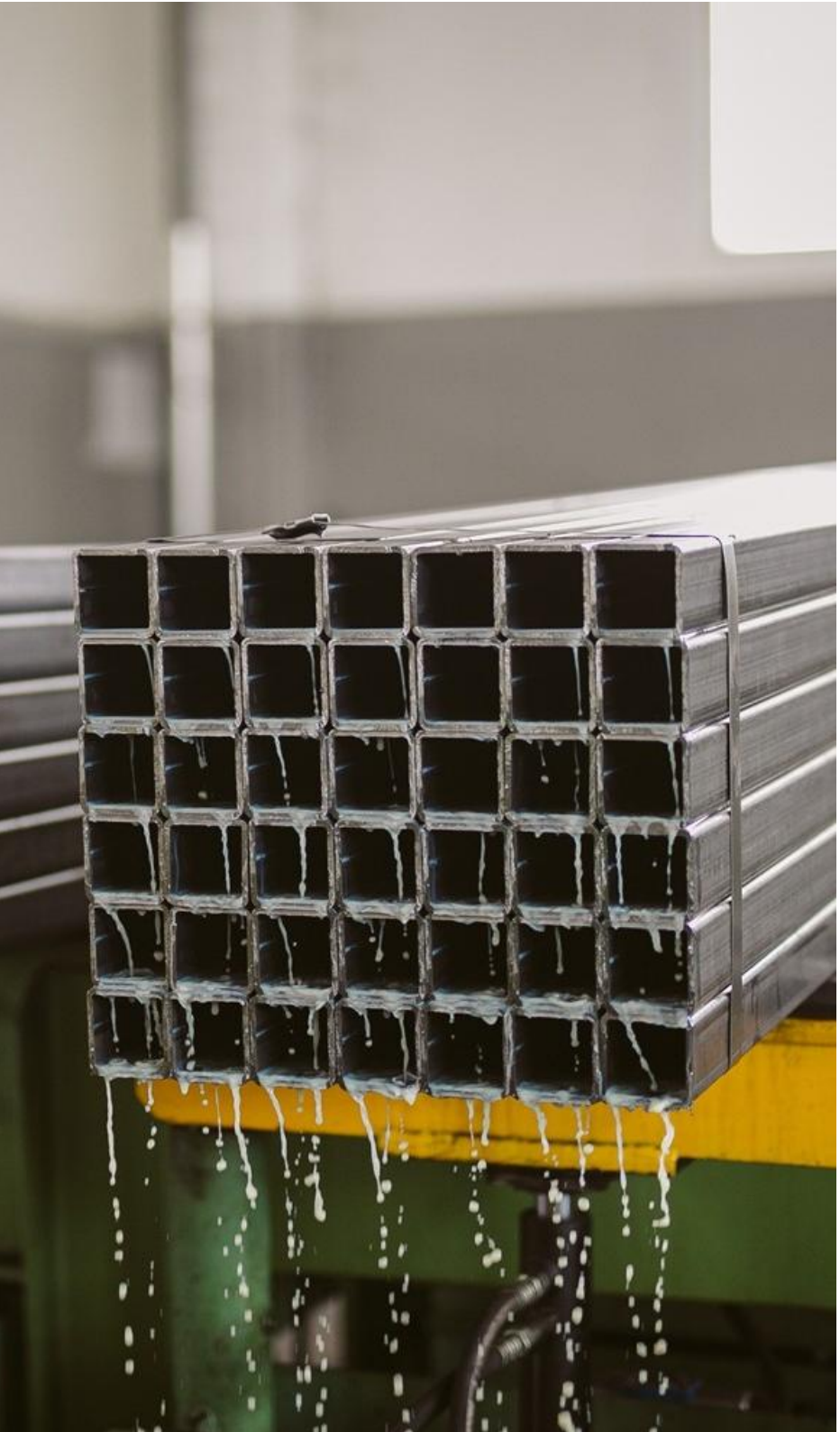


ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025

Seam pipes
Unipromet d.o.o

EPD HUB, HUB-4011
Published on 19.09.2025, last updated on 19.09.2030

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.

