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ŽELEZIARNE PODBREZOVÁ

Environmental Product Declaration

Specific EPD

In accordance with ISO 14025:2006 and EN 15804:2012+A2:2019/AC:2021

Seamless hot rolled steel tubes PE60 Železiarne Podbrezová a. s.



Programme
EPD Square | www.epdsquare.com

Programme operator
EPD Square, s.r.o.

EPD Registration number
SQ 00-044

Publication date
29.10.2025

Valid until
28.10.2030

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General information

Product
Seamless hot rolled steel tubes PE60

Program operator
EPD Square, s.r.o.
Lermontovova 3, 811 05 Bratislava, Slovakia
Email: info@epdsquare.com

Registration number
SQ 00-044

Publication date
29.10.2025

Valid until date
28.10.2030

Owner of the declaration
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Manufacturer
Železiarne Podbrezová a. s.
Kolkáreň 35, 976 81 Podbrezová, Slovakia
Email: adamcak@zelpo.sk

Place of production
Strojárenská street 24, 976 43 Valaská - Piesok, Slovakia

Product Category Rules (PCR)
The CEN standard EN 15804+A2 serves as the core PCR.
In addition, EPD Square PCR v1.0, 2024 is used.

Declared unit
1 tonne

Mass per DU
1000 kg

UN CPC code
4127

Geographical scope
Slovakia, Europe

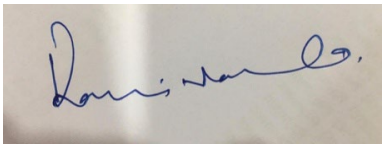
Year of study
Jan 2024 - Dec 2024

Comparability
EPDs of construction products may not be comparable if they do not comply with EN 15804 and if they are not compared in the context of the building.

EPD author
Silvia Vilčeková, Sarah Curpen, EPD Clarity, s.r.o.

Verification type
Independent verification of the declaration and data, according to ISO14025:2006
Internal: ☐
External: ☒

Verified by
Ravi Narula



The owner of the declaration shall be liable for the underlying information and evidence.
EPD Square shall not be liable with respect to manufacturer, life cycle assessment data and evidence.

System boundaries

Cradle to gate with options A4, A5, modules C1–C4 and module D. The LCA was carried out considering the product stage A1-A3, A4, A5, modules C1–C4, module D.

Modules declared and geographical scope

	Product stage			Construction process stage		Use stage							End of life stage				Resource recovery stage
	Raw material supply	Transport	Manufacturing	Transport	Construction installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling-potential
Module	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Modules declared	✓	✓	✓	✓	✓	MND	MND	MND	MND	MND	MND	MND	✓	✓	✓	✓	✓
Geography	SK	SK	SK	EU	EU	MND	MND	MND	MND	MND	MND	MND	EU	EU	EU	EU	EU

Modules not declared = MND

Description of Organization

Železiarne Podbrezová was founded in 1840 under the old Austrian Empire. Currently, it counts more than 3 000 employees. In particular, it has its own steel manufacturing plant, a modern tube mill and a large cold drawn tubes division. Its headquarter, production plants but also its branches are all over the European Union: specifically, in Slovakia, Czech Republic, Spain, Italy, Poland and Germany. Železiarne Podbrezová Group is an integral cycle manufacturer; transforming scrap into seamless steel tubes, precision seamless tubes and continuously cast billets. Lastly, the company succeeds in providing timely service and product innovation. The company established and implemented a quality management system for the successful management, improvement of performance, and competitiveness of the organization as a continuous improvement of the activities and processes in order to benefit all interested parties - customers, owners, employees, and suppliers.

Environmental policy of Železiarne Podbrezová a.s. adopted by the company's management in 1999 contributes to protection against air pollution, which significantly improved the quality of the environment. In this area as well as in energy efficiency, the company have invested heavily in reducing natural gas consumption and thus in reducing CO_2 emissions. In addition, the company is constantly increasing the share of renewable energy sources in its total energy consumption. The strategic role of the company is to minimize the impact of its activities on the environment. The environmental plan is evaluated and updated annually. The plan identifies strategies and environmental projects (energy, water, waste, chemical risks and noise) that aim to minimize the company's environmental footprint. In addition to the defined objectives, the plan sets out the necessary resources (including capital expenditures) to ensure progress and cost savings.

