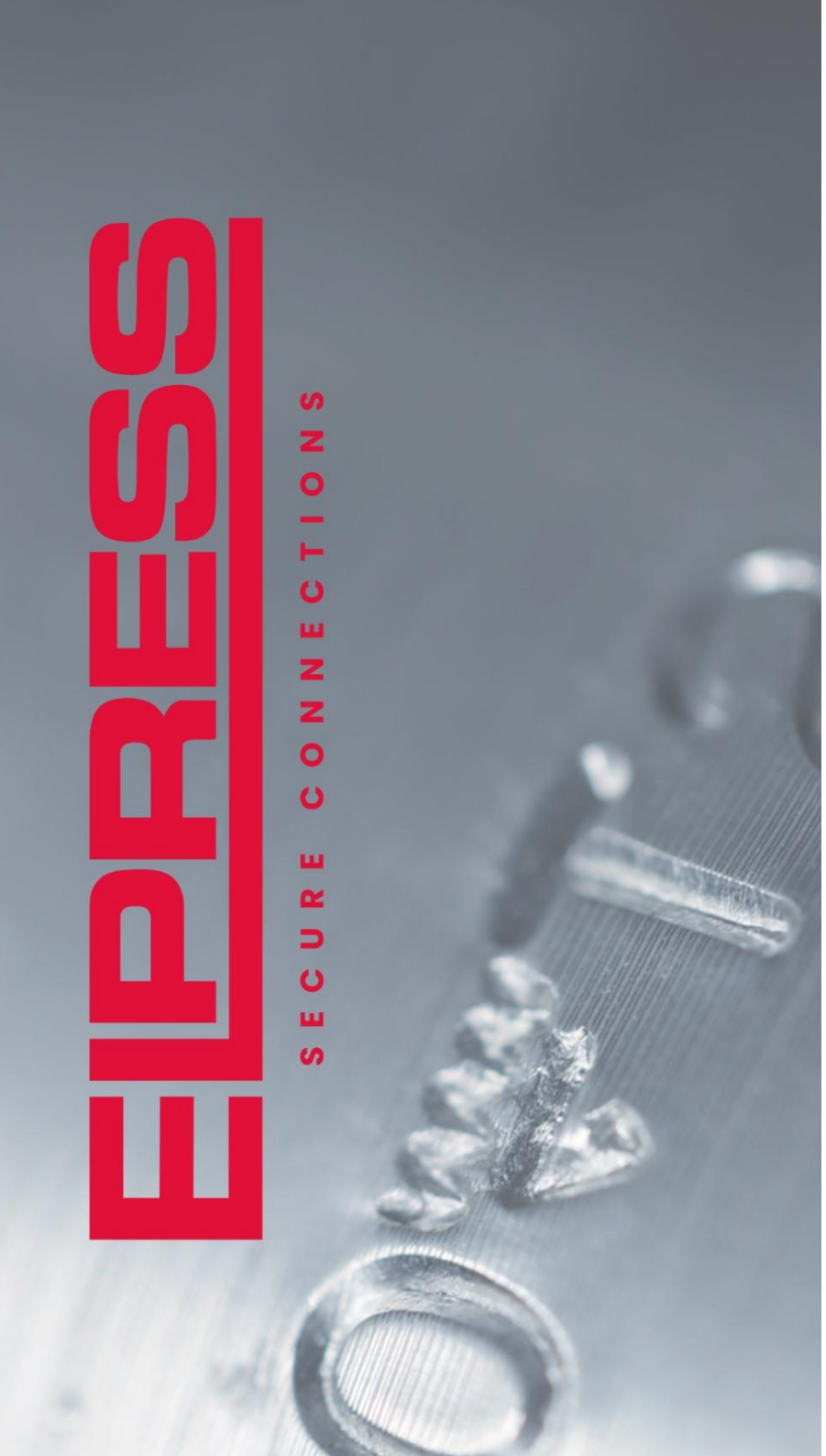
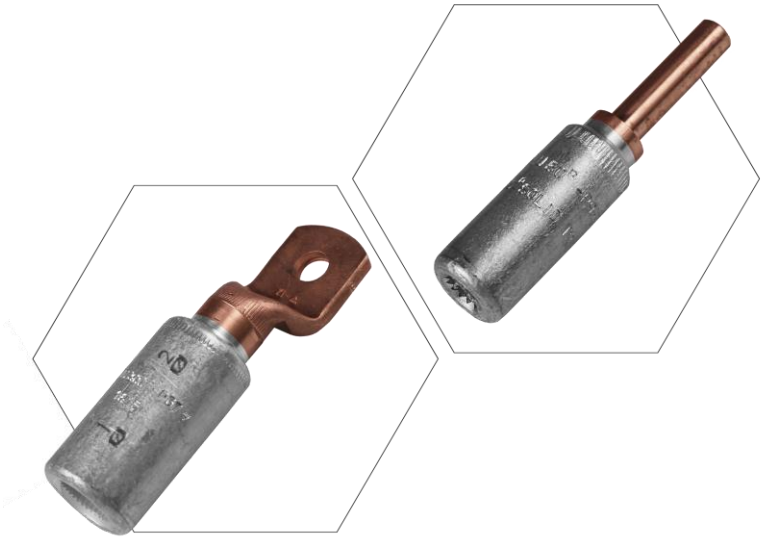


ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025

Elpress AB AlCu Terminals
AKK, AKP, AKS, SL



EPD HUB, HUB-4709

Published on 18.12.2025, last updated on 18.12.2030

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	Elpress AB
Address	Industrivägen 15, 872 32 Kramfors
Contact details	support@elpress.se
Website	https://www.elpress.net

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	Manufactured 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	Anna Granås, Tobias Norlin, Elpress AB
EPD verification	Independent verification of this EPD and data, according to ISO 14025: o Internal verification þ External verification
EPD verifier	Imane Uald Lamkaddam 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	Elpress AB AlCu Terminals
Additional labels	AKK, AKP, AKS, SL
Product reference	See product description
Place(s) of raw material origin	Austria, Finland, Norway, Sweden
Place of production	Kramfors, Sweden
Place(s) of installation and use	Worldwide
Period for data	Calendar year 2024
Averaging in EPD	Multiple products
Variation in GWP-fossil for A1-A3 (%)	<1
GTIN (Global Trade Item Number)	-
NOBB (Norwegian Building Product Database)	-
A1-A3 Specific data (%)	66,1

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 kg
Declared unit mass	1 kg
Mass of packaging	0,058 kg
GWP-fossil, A1-A3 ($kgCO_2e$)	5,81
GWP-total, A1-A3 ($kgCO_2e$)	5,78
Secondary material, inputs (%)	10,9
Secondary material, outputs (%)	65
Total energy use, A1-A3 (kWh)	33,8
Net freshwater use, A1-A3 (m^3)	0,1

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Since 1959, Elpress is a manufacturer of crimping systems, delivering premium solutions for demanding industries worldwide. With a strong commitment to quality, sustainability and reliability, we develop, manufacture, and provide complete crimping systems that ensure secure and durable electrical connections. Elpress represents knowledge, experience, development and above all, safety. Our headquarters and production is in Sweden. Our market is worldwide.

PRODUCT DESCRIPTION

We produce the terminals with friction welding, which means that aluminium is joined with copper. This is done when aluminium is rotated towards copper under pressure and it is the method that provides the best bond between Al and Cu. We produce AlCu terminals of type AKK, AKS, AKP and SL but also largely customised terminals (also larger than 1200 mm²). Terminals of type AKK are used at the end of an Al conductor for connection to a Cu bus bar. Through connectors of type AKS are used for jointing of Al conductors to Cu conductors. Pin sleeves of type AKP are made for connection of Al conductors to apparatus with connections of copper. AlCu type SL are shearbolt connectors and intended for stranded and solid aluminium and copper cable, low voltage and medium voltage up to 36 kV. Transition through connectors of type AKS-10S are used for jointing stranded Al conductors to solid Cu conductors 10 mm².

Further information can be found at: https://www.elpress.net

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	100	EU
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	-
Biogenic carbon content in packaging, kg C	0,021

FUNCTIONAL UNIT AND SERVICE LIFE

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

SUBSTANCES, REACH - VERY HIGH CONCERN

Substances of very high concern	EC	CAS
Lead	231-100-4	7439-92-1

REACH materials only applicable for SL shearbolt connectors.

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

Modules not declared = ND. Modules not relevant = MNR

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 material for production is purchased as copper tubes and aluminium profiles and bars. The copper is made of recycled phosphorus de-oxidized copper with limited residual phosphorus content. The aluminium is made of approximately 40% recycled port-consumer and 60%primary aluminium. The steel and brass are insert components supplied as finished products with no additional processing required.