GENERAL INFORMATION

MANUFACTURER

Manufacturer	Unipromet
Address	Bulevar oslobodilaca Čačka 92A, 32103
Contact details	office@unipromet.co.frs
Website	https://unipromet.co.rs/

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 C1-C4, D
EPD author	LCA Institut
EPD verification	Independent verification of this EPD and data, according to ISO 14025: □ Internal verification ☑ External verification
EPD verifier	Nemanja Nedic, as an authorized verifier acting for EPD Hub Limited

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	Seam Pipes
Place(s) of raw material origin	Turkey & Europe
Place of production	Serbia
Place(s) of installation and use	EU
Period for data	2024
Averaging in EPD	No grouping
Variation in GWP-fossil for A1-A3	-
A1-A3 Specific data (%)	100

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 kg
Declared unit mass	1 kg
GWP-fossil, A1-A3 ($kgCO_2e$)	2,51
GWP-total, A1-A3 ($kgCO_2e$)	2,51
Secondary material, inputs (%)	62,6
Secondary material, outputs (%)	85
Total energy use, A1-A3 (kWh)	9,21
Net freshwater use, A1-A3 (m^3)	0,01

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Unipromet was founded in 1989 as a private family-owned company. Currently, it employs 650 people who represent the driving force behind the company, ensuring both quality and continued success. The company specializes in the production, delivery, and installation of road safety equipment, noise barrier panels, steel pipes, vertical signage, and structures for solar power plants. Over the years, Unipromet has grown into a regional leader with an annual turnover of 102 million euros. The entire metal processing process is consolidated across 60,000 m² of covered workspace and 220,000 m² of land, located in two factories, Kraljevo and Čačak.

The company manufactures and installs protective fences in compliance with European (EN 1317 standard) and other international standards such as ASTRA (Switzerland) and NF (France), which enable export to more than 30 countries. Membership in the "Gütegemeinschaft Stahlschutzplanken eV" good quality society and the "Studiengesellschft Stahlschutzplanken eV" development society, constant quality control according to the RAL RG-620 standard carried out in modern laboratories such as TUV and BASt from Germany and DTC from Switzerland allows access to all markets that have accepted the mentioned standards.3

PRODUCT DESCRIPTION

Seam pipes provide exceptional strength and stability, making them ideal for use in construction and construction. They are available in different shapes (square, rectangular, round).

They are used for the production of metal furniture, light steel structures, for cars and trucks, agricultural machines and tools, mechanical engineering and general consumption.

Further information can be found at:
https://unipromet.co.rs/

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	100	World
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	0.079

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 kg
Mass per declared unit	1 kg

SUBSTANCES, REACH - VERY HIGH CONCERN

The product does not contain any REACH SVHC substances in amounts greater than 0,1 % (1000 ppm).

PRODUCT LIFE-CYCLE

SYSTEM BOUNDARY

This EPD covers the life-cycle modules listed in the following table.

Product stage			Assembly stage		Use stage							End of life stage				Beyond the system boundaries		
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D		
X	X	X	MND	MND	MND	MND	MND	MND	MND	MND	MND	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 = MND. Modules not relevant = MNR

MANUFACTURING AND PACKAGING (A1-A3)

The environmental impact that is considered for the production phase includes the production of raw materials (galvanized steel), auxiliary substances (oil and water) and various packaging materials (plastic foil and wooden pallets), taking into account the quality criteria and the requirements of the standards that our product should satisfy. The study considers energy sources, taking into account the consumption and losses of electricity, as well as the amount of electricity obtained from renewable sources (solar panels). Consumption of fuel for work and transport machines.

Also water consumption as well as the amount and type of waste materials generated during the production process.

The raw material is hot-rolled steel, from which seam pipes are produced, and zinc, which is used as the basic material for surface protection of the product.

The product is obtained by plastic processing of steel and the process of induction welding of the material and protected by the process of hot galvanizing.

During the production process, different production machines, different production phases that include the consumption of resources, energy, water and transport devices during the process, as well as different regeneration and recuperation procedures are included in the work.