Product information

Product name
Seamless hot rolled steel tubes PE60

Product description
Seamless steel tubes for construction industry - buildings (hollow structural sections)

Outer diameter 10,2 - 139,7 mm; Wall thickness 0,5 - 16 mm; Length 5 - 14 m The construction tubes have irreplaceable position as part of: frames and construction units of industry machines and vehicles, pipelines for ventilation or air-conditioning, pipelines for fire protection, reinforcements filled with concrete to increase the carrying capacity in steel, construction like reinforcements, frames.

Seamless steel tubes for mechanical engineering and general use

Outer diameter 10,2 - 139,7 mm; Wall thickness 0,5 - 16 mm; Length 5 - 14 m Steel tubes have an irreplaceable role for their unique characteristics, i.e. wide range of sizes, variety of available steel grades and welding ability. In general, steel tubes are basic construction materials for stationary or moving machinery, vehicles Possible applications of steel tubes: pressure vessels, parts and the axis of the machine units, construction elements of machines, basis and supports of machines, design features for storages and containers, fixtures for tools, parts of agricultural machinery, conveyor belts, elements of ships.

Seamless steel tubes for power generation

Outer diameter 10,2 - 139,7 mm; Wall thickness 0,5-16 mm; Length 5 - 22 m

• Tubes with specified room temperature properties

• Tubes with specified elevated temperature properties - boiler tubes

• Alloy fine grain steel tubes for pressure equipment

• Tubes with specified low temperature properties

• Tubes for heat exchangers

• Tubes with internal riffling

Modern power devices that operate with high efficiency require the use of suitable steel tubes, to guarantee their long-term, safe and trouble-free operation. Steel tubes are important structural materials used in these facilities. For production and screening, these tubes are placed high demands. Seamless steel tubes for power station and similar energy production plants have to meet particular stringent requirements. Examples of use of our tubes are as follows: heat exchangers, steam generators and other pressure device.

Seamless steel tubes for transportation of flammable substances or water

Pipes suitable for welding and threading (transport of substances, water), 10,2-114,3 mm; Line pipe, Outer diameter (OD) 21,3-114,3 mm; Casing and tubing, Outer diameter (OD) 26,7- 114,3 mm; From exploration and production to transport and processing of oil and gas, Železiarne Podbrezová provides Line pipe (API 5L) and casing and tubing (API 5CT) for OCTG equipment; flowlines, onshore line pipes and carbon steel and steel alloy seamless tubes for oil refineries.

Product application

Seamless hot rolled steel tubes, fields of application
• power generation
• mechanical engineering
• transport of flammable media
• construction industry

Technical Specifications

Seamless steel tubes for construction industry - buildings (hollow structural sections)

Tubes used in the construction business are delivered according to EN 10210-2 and steel grades according to: EN 10210-1: S235JRH, S275JOH, S275NH, S275NLH, S275J2H, S355JOH, S355J2H, S355NLH, S355NH, S420NLH, S460NLH, S460NH.

Seamless steel tubes for mechanical engineering and general use

Tubes for mechanical engineering, parts of machines and general use are delivered according to EN 10297-1 and steel grades according to: EN 10297-1 and EN 10083-2: E235, E275, E315, E355, E420, E460, E470, E275K2, E355K2, E460K2, E420J2, 20MnV6, 16MnCr5, 20NiCrMo2-2, 25CrMo4, 28Mn6, 30CrMo4, 34CrMo4, 38Mn6, 42CrMo4, C10E, C15E, C15R, C22E, C35E, C45E, C60E.

