, or similar building elements and are used together with Roxtec seals and modules. When used as part of Roxtec sealing systems, they provide certified protection against fire, water, gas, smoke, and other hazards, verified at system level through third-party testing, while enabling long-term reliability and future upgrades through modular adaptability.

This EPD covers all GALV variants, sizes, and models belonging to the Roxtec product families B…frames, G…frames, S…frames, and SL…sleeves, which together constitute the declared product group:

- **B…-, G…-, and S…- rectangular steel frames** intended for use with Roxtec modular sealing systems.
- **SL…- circular steel sleeves** intended for use with Roxtec round seals.

The product families differ primarily in geometry and fastening/application method, reflecting different installation solutions, while sharing the same material composition, manufacturing processes, and intended function.

Further information can be found on:
www.roxtec.com

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	100	EUR

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	0,0164

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 kg of product
Mass per declared unit	1 kg
Reference service life	25 years

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	ND	ND	ND	ND	ND	ND	ND	ND	ND	x	x	x	x	x		
Raw materials	Transport	Manufacturing	Transport	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction/ demolition	Transport	Waste processing	Disposal	Reuse	Recovery	Recycling

Not declared = ND.

MANUFACTURING AND PACKAGING (A1-A3)

The environmental impacts considered for the product stage cover the production of raw materials used in manufacturing, as well as packaging materials, ancillary materials, and transport from suppliers. Manufacturing activities include steel processing, welding, and surface treatment by galvanizing. Material losses occurring during production and the handling and treatment of generated waste are included.

The consumption of utilities such as electricity and district heating is modelled using a market-based energy approach, and accounts for related transmission and conversion losses. 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 are not covered in this EPD. Apart from packaging waste and related transport declared in Module C, material loss during installation is estimated to be zero as the products are delivered in ready-to-install condition.

PRODUCT USE AND MAINTENANCE (B1-B7)

Roxtec sealing systems provide passive protection against multiple hazards during the use phase, and do not require any additional resources during operation.

PRODUCT END OF LIFE (C1-C4, D)

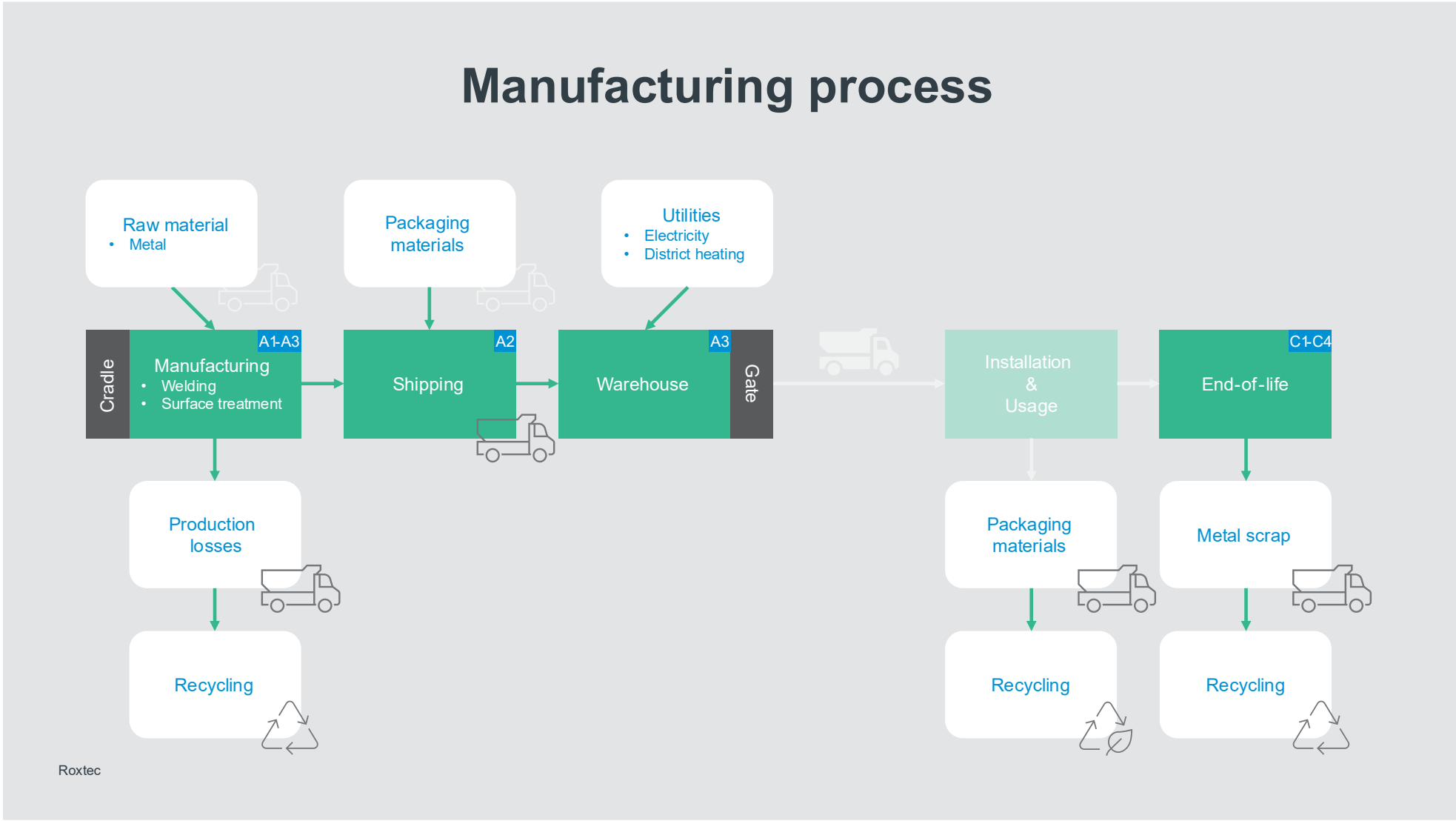
The deconstruction/demolition of the product is assumed to be negligible and is therefore not considered. At the end-of-life stage, the entire product is sent to recycling and disposal facilities. The transport and distribution of material fractions to recycling and landfill are included in the end-of-life modelling.