TRANSPORT AND INSTALLATION (A4-A5)

This EPD does not cover the use phase

PRODUCT USE AND MAINTENANCE (B1-B7)

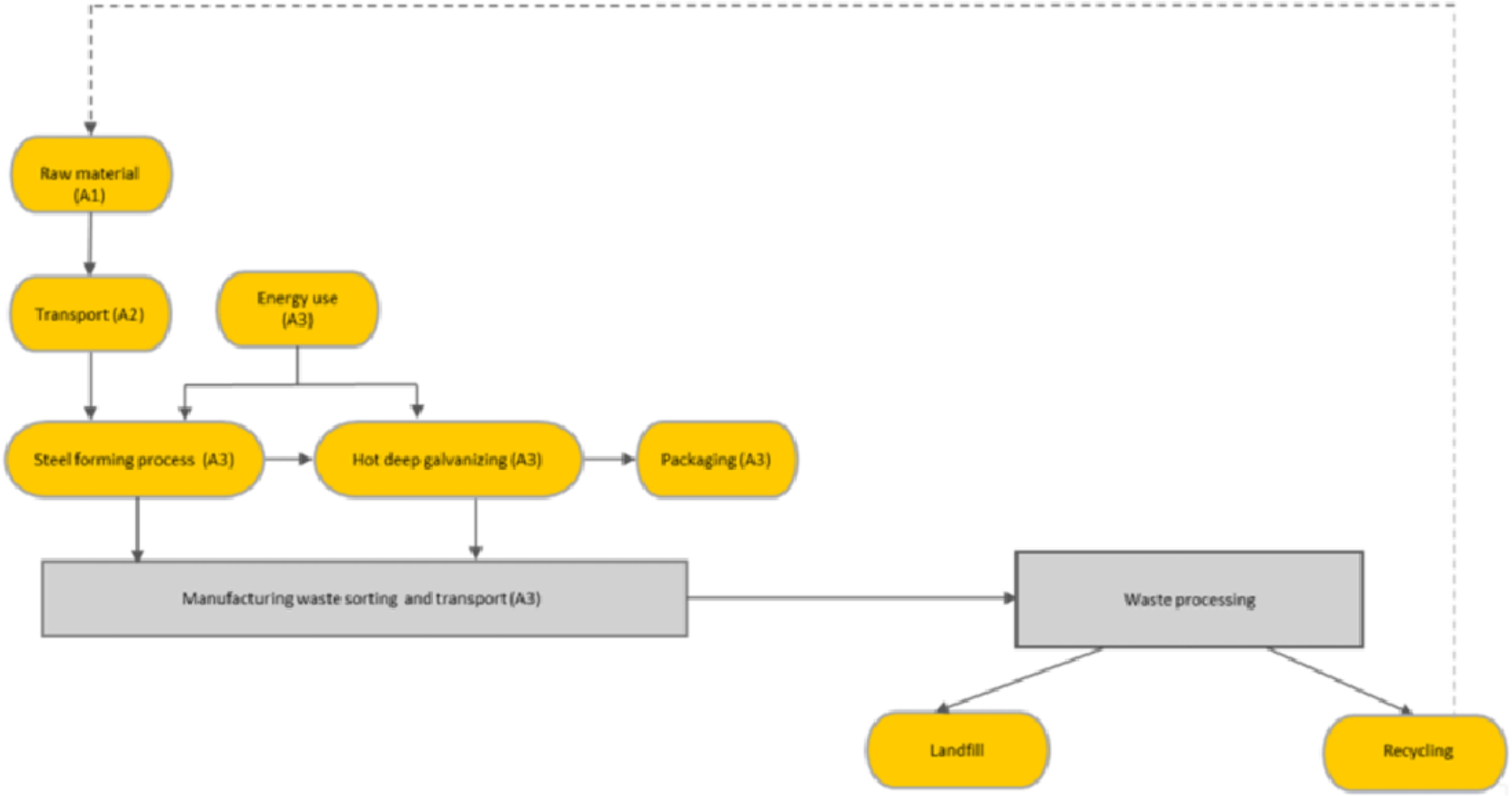
This EPD does not cover the use phase.

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

PRODUCT END OF LIFE (C1-C4, D)

At the end of the life cycle, it is assumed that 85% of the waste generated from the removal of the seam pipes enters product recycling process, thereby avoiding the need for raw material production. The removed pipes are transported to a waste recycling facility, while the remaining 15% is assumed to be disposed of in a landfill. The emissions caused by the removal of the pipes are also included in this phase.

LIFE CYCLE 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. Data quality has been assessed according to time, technical, and geographical representativeness in the LCA report.

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	Mass Allocation
Packaging material	Mass Allocation
Ancillary materials	Mass Allocation
Manufacturing energy and waste	Mass Allocation

PRODUCT & MANUFACTURING SITES GROUPING

Type of grouping	Multiple products
Grouping method	Based on a representative product
Variation in GWP-fossil A1-A3 %	0,9%

This EPD is product and factory specific.