Seamless steel tubes for power generation

Tubes for pressure equipment, used at higher temperature are delivered according to EN 10216, steel grades according to 10216-2:
• P195GH, P235GH, P265GH, 16Mo3, 14MoV6- 3, 7CrWVMoNb9-6, 7CrMoVTiB10-10, 10CrMo5-5, 13CrMo4-5, 10CrMo9-10, 25CrMo4, X11CrMo5+I, X11CrMo5+NT1, X11CrMo5+NT2, X10CrMoVNb9-1
• steel grades according to EN 10216-1: P195TR1, P235TR1, P265TR1, P195TR2, P235TR2, P265TR2, P355N, P460N, P355NH, P460NH, P275NL1, P355NL1, P460NL1, P275NL2, P355NL2, P460NL2
• steel grades according to EN 10216-4: P215NL, P265NL

Seamless steel tubes for transportation of flammable substances or water

Tubes are delivered according to API 5L, EN ISO 3183 and steel grades according to EN ISO 3183, PSL1:
• L210, L245, L290, L320, L360, L390, L415, L450,
• steel grades according to EN ISO 3183, PSL2: L245NE or BNE, L290NE or X42NE, L360NE or X52NE, L415NE or X60NE
• steel grades according to API 5L, PSL1: A, B, X42, X46, X52, X56, X60, X65
• steel grades according to API 5CT: H40, J55, K55 and N80.