The benefits from recycling are reported in Module D, which accounts for loads and benefits beyond the system boundary.

SCENARIO DOCUMENTATION AND REFERENCES

Further details and qualitative figures can be found in the scenario documentation with referenced data in the bibliography.

MANUFACTURING PROCESS



LIFE-CYCLE ASSESSMENT

CUT-OFF CRITERIA

The study includes all major raw material and energy consumption. All inputs and outputs of the unit processes, for which data are available, are included in the calculation. There is no neglected unit process that is 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 study does not exclude any modules or processes which are stated mandatory in the EN 15804:2012+A2:2019 and the applied PCR. The study does not exclude any hazardous materials or substances.

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 any material, energy, or waste data cannot be measured separately for the product under investigation. All allocations are made according to the referenced standards and the applied PCR. In this study, allocation has been done in the following ways:

Data type	Allocation
Raw materials	Allocated by mass or volume
Packaging material	Allocated by mass or volume
Ancillary materials	Not applicable
Manufacturing energy and waste	Allocated by mass or volume

PRODUCT & MANUFACTURING SITES GROUPING

Type of grouping	Multiple products
Grouping method	Based on average results of product groups by total mass
Variation in GWP-fossil for A1-A3, %	<10%

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'.

Metal waste and recycling modelling:

[01] https://www.stenametall.com/news-insights/insights-inspiration/the-transition-of-the-steel-industry/

[02] https://worldsteel.org/wp-content/uploads/Life-cycle-inventory-LCI-study-2020-data-release.pdf

Packaging waste and recycling modelling:

[03] https://www.businesswaste.co.uk/your-waste/waste-wood-collection/wood-recycling-facts-and-statistics/

Power grid T&D loss modelling:

[04] https://group.vattenfall.com/dk/siteassets/danmark/om-os/baeredygtighed/vattenfall-lca-brochure.pdf

Service life modelling (RSL):

[05] https://www.roxtec.com/globalassets/03.-files/application-guidelines/service-and-maintenance-guidelines/roxtec_service_and_maintenance_guidelines_en.pdf

Roxtec product certificates portal:

[06] https://www.roxtec.com/en/products/certificates/

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	2,50E+00	5,36E-02	2,01E-02	2,57E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,46E-02	1,91E-02	1,33E-03	-9,07E-01
GWP – fossil	kg CO_2e	2,49E+00	5,36E-02	1,99E-02	2,56E+00	ND	ND0	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,46E-02	1,94E-02	1,32E-03	-8,98E-01
GWP – biogenic	kg CO_2e	7,73E-03	9,72E-06	1,29E-04	7,87E-03	ND	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	5,36E-06	-2,75E-04	4,21E-07	-9,00E-03
GWP – LULUC	kg CO_2e	1,97E-03	2,55E-05	8,78E-05	2,08E-03	ND	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,10E-05	2,44E-05	7,82E-07	-3,34E-04
Ozone depletion pot.	kg CFC_{-11}e	1,49E-08	7,43E-10	8,50E-10	1,65E-08	ND	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,64E-10	2,58E-10	3,59E-11	-3,55E-09
Acidification potential	mol H^+e	1,09E-02	1,14E-03	2,18E-04	1,23E-02	ND	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	8,40E-05	2,30E-04	9,26E-06	-3,93E-03
EP-freshwater[2)]	kg Pe	1,48E-03	2,92E-06	6,04E-06	1,49E-03	ND	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,92E-06	1,28E-05	3,77E-07	-4,34E-04
EP-marine	kg Ne	2,50E-03	2,92E-04	6,34E-05	2,86E-03	ND	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,76E-05	5,11E-05	1,50E-05	-8,87E-04
EP-terrestrial	mol Ne	2,56E-02	3,24E-03	8,94E-04	2,98E-02	ND	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,00E-04	5,77E-04	3,86E-05	-9,67E-03
POCP ("smog")[3)]	kg NMVOCe	8,91E-03	8,99E-04	2,26E-04	1,00E-02	ND	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,24E-04	1,71E-04	1,45E-05	-3,17E-03
ADP-minerals & metals[4)]	kg Sbe	6,42E-05	8,96E-08	2,49E-07	6,46E-05	ND	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	6,87E-08	1,35E-06	2,25E-09	-4,73E-05
ADP-fossil resources	MJ	2,78E+01	6,83E-01	3,07E-01	2,88E+01	ND	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,57E-01	2,62E-01	3,14E-02	-8,50E+00
Water use[5)]	m^3e depr.	1,31E+00	2,41E-03	1,13E-02	1,32E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,77E-03	5,07E-03	1,05E-03	-2,27E-01