LCA SOFTWARE AND BIBLIOGRAPHY

This EPD has been created using One Click LCA EPD Generator. The LCA and EPD have been prepared according to the reference standards and ISO 14040/14044. The EPD Generator uses Ecoinvent v3.10.1 and One Click LCA databases as sources of environmental data. Allocation used in Ecoinvent 3.10.1 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	2,36E+00	4,04E-02	1,13E-01	2,51E+00	MND	MND	MND	MND	MND	MND	MND	MND	MND	3,95E-03	4,30E-02	1,92E-02	9,37E-04	-6,67E-01
GWP – fossil	kg CO_2e	2,35E+00	4,04E-02	1,13E-01	2,51E+00	MND	MND	MND	MND	MND	MND	MND	MND	MND	3,93E-03	4,30E-02	1,92E-02	9,36E-04	-6,68E-01
GWP – biogenic	kg CO_2e	2,57E-03	8,51E-06	1,24E-05	2,59E-03	MND	MND	MND	MND	MND	MND	MND	MND	MND	8,81E-06	9,38E-06	-4,08E-05	-2,98E-07	9,00E-04
GWP – LULUC	kg CO_2e	1,82E-03	1,80E-05	2,42E-04	2,08E-03	MND	MND	MND	MND	MND	MND	MND	MND	MND	1,21E-05	1,90E-05	2,37E-05	5,35E-07	1,53E-04
Ozone depletion pot.	kg $CFC\text{-}_{11}e$	1,83E-08	5,83E-10	1,73E-09	2,06E-08	MND	MND	MND	MND	MND	MND	MND	MND	MND	7,24E-11	6,01E-10	2,58E-10	2,71E-11	-3,35E-09
Acidification potential	mol H^+e	1,60E-02	1,36E-04	1,01E-03	1,71E-02	MND	MND	MND	MND	MND	MND	MND	MND	MND	2,31E-05	1,43E-04	2,29E-04	6,64E-06	-2,36E-03
EP-freshwater[2)]	kg Pe	9,84E-04	3,14E-06	1,38E-04	1,13E-03	MND	MND	MND	MND	MND	MND	MND	MND	MND	3,66E-06	3,34E-06	1,24E-05	7,70E-08	-3,76E-04
EP-marine	kg Ne	2,45E-03	4,45E-05	1,47E-04	2,64E-03	MND	MND	MND	MND	MND	MND	MND	MND	MND	3,62E-06	4,64E-05	5,06E-05	2,53E-06	-3,82E-04
EP-terrestrial	mol Ne	4,99E-02	4,85E-04	1,35E-03	5,17E-02	MND	MND	MND	MND	MND	MND	MND	MND	MND	3,25E-05	5,05E-04	5,72E-04	2,76E-05	-6,98E-03
POCP ("smog")[3)]	kg NMVOCe	8,09E-03	1,96E-04	5,84E-04	8,87E-03	MND	MND	MND	MND	MND	MND	MND	MND	MND	1,07E-05	1,99E-04	1,69E-04	9,90E-06	-2,14E-03
ADP-minerals & metals[4)]	kg Sbe	2,91E-05	1,21E-07	4,55E-07	2,96E-05	MND	MND	MND	MND	MND	MND	MND	MND	MND	5,30E-08	1,41E-07	1,36E-06	1,49E-09	-2,45E-05
ADP-fossil resources	MJ	2,69E+01	5,78E-01	1,73E+00	2,92E+01	MND	MND	MND	MND	MND	MND	MND	MND	MND	9,14E-02	6,03E-01	2,58E-01	2,30E-02	-6,55E+00
Water use[5)]	m^3e depr.	1,42E+00	2,78E-03	4,63E-02	1,47E+00	MND	MND	MND	MND	MND	MND	MND	MND	MND	2,49E-03	2,80E-03	4,64E-03	6,63E-05	1,26E-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.