Geographical scope

Slovakia, Europe

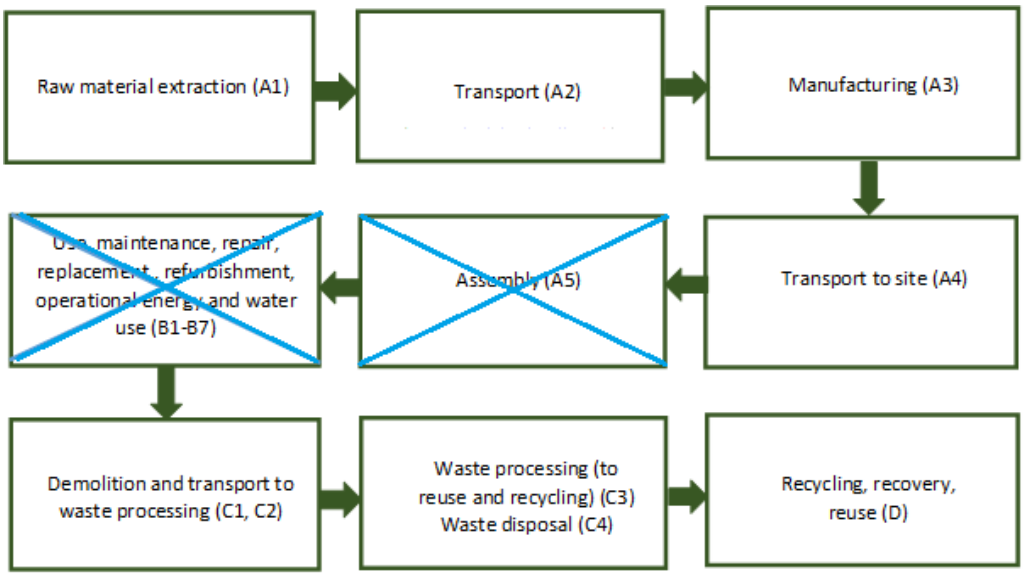
Product contents information

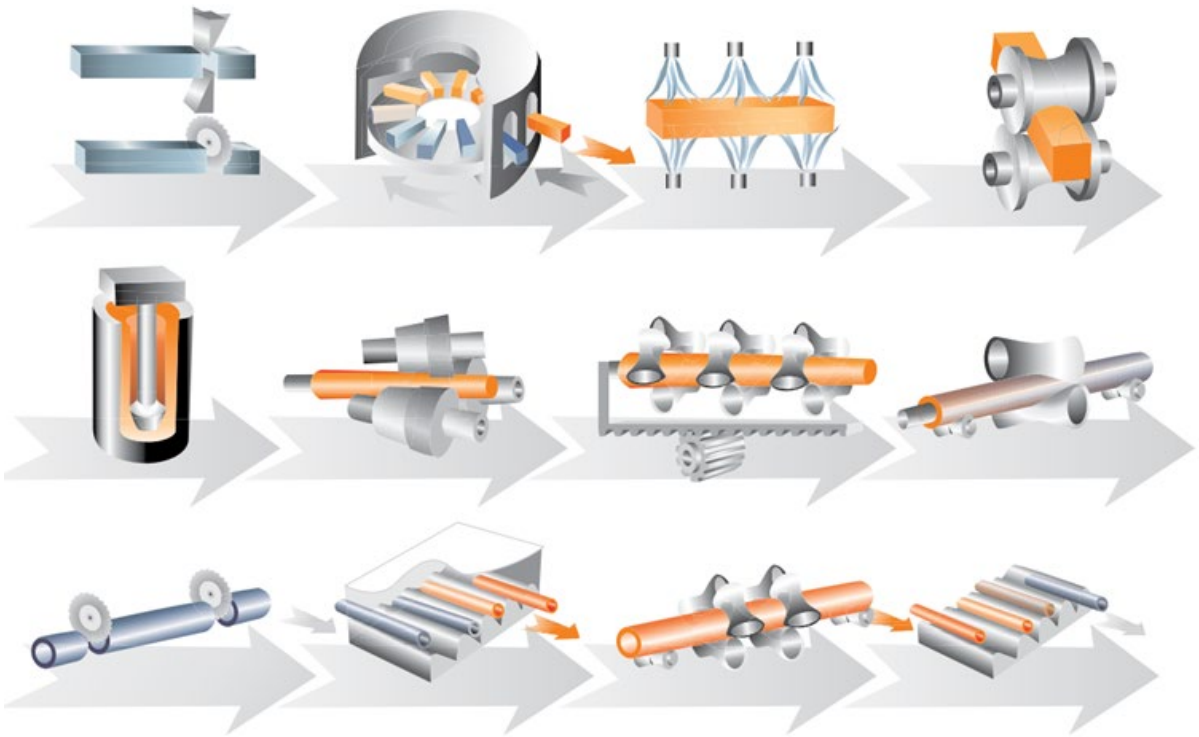
Product components	Weight, kg	Post-consumer material, weight-%	Renewable material, weight-%
Steel scrap	1353	100	0
Pig Iron	28	0	0
Lime	48	0	0
Dolomite	15	0	0
Electrode	3	0	0
Polyethylene	3	0	0
Anthracite	3	0	0
TOTAL	1453	93	0

Packaging materials	Weight, kg	Weight-% (versus the product)
Plastic Stopper	0.0655	0.0263
Paper Packaging	0.0263	0.0237
Sulfate wrapping paper	0.0263	0
PE foil	0.0916	0
Tape	0.087	0
Wood Pallet	3.23	0.323
Wood Crate	0.0022	0.00022
Wire	0.851	0
Anti Slip rubber	0.336	0
TOTAL	1.49	0.373

Manufacturing process

The product is manufactured at the facility in Podbrezová, Slovakia. The main raw material for steel production is usually pig iron. The production of pig iron takes place in a blast furnace by reducing the iron oxides contained in the iron ore. Ore, coke and limestone are fed to the blast furnace and reduced and melted at high temperatures. Pig iron and scraps, blast furnace slag are periodically removed from the blast furnace and either cast in rolls or transported as liquid metal directly to rolling mill. In the rolling mill, there is rolling of metals, production of metal semi-finished products and products such as sheets, bars and thick wires, beams, rails, seamless pipes and others.





Life cycle assessment

Cut-off criteria

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. 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. Additives are not included in this study as their mass is less than 5% of total inputs. 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.
In accordance with EN 15804+A2 cut-off criteria, additives used in the manufacturing process, which account for 1% of the total mass input, have been excluded from the Life Cycle Assessment (LCA). The justification for this exclusion is as follows:

Allocation, estimations, and assumptions

Allocation is based on annual production rate and made with high accuracy and precision. The values for 1 m^3 of the products which are used within this study are calculated by considering the total product weight per annual production. In the production plant, several kinds of 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 energy consumption, packaging materials and the generated waste per the declared product are allocated. Subsequently, the produced products output fixed to 1 ton and the corresponding amount of product is used in the calculations.

Database(s) and LCA software

This EPD has been created using One Click LCA Pre-Verified EPD Generator. Ecoinvent v3.8 and One Click LCA databases were used as sources of environmental data.

LCA Scenarios and additional technical information

Scenarios included in the LCA are based on realistic scenarios which are currently in use and are representative for one of the most likely scenario alternatives.