The manufacturing process of the raw copper material is casting, extruding, drawing/rolling. The manufacturing process of the raw aluminium material is preheating die and bullet, extrusion, stretching and ageing. Elpress production process for Bimetallic (Cu/Al) terminals is mechanical processing such as cutting, extrusion, friction welding, turning, pressing mainly and as final step packaging. Manufacturing process requires, besides raw material, electricity and energy for heating of production facilities and fuel for the internal transport from production to storage. The copper and aluminium waste produced at the plant is directed to recycling as the loss of material is considered as well as wastewater treatments.
Transportation of raw materials, ancillary materials and packaging materials is assessed as road transport.

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 application area of the product is for securely connect electrical cables to terminals or other electrical equipment. The process involves inserting the conductor into the lug and then crimping it with a special tool which means that the energy and material use during installation is likely to be low.
Module A5 therefore only covers the handling of packaging waste and cardboard for recycling. The aluminium-copper terminal is a complete product delivered ready for installation and no losses occur. Therefore, no losses are declared for the product. Products are mainly delivered to whole Europe and worldwide. The distance to the customer (weighted average) is estimated as 819,47 km by truck and 447,34 km by air.
Road transport is assumed to be carried out by EURO6 trucks 16-32 tons. Air transport is assumed to be carried out by freight, aircraft, unspecified. Transportation losses are assessed as insignificant (<1%).

PRODUCT USE AND MAINTENANCE (B1-B7)

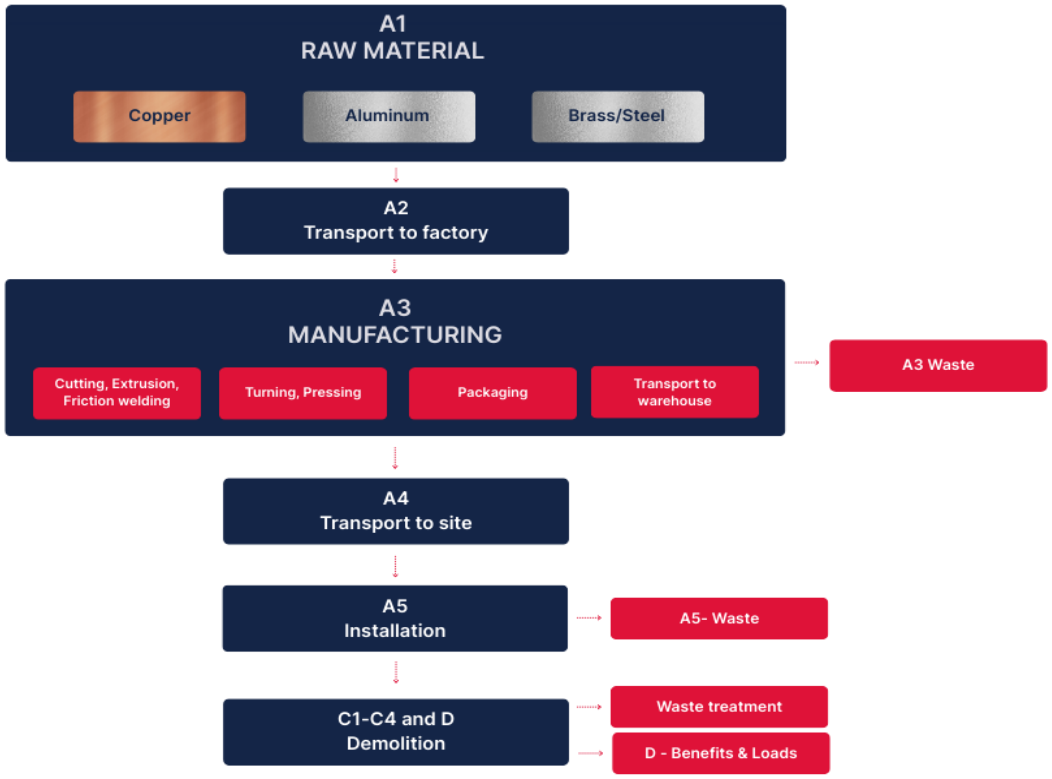
This EPD does not cover the use phase.
Air, soil, and water impacts during the use phase have not been studied.