1) GWP = Global Warming Potential; 2) EP = Eutrophication potential. Required characterization 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	2,46E-07	2,38E-09	3,52E-09	2,52E-07	ND	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,47E-09	3,15E-09	2,12E-10	-5,78E-08
Ionizing radiation[6)]	kBq U235e	1,31E-01	3,71E-04	1,72E-03	1,33E-01	ND	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,11E-04	2,24E-03	2,20E-05	1,90E-02
Ecotoxicity (freshwater)	CTUe	1,41E+02	3,05E-01	1,69E+00	1,43E+02	ND	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	5,06E-02	1,27E+00	1,94E-02	-1,29E+01
Human toxicity, cancer	CTUh	3,77E-09	1,04E-11	7,78E-11	3,86E-09	ND	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	4,06E-12	1,70E-11	2,86E-13	-3,99E-10
Human tox. non-cancer	CTUh	5,34E-08	2,52E-10	6,22E-10	5,43E-08	ND	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,31E-10	1,16E-09	1,29E-11	-1,48E-08
SQP[7)]	-	8,63E+00	1,72E-01	7,36E+00	1,62E+01	ND	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,60E-01	4,97E-01	6,49E-02	-2,87E+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	2,88E+00	6,36E-03	1,95E+00	4,83E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	4,90E-03	-1,25E-02	-5,76E-01	-6,05E-01
Renew. PER as material	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,50E-02
Total use of renew. PER	MJ	2,88E+00	6,36E-03	1,95E+00	4,83E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	4,90E-03	-1,25E-02	-5,76E-01	-5,30E-01
Non-re. PER as energy	MJ	2,78E+01	6,83E-01	2,67E-01	2,88E+01	ND	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,57E-01	2,62E-01	3,14E-02	-8,50E+00
Non-re. PER as material	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,00E-03
Total use of non-re. PER	MJ	2,78E+01	6,83E-01	2,67E-01	2,88E+01	ND	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,57E-01	2,62E-01	3,14E-02	-8,49E+00
Secondary materials	kg	4,08E-01	2,99E-04	2,41E-03	4,11E-01	ND	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,52E-04	3,16E-04	8,77E-06	4,94E-01
Renew. secondary fuels	MJ	2,52E-04	1,77E-06	2,04E-02	2,07E-02	ND	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,93E-06	1,47E-05	1,77E-07	-6,93E-05
Non-ren. secondary fuels	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of net fresh water	m^3	1,92E-02	6,00E-05	1,89E-04	1,95E-02	ND	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	5,28E-05	1,17E-04	-1,02E-04	-3,83E-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	9,45E-01	1,08E-03	1,40E-03	9,48E-01	ND	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	6,05E-04	1,72E-03	4,08E-05	-2,78E-01
Non-hazardous waste	kg	1,25E+01	1,77E-02	4,09E-02	1,26E+01	ND	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,12E-02	6,74E-02	1,70E-01	-2,38E+00
Radioactive waste	kg	3,33E-05	9,06E-08	4,42E-07	3,38E-05	ND	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	7,62E-08	5,72E-07	5,37E-09	4,98E-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	ND	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for recycling	kg	0,00E+00	0,00E+00	1,04E-01	1,04E-01	ND	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	8,56E-01	0,00E+00	0,00E+00
Materials for energy rec	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy – Electricity	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy – Heat	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	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	2,48E+00	5,34E-02	1,99E-02	2,56E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,45E-02	1,94E-02	3,27E-03	-8,93E-01
Ozone depletion Pot.	kg $CFC_{-11}e$	1,31E-08	5,92E-10	8,86E-10	1,45E-08	ND	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,90E-10	2,23E-10	2,87E-11	-3,72E-09
Acidification	kg SO_2e	8,88E-03	9,09E-04	1,51E-04	9,94E-03	ND	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	6,41E-05	1,85E-04	6,85E-06	-3,16E-03
Eutrophication	kg PO_4^3e	1,99E-03	1,07E-04	5,43E-04	2,64E-03	ND	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,56E-05	2,72E-05	3,17E-06	-5,80E-04
POCP (“smog”)	kg C_2H_4e	1,04E-03	4,68E-05	1,77E-05	1,10E-03	ND	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	5,72E-06	1,09E-05	1,05E-06	-4,48E-04
ADP-elements	kg Sbe	6,40E-05	8,78E-08	2,45E-07	6,44E-05	ND	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	6,70E-08	1,35E-06	2,20E-09	-4,73E-05
ADP-fossil	MJ	2,57E+01	6,78E-01	2,77E-01	2,66E+01	ND	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,52E-01	2,23E-01	3,11E-02	-8,91E+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	2,49E+00	5,36E-02	2,00E-02	2,57E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,46E-02	1,94E-02	1,32E-03	-8,98E-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 characterization 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 characterization factor for biogenic CO_2 is set to zero.

SCENARIO DOCUMENTATION

Manufacturing energy scenario documentation

Scenario parameter	Value
Electricity data source and quality	100% hydro Data source: Ecoinvent, Sweden Electricity production, hydro, run-of-river (Reference product: electricity, high voltage) Transformation and transmission losses 8% (ref [04]).
Electricity CO_2e / kWh	0.0044
District heating data source and quality	100% biofuel Data source: Ecoinvent, Sweden Heat and power co-generation, wood chips, 6667 kW, state-of-the-art 2014 (Reference product: heat, district or industrial, other than natural gas)
District heating CO_2e / kWh	0.0026

Manufacturing scenario documentation

Scenario information	Value
Production loss (ref [01])	Metal: 13%
Scenario assumptions e.g. transportation for the life-cycle stage A3	300 km transport by truck to local recycling station/landfill.

End of life scenario documentation

Scenario information	Value
Collection process – kg collected with mixed construction waste	Metal: 1 kg
Recovery process – kg for recycling (ref [02])	Metal: 0,85 kg
Disposal (total) – kg for final deposition	Metal: 0,15 kg
Waste materials on the building site before waste processing, generated by the product's packaging / kg	Wood: 0.04 kg
Output materials (specified by type) as result of waste processing at the building site e.g. collection for recycling, for energy recovery, disposal (specified by route) / kg (ref [03])	% are for recycling, incineration w. energy recovery, landfill, respectively. Wood: 15%, 0%, 85%
Scenario assumptions e.g. transportation for the life-cycle stages C2-C4	300 km transport by truck to local recycling station/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 is 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

Elena Antuña-Bernardo as an authorized verifier for EPD Hub Limited
01.04.2026