Life cycle stages A2 & C2: Vehicle capacity utilization volume factor is assumed to be 1 which means full load. It may vary but as the role of transportation emission in total results is small and so the variety in load assumed to be negligible. Empty returns are not taken into account as it is assumed that return trip is used by transportation companies to serve the needs of other clients.

Module C1: The impacts of the disassembly are accounted for.

Module C2: Transportation distance to the closest disposal area is estimated as 50 km and the transportation method is assumed as lorry which is the most common.

Module C3: 85% of the product is recycled and sorted.

Module C4: 15% of the product ends at a landfill without prior treatment.

D: The benefits of the recycled product are considered.

Manufacturing energy scenario

Electricity data source and quality	Electricity, high voltage, residual mix, AIB
Electricity kg CO_2e / kWh	0.25
Heating data source and quality	Heat production, natural gas, at boiler atm. low-NOx condensing non-modulating <100kW (Reference product: heat, central or small-scale, natural gas)
Heat kg CO_2e / kWh	0.0764
Heat production, natural gas	Heat production, natural gas, at industrial furnace low-NOx >100kW (Reference product: heat, district or industrial, natural gas)
Heat kg CO_2e / kWh	0.0827
Electricity Data source and quality - Solar	Electricity production, photovoltaic, 3kWp slanted-roof installation, multi-Si, panel, mounted (Reference product: electricity, low voltage)
Steam kg CO_2e / kWh	0.0819
Hydro, electricity production	Electricity production, hydro, run-of-river, ecoinvent 3.10.1
Hydro kg CO_2e / kWh	0.0044

End of Life (C1, C2,C3, C4)

	Value	Unit
Collected separately	0	kg
Collected as mixed construction waste	0	kg
Reuse	0	kg
Recycling	850	kg
Energy recovery	0	kg
To landfill	150	kg

LCA results

Results are presented per 1 tonne (Declared Unit) of the product.

Core environmental impact indicators – EN 15804+A2, PEF 3.1

Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
GWP-total	kg CO2 eq.	7.0E+02	7.1E+01	6.6E+00	3.6E+00	4.8E+00	1.9E+01	9.4E-01	-9.9E+01
GWP-fossil	kg CO2 eq.	7.1E+02	7.1E+01	7.0E-01	3.6E+00	4.8E+00	1.9E+01	9.4E-01	-9.9E+01
GWP-biogenic	kg CO2 eq.	-5.9E+00	-1.7E-18	5.9E+00	3.7E-04	1.0E-03	-4.1E-02	-3.0E-04	9.3E-02
GWP-LULUC	kg CO2 eq.	3.3E-01	2.8E-02	2.1E-04	3.7E-04	2.1E-03	2.4E-02	5.4E-04	-1.2E-02
ODP	kg CFC11 eq.	2.3E-05	1.5E-06	2.0E-09	5.5E-08	6.7E-08	2.6E-07	2.7E-08	-3.4E-07
AP	mol H^+ eq.	2.4E+00	1.7E-01	8.3E-04	3.3E-02	1.6E-02	2.3E-01	6.6E-03	-3.9E-01
EP-freshwater	kg P eq.	1.9E-01	4.9E-03	4.2E-05	1.0E-04	3.7E-04	1.2E-02	7.7E-05	-4.3E-02
EP-marine	kg N eq.	4.7E-01	4.4E-02	8.6E-04	1.5E-02	5.2E-03	5.1E-02	2.5E-03	-8.7E-02
EP-terrestrial	mol N eq.	4.6E+00	4.7E-01	3.3E-03	1.7E-01	5.6E-02	5.7E-01	2.8E-02	-9.6E-01
POCP	kg NMVOC eq.	2.0E+00	2.9E-01	1.1E-03	4.9E-02	2.2E-02	1.7E-01	9.9E-03	-3.3E-01
ADP-M&M	kg Sb eq.	6.3E-04	2.0E-04	7.0E-07	1.3E-06	1.6E-05	1.4E-03	1.5E-06	-9.6E-04
ADP-fossil	MJ	1.8E+04	1.1E+03	1.9E+00	4.7E+01	6.7E+01	2.6E+02	2.3E+01	-9.1E+02
WDP	m^3	1.6E+02	5.4E+00	6.6E-02	1.2E-01	3.1E-01	4.6E+00	6.6E-02	-1.7E+01