PRODUCT END OF LIFE (C1-C4, D)

Energy consumption for demolition is assumed negligible.
An end-of-life recycling rate of 60% is assumed for copper and 70% is assumed for aluminium. The disassembled material collected for treatment is transported to the closest facility for sorting and recycling (C2-C3). The assumption for an average distance and transport method is estimated to be 250 km by EURO6 trucks 16-32 tons. The remaining 40% for copper and 30% for aluminium is assumed to be landfilled (A4) using transport distance 50 km with 16-32 tons EURO6 trucks. Benefits and loads in Module D are calculated for the

recycling activities described in Module C3, and for the exported energy from the incineration of packaging materials in Module A5.

MANUFACTURING PROCESS



LIFE-CYCLE ASSESSMENT

CUT-OFF CRITERIA

The LCA includes all industrial processes from raw material acquisition to production, distribution, installation and end-of-life stages. The study includes modules A1-A3, A4, A5, C1-C4 and D modules, and does not exclude any modules or processes which are stated mandatory in the EN 15804:2012+A2:2019 and the applied PCR. For easier modelling and because of lack of accuracy in available modelling resources many constituents under 1% of product mass are excluded. These include some ancillary materials which are all present in the manufacturing only in very small amounts and have no serious impact on the emissions of the product. The stage-specific total neglected input and output flows also do not exceed 5% of energy usage or mass. 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, are included in the calculation. 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

In this study allocation could not be avoided for packaging, ancillary material, energy consumption and waste production as the information was only measured on factory or production process level. The inputs were allocated to studied product based on annual production volume (mass). The values for 1 kilogram of product are calculated by considering the total product weight per annual production. In the factory, several kinds of metal products are produced; since the production processes of these products are similar, the annual production percentages are taken into consideration for allocation.

According to the ratio of the annual production of the declared product to the total annual production at the factory, the annual total raw materials, energy consumption, packaging materials and the generated waste per the declared product are allocated. Subsequently, the product output fixed to 1 kg and the corresponding amount of product is used in the calculations. Distribution distance was calculated as a sales volume-based weighted average according to the percentage ratios for each destination point. This LCA study is conducted in accordance with all methodological considerations, such as performance, system boundaries, data quality, allocation procedures, and decision rules to evaluate inputs and outputs.

Data type	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

The data used is for total produced kilograms in calendar year 2024 for all made products in kilograms. All calculations produced in 2024 are calculated from that number of kilograms.

PRODUCT & MANUFACTURING SITES GROUPING

Type of grouping	Multiple products
Grouping method	Based on a representative product
Variation in GWP-fossil for A1-A3, %	<1

EPD calculation is based on average. The products do not differ in terms of packaging materials, consumption of process materials and energy. There are small differences in the amounts of the metals and production waste. The products are all manufactured in the same

production plant in Kramfors, Sweden.
The products are grouped within a single EPD because their environmental profiles and manufacturing characteristics are effectively identical. The terminals are manufactured using very similar processes. As a result, the variation in global warming potential (GWP) between the terminals is less than 1%, indicating that there is no significant difference in climate impact. To ensure comparability, all inputs and results are normalized per kilogram of product.

LCA SOFTWARE AND BIBLIOGRAPHY

This EPD has been created using One Click LCA EPD Generator for EPD Hub V3 and EPD System Verification 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‘.

