ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025

Black steel

RS Stålteknik A/S

EPD HUB, HUB-6138

Published on 28.04.2026, last updated on 28.04.2026, valid until 27.04.2031

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	RS Ståltеknik A/S
Address	Sjællandsvej 20, 9500 Hobro, Denmark
Contact details	rs@rsstaalteknik.dk
Website	www.rsstaalteknik.dk

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 EN 17662 Execution of steel structures and aluminium structures
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	Stefan Emil Danielsson, SDG Consulting
EPD verification	Independent verification of this EPD and data, according to ISO 14025: ☐ Internal verification ☑ External verification
EPD verifier	Afzal khan Peerukhan 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	Black steel
Additional labels	-
Product reference	-
Place(s) of raw material origin	Germany, Italy, Denmark, Poland, Sweden, Finland
Place of production	Hobro, Denmark
Place(s) of installation and use	Denmark
Period for data	2025 calendar year
Averaging in EPD	No grouping
Variation in GWP-fossil for A1-A3 (%)	-
GTIN (Global Trade Item Number)	-
NOBB (Norwegian Building Product Database)	-
A1-A3 Specific data (%)	78,7

ENVIRONMENTAL DATA SUMMARY

Declared unit	1000 kg
Declared unit mass	1000 kg
Mass of packaging	10,75 kg
GWP-fossil, A1-A3 ($kgCO_2e$)	1920
GWP-total, A1-A3 ($kgCO_2e$)	2050
Secondary material, inputs (%)	67,2
Secondary material, outputs (%)	0
Total energy use, A1-A3 (kWh)	7740
Net freshwater use, A1-A3 (m^3)	75,5

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

RS Ståltekniik is a Danish manufacturer of steel components and steel structures for the construction, concrete and industrial sectors. The company works with the development, design and manufacture of both standardized and customized steel solutions.

The products are often developed in close collaboration with customers and consultants to ensure that they meet the technical and functional requirements of the specific project. The solutions are used, among other things, in connection with concrete production, construction projects and industrial production plants.

The company emphasizes high quality in the products, precision in manufacturing and delivery reliability in relation to the customers' projects.

PRODUCT DESCRIPTION

The products include components and structures made of structural steel (black steel) and stainless steel produced and supplied by RS Ståltekniik. The products are primarily used in the concrete industry, the construction sector and in various industrial installations.

The products consist of steel components and steel structures that are manufactured as either standardized solutions or customer-specific products. They are typically included as structural or functional elements in construction, production plants and equipment for concrete production. The steel products are characterized by high mechanical strength, long service life and the possibility of adapting to project-specific requirements.

The products are mainly manufactured from structural steel and stainless steel in various material qualities depending on the area of application and environmental impacts. The materials are processed through industrial metalworking activities and assembled into finished components and structures that are supplied for use in construction and industrial projects.

Surface treatment is used to increase the products' resistance to corrosion and to ensure a long technical service life. For the products supplied, the surface treatment is distributed approximately as follows:

- approx. 70% hot-dip galvanized surfaces
- approx. 30% painted or coated surfaces