GWP-total: Global Warming Potential; GWP-fossil: Global Warming Potential fossil fuels; GWP-biogenic: Global Warming Potential biogenic; GWP-LULUC: Global Warming Potential land use and land use change; ODP: Depletion potential of the stratospheric ozone layer; AP: Acidification potential, Accumulated Exceedance; EP-freshwater: Eutrophication potential, fraction of nutrients reaching freshwater end compartment; See "additional requirements" for indicator given as PO4 eq. EP-marine: Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-terrestrial: Eutrophication potential, Accumulated Exceedance; POCP: Formation potential of tropospheric ozone; ADP-M&M: Abiotic depletion potential for non-fossil resources (minerals and metals); ADP-fossil: Abiotic depletion potential for fossil resources; WDP: Water deprivation potential, deprivation weighted water consumption

Additional (optional) environmental impact indicators – EN 15804+A2, PEF 3.1

Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
PM	Disease incidence	2.5E-05	6.9E-06	1.4E-08	9.3E-07	3.8E-07	3.1E-06	1.5E-07	-6.6E-06
IRP	kBq U235 eq.	4.2E+02	1.3E+00	6.9E-03	2.1E-02	5.4E-02	2.2E+00	1.4E-02	3.7E+00
ETP-fw	CTUe	1.3E+03	1.2E+02	1.1E+00	2.6E+00	1.1E+01	1.5E+02	1.9E+00	-2.4E+02
HTP-c	CTUh	2.4E-07	1.2E-08	1.1E-10	3.7E-10	8.1E-10	1.7E-08	1.7E-10	-1.6E-08
HTP-nc	CTUh	3.6E-06	6.9E-07	4.8E-09	5.9E-09	4.2E-08	1.2E-06	4.0E-09	-7.8E-07
SQP	Dimensionless	2.9E+03	1.1E+03	2.5E+00	3.3E+00	4.0E+01	5.0E+02	4.5E+01	-2.9E+02

PM: Particulate matter emissions; IRP: Ionising radiation, human health; ETP-fw: Ecotoxicity (freshwater); ETP-c: Human toxicity, cancer effects; HTP-nc: Human toxicity, non-cancer effects; SQP: Land use related impacts / soil quality

Use of Natural Resources

Parameter	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
RPEE	MJ	1.0E+03	1.7E+01	-5.3E+01	3.0E-01	9.2E-01	4.8E+01	2.2E-01	-5.2E+01
RPEM	MJ	4.7E+01	0.0E+00	-4.7E+01	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
TPE	MJ	1.1E+03	1.7E+01	-1.0E+02	3.0E-01	9.2E-01	4.8E+01	2.2E-01	-5.2E+01
NRPE	MJ	1.7E+04	1.1E+03	-1.9E+01	4.7E+01	6.7E+01	2.6E+02	2.3E+01	-9.1E+02
NRPM	MJ	3.8E+02	0.0E+00	-1.6E+01	0.0E+00	0.0E+00	-3.1E+02	-5.4E+01	1.1E+00
TRPE	MJ	1.8E+04	1.1E+03	-3.5E+01	4.7E+01	6.7E+01	-4.9E+01	-3.1E+01	-9.1E+02
SM	kg	4.9E+00	4.6E-01	2.0E-03	2.0E-02	3.0E-02	3.2E-01	5.8E-03	5.5E+01
RSF	MJ	1.7E-02	5.8E-03	3.4E-05	5.1E-05	3.8E-04	1.5E-02	1.2E-04	-8.2E-03
NRSF	MJ	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
W	m^3	2.1E+01	1.6E-01	-5.0E-03	3.1E-03	8.9E-03	1.4E-01	2.4E-02	-2.2E-01