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	5,31E+00	3,20E-01	1,53E-01	5,78E+00	5,61E-01	8,91E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,42E-02	1,76E-02	5,05E-03	-4,06E+00
GWP – fossil	kg CO_2e	5,26E+00	3,20E-01	2,33E-01	5,81E+00	5,60E-01	2,09E-03	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,42E-02	1,77E-02	5,06E-03	-3,93E+00
GWP – biogenic	kg CO_2e	2,98E-04	6,29E-05	-8,31E-02	-8,27E-02	6,24E-05	8,70E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	6,86E-06	-5,28E-05	-1,14E-05	-6,90E-02
GWP – LULUC	kg CO_2e	5,51E-02	1,15E-04	3,15E-03	5,83E-02	8,70E-05	1,15E-06	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,23E-05	2,08E-05	6,03E-06	-6,01E-02
Ozone depletion pot.	kg $CFC\text{-}_{11}e$	3,19E-07	6,36E-09	6,27E-09	3,32E-07	9,38E-09	2,11E-11	ND	ND	ND	ND	ND	ND	ND	0,00E+00	6,80E-10	1,90E-10	1,06E-10	-5,52E-08
Acidification potential	mol H^+e	3,67E-02	6,70E-04	9,64E-04	3,83E-02	1,99E-03	8,42E-06	ND	ND	ND	ND	ND	ND	ND	0,00E+00	7,11E-05	1,89E-04	3,09E-05	-6,38E-02
EP-freshwater[2)]	kg Pe	1,22E+01	2,17E-05	5,86E-05	1,22E+01	1,66E-05	4,65E-07	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,30E-06	9,56E-06	6,98E-07	-3,68E-02
EP-marine	kg Ne	6,33E-03	1,61E-04	4,40E-04	6,93E-03	7,48E-04	1,36E-05	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,71E-05	4,20E-05	1,28E-05	-1,62E-02
EP-terrestrial	mol Ne	7,02E-02	1,74E-03	3,25E-03	7,52E-02	8,16E-03	2,66E-05	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,84E-04	4,73E-04	1,20E-04	-2,27E-01
POCP ("smog")[3)]	kg NMVOCe	2,16E-02	1,11E-03	9,74E-04	2,37E-02	2,91E-03	1,02E-05	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,18E-04	1,39E-04	3,93E-05	-4,86E-02
ADP-minerals & metals[4)]	kg Sbe	8,14E-04	1,08E-06	1,60E-06	8,16E-04	6,32E-07	1,35E-08	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,14E-07	1,04E-06	1,22E-08	-6,57E-04
ADP-fossil resources	MJ	6,81E+01	4,50E+00	2,29E+01	9,55E+01	7,56E+00	1,90E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	4,81E-01	2,08E-01	9,51E-02	-5,46E+01
Water use[5)]	m^3e depr.	9,85E-01	2,25E-02	2,61E-01	1,27E+00	1,87E-02	5,21E-04	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,39E-03	3,30E-03	1,65E-03	-5,34E+00

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	5,30E-08	2,35E-08	1,48E-08	9,12E-08	1,58E-08	1,13E-10	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,52E-09	2,64E-09	6,06E-10	-5,66E-07
Ionizing radiation[6)]	kBq U235e	0,00E+00	5,81E-03	1,52E+00	1,52E+00	4,50E-03	1,25E-04	ND	ND	ND	ND	ND	ND	ND	0,00E+00	6,20E-04	7,49E-04	1,59E-04	-7,26E-01
Ecotoxicity (freshwater)	CTUe	1,90E-11	6,05E-01	1,26E+00	1,86E+00	5,47E-01	6,79E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	6,39E-02	1,21E-01	2,64E+01	-4,29E+02
Human toxicity, cancer	CTUh	7,66E-08	5,46E-11	9,13E-11	7,68E-08	5,21E-11	1,51E-12	ND	ND	ND	ND	ND	ND	ND	0,00E+00	5,73E-12	1,41E-11	3,06E-12	-5,11E-09
Human tox. non-cancer	CTUh	7,66E-08	2,85E-09	3,20E-09	8,27E-08	5,48E-09	8,03E-11	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,04E-10	9,04E-10	6,11E-10	-8,14E-08
SQP[7)]	-	0,00E+00	2,71E+00	9,23E+00	1,19E+01	1,74E+00	1,41E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,90E-01	3,95E-01	1,59E-01	-4,51E+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	8,53E+00	7,91E-02	4,43E+00	1,30E+01	6,01E-02	-9,18E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	8,41E-03	3,24E-02	2,31E-03	-2,53E+01
Renew. PER as material	MJ	0,00E+00	0,00E+00	7,43E-01	7,43E-01	0,00E+00	-7,43E-01	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,70E-01
Total use of renew. PER	MJ	8,53E+00	7,91E-02	5,17E+00	1,38E+01	6,01E-02	-1,66E+00	ND	ND	ND	ND	ND	ND	ND	0,00E+00	8,41E-03	3,24E-02	2,31E-03	-2,46E+01
Non-re. PER as energy	MJ	8,14E+01	4,50E+00	2,25E+01	1,08E+02	7,56E+00	1,90E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	4,81E-01	2,08E-01	9,51E-02	-5,46E+01
Non-re. PER as material	MJ	0,00E+00	0,00E+00	2,43E-03	2,43E-03	0,00E+00	-2,43E-03	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,20E-03
Total use of non-re. PER	MJ	8,14E+01	4,50E+00	2,25E+01	1,08E+02	7,56E+00	1,66E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	4,81E-01	2,08E-01	9,51E-02	-5,46E+01
Secondary materials	kg	1,09E-01	2,11E-03	5,80E-02	1,69E-01	1,53E-03	3,14E-05	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,23E-04	2,41E-04	3,34E-05	6,20E-01
Renew. secondary fuels	MJ	2,30E-02	2,65E-05	5,40E-03	2,85E-02	1,59E-05	1,77E-07	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,82E-06	1,10E-05	5,15E-07	-1,09E-03
Non-ren. secondary fuels	MJ	1,44E-01	0,00E+00	0,00E+00	1,44E-01	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	9,62E-02	6,15E-04	8,34E-03	1,05E-01	5,56E-04	-1,07E-05	ND	ND	ND	ND	ND	ND	ND	0,00E+00	6,55E-05	9,11E-05	-5,40E-04	-1,30E-01