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	2,35E+00	7,92E-03	1,86E+00	4,22E+00	MND	MND	MND	MND	MND	MND	MND	MND	MND	2,51E-02	8,27E-03	4,81E-02	2,22E-04	-1,07E+00
Renew. PER as material	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	MND	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Total use of renew. PER	MJ	2,35E+00	7,92E-03	1,86E+00	4,22E+00	MND	MND	MND	MND	MND	MND	MND	MND	MND	2,51E-02	8,27E-03	4,81E-02	2,22E-04	-1,07E+00
Non-re. PER as energy	MJ	2,69E+01	5,78E-01	1,39E+00	2,89E+01	MND	MND	MND	MND	MND	MND	MND	MND	MND	9,14E-02	6,03E-01	2,58E-01	2,30E-02	-6,55E+00
Non-re. PER as material	MJ	0,00E+00	0,00E+00	4,60E-02	4,60E-02	MND	MND	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Total use of non-re. PER	MJ	2,69E+01	5,78E-01	1,44E+00	2,89E+01	MND	MND	MND	MND	MND	MND	MND	MND	MND	9,14E-02	6,03E-01	2,58E-01	2,30E-02	-6,55E+00
Secondary materials	kg	6,26E-01	2,51E-04	9,62E-03	6,36E-01	MND	MND	MND	MND	MND	MND	MND	MND	MND	1,51E-05	2,71E-04	3,15E-04	5,78E-06	5,36E-01
Renew. secondary fuels	MJ	1,98E-04	3,20E-06	8,60E-02	8,62E-02	MND	MND	MND	MND	MND	MND	MND	MND	MND	1,21E-07	3,45E-06	1,46E-05	1,20E-07	-9,41E-05
Non-ren. secondary fuels	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	MND	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of net fresh water	m^3	1,17E-02	8,19E-05	1,15E-03	1,30E-02	MND	MND	MND	MND	MND	MND	MND	MND	MND	7,90E-05	7,99E-05	1,37E-04	2,39E-05	-2,63E-02

8) PER = Primary energy resources.

END OF LIFE – WASTE

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste	kg	7,42E-01	9,90E-04	5,13E-03	7,48E-01	MND	MND	MND	MND	MND	MND	MND	MND	MND	2,31E-04	1,05E-03	1,69E-03	2,54E-05	-4,66E-01
Non-hazardous waste	kg	1,51E+01	1,84E-02	8,19E-01	1,59E+01	MND	MND	MND	MND	MND	MND	MND	MND	MND	1,79E-02	1,97E-02	6,09E-02	5,80E-04	1,12E+01
Radioactive waste	kg	3,52E-05	1,20E-07	1,91E-06	3,72E-05	MND	MND	MND	MND	MND	MND	MND	MND	MND	6,48E-07	1,20E-07	5,60E-07	3,52E-09	-4,29E-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	MND	MND	MND	MND	MND	MND	MND	MND	MND	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	0,00E+00	0,00E+00	MND	MND	MND	MND	MND	MND	MND	MND	MND	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	MND	MND	MND	MND	MND	MND	MND	MND	MND	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	MND	MND	MND	MND	MND	MND	MND	MND	MND	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	MND	MND	MND	MND	MND	MND	MND	MND	MND	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	MND	MND	MND	MND	MND	MND	MND	MND	MND	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	2,36E+00	4,04E-02	1,13E-01	2,51E+00	MND	MND	MND	MND	MND	MND	MND	MND	MND	3,94E-03	4,30E-02	1,92E-02	9,37E-04	-6,68E-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

End of life scenario documentation

Scenario parameter	Value
ELECTRICITY DATA SOURCE AND QUALITY	Electricity, medium voltage, residual mix (Reference product: electricity, medium voltage)
ELECTRICITY CO2E / KWH	1.11 kg CO2e / kWh
SOLAR ELECTRICITY SOURCE AND QUALITY	Electricity production, photovoltaic, 3kWp slanted-roof installation, single-Si, panel, mounted (Reference product: electricity, low voltage)
ELECTRICITY CO2E / KWH	0.085 kg CO2e / kWh

Scenario information	Value
COLLECTION PROCESS – KG COLLECTED SEPARATELY	1 kg of metal waste
COLLECTION PROCESS – KG COLLECTED WITH MIXED WASTE	-
RECOVERY PROCESS – KG FOR RE-USE	-
RECOVERY PROCESS – KG FOR RECYCLING	0.85 kg of steel
RECOVERY PROCESS – KG FOR ENERGY RECOVERY	-
DISPOSAL (TOTAL) – KG FOR FINAL DEPOSITION	0.15 kg of steel
SCENARIO ASSUMPTIONS E.G. TRANSPORTATION	250 km to recycling plant and 50 km to 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 15802+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.

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

Nemanja Nedic, as an authorized verifier acting for EPD Hub Limited
19.09.2025