RPEE: Renewable primary energy resources used as energy carrier; RPEM: Renewable primary energy resources used as raw materials; TPE: Total use of renewable primary energy resources; NRPE: Non-renewable primary energy resources used as energy carrier; NRPM: Non-renewable primary energy resources used as materials; TRPE: Total use of non-renewable primary energy resources; SM: Use of secondary materials; RSF: Use of renewable secondary fuels; NRSF: Use of non-renewable secondary fuels; W: Use of net fresh water

End of life – Waste

Parameter	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
HW	KG	4.0E+01	1.5E+00	1.9E-02	5.3E-02	1.2E-01	1.7E+00	2.5E-02	-3.3E+01
NHW	KG	1.2E+03	3.1E+01	9.2E+00	7.2E-01	2.2E+00	6.1E+01	5.8E-01	-2.6E+02
RW	KG	1.0E-01	3.2E-04	1.7E-06	5.1E-06	1.3E-05	5.6E-04	3.5E-06	9.6E-04

HW: Hazardous waste disposed; NHW: Non-hazardous waste disposed; RW: Radioactive waste disposed

End of life – Output flows

Parameter	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
CR	kg	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
MR	kg	0.0E+00	0.0E+00	2.0E+00	0.0E+00	0.0E+00	8.5E+02	0.0E+00	0.0E+00
MER	kg	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
EEE	MJ	0.0E+00	0.0E+00	8.5E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
ETE	MJ	0.0E+00	0.0E+00	8.5E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

CR: Components for reuse; MR: Materials for recycling; MER: Materials for energy recovery; EEE: Exported electric energy; ETE: Exported thermal energy

Information describing biogenic carbon content at factory gate

Biogenic carbon content	Value	Unit
Biogenic carbon content in product	0	kg C
Biogenic carbon content in the accompanying packaging	3.73	kg C

Specific data (GWP-GHG) and data variation for A1-A3

Specific data and data variation	Value-%
Specific data	90,55
Variation - product	Not relevant
Variation - site	Not relevant

Hazardous substances

☒ The product does not contain any REACH SVHC substances in amounts greater than 0.1 %.

Contact information

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Bibliography

ISO 14020:2000
Environmental labels and declarations – General principles

ISO 14025:2010
Environmental labels and declarations - Type III environmental declarations - Principles and procedures

ISO 14044:2006
Environmental management - Life cycle assessment - Requirements and guidelines

EN 15804:2012+A2:2019
Sustainability of construction works - Environmental product declaration - Core rules for the product category of construction products

EPD Square PCR v.1.0, 2024

EPD Square, General Programme Instructions v.1, 2024

Ecoinvent database v3.10.1 (2024) and One Click LCA database

Annex

Environmental impacts – EN 15804+A1, CML/ISO 21930

Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
GWP	kg CO2 eq.	7.1E+02	7.0E+01	7.9E-01	3.6E+00	4.8E+00	1.9E+01	9.3E-01	-9.9E+01
ODP	kg CFC11 eq.	1.9E-05	1.2E-06	1.6E-09	4.4E-08	5.4E-08	2.1E-07	2.2E-08	-3.7E-07
AP	kg SO_2 eq.	2.0E+00	1.3E-01	6.2E-04	2.3E-02	1.2E-02	1.8E-01	4.9E-03	-3.2E-01
EP	kg PO_4 eq.	2.7E-01	3.3E-02	2.4E-04	5.3E-03	3.0E-03	2.7E-02	1.6E-03	-5.9E-02
POCP	kg C_2H_4 eq.	1.6E-01	1.4E-02	7.3E-05	1.7E-03	1.1E-03	1.1E-02	4.7E-04	-5.0E-02
ADP-M&M	kg Sb eq.	5.8E-04	2.0E-04	6.8E-07	1.3E-06	1.5E-05	1.4E-03	1.5E-06	-9.6E-04
ADP-fossil	MJ	1.0E+04	1.0E+03	1.7E+00	4.7E+01	6.6E+01	2.2E+02	2.3E+01	-9.7E+02

Environmental impacts – GWP-GHG

Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
GWP - GHG	kg CO2e	7.1E+02	7.1E+01	7.0E-01	3.6E+00	4.8E+00	1.9E+01	9.4E-01	-9.9E+01

GWP- GHG: Global Warming Potential, greenhouse gases