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	3,99E-01	6,62E-03	1,19E-02	4,18E-01	5,45E-03	3,21E-04	ND	ND	ND	ND	ND	ND	ND	0,00E+00	6,99E-04	1,63E-03	5,21E-04	-8,51E-01
Non-hazardous waste	kg	1,93E-01	1,39E-01	4,61E+00	4,94E+00	1,14E-01	3,64E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,47E-02	4,58E-02	8,21E-01	-5,39E+00
Radioactive waste	kg	4,92E-04	1,44E-06	3,32E-04	8,25E-04	1,11E-06	3,18E-08	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,54E-07	1,84E-07	3,88E-08	-1,91E-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	3,08E-05	0,00E+00	0,00E+00	3,08E-05	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	1,30E-02	0,00E+00	9,34E-02	1,06E-01	0,00E+00	4,80E-02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	6,50E-01	0,00E+00	0,00E+00
Materials for energy rec	kg	3,00E-03	0,00E+00	0,00E+00	3,00E-03	0,00E+00	4,60E-03	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy	MJ	3,73E-02	0,00E+00	0,00E+00	3,73E-02	0,00E+00	2,23E-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	9,30E-03	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy – Heat	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,30E-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	1,87E+00	3,18E-01	2,37E-01	2,43E+00	5,57E-01	7,91E-03	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,39E-02	1,76E-02	5,03E-03	-3,97E+00
Ozone depletion Pot.	kg CFC_{-11}e	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
Acidification	kg SO_2e	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
Eutrophication	kg PO_4^3e	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
POCP (“smog”)	kg C_2H_4e	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
ADP-elements	kg Sbe	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
ADP-fossil	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

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	5,31E+00	3,20E-01	2,36E-01	5,87E+00	5,60E-01	2,09E-03	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,42E-02	1,77E-02	5,06E-03	-3,99E+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. District heat, Sundsvall, Sweden, 2023, Sweden, One Click LCA, 0.0276 kgCO2e/kWh
2. Electricity, medium voltage, residual mix, Sweden, Ecoinvent, 0.0512 kgCO2e/kWh

Transport scenario documentation - A4 (Transport resources)

1. Market for transport, freight, lorry 16-32 metric ton, EURO6, 819,47 km
2. Market for transport, freight, aircraft, unspecified, 447,34 km

Transport scenario documentation A4

Scenario parameter	Value
Capacity utilization (including empty return) %	50
Bulk density of transported products	0,00E+00
Volume capacity utilization factor	1

Installation scenario documentation - A5 (Installation waste)

1. Treatment of waste paperboard, unsorted, sorting, Ecoinvent, Materials for recycling, 0.048 kg
2. Treatment of waste packaging paper, municipal incineration, Ecoinvent, Materials for energy recovery, 0.0046 kg
3. Exported Energy: Thermal, Ecoinvent, Materials for energy recovery, 0.013 MJ
4. Exported Energy: Electricity, Ecoinvent, Materials for energy recovery, 0.0093 MJ
5. Treatment of waste packaging paper, sanitary landfill, Ecoinvent, 0.0052 kg

Use stages scenario documentation - C1-C4 (Data source)

1. Treatment of waste aluminium, sanitary landfill, Ecoinvent, 0.15 kg
2. Sorting and pressing of iron scrap, Ecoinvent, Materials for recycling, 0.35 kg
3. Sorting and pressing of iron scrap, Ecoinvent, Materials for recycling, 0.3 kg
4. Treatment of scrap steel, inert material landfill, Ecoinvent, 0.2 kg

Scenario information	Value
Scenario assumptions e.g. transportation	Transported 250 km (recycling) and 50 km (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

Imane Uald Lamkaddam as an authorized verifier for EPD Hub Limited
18.12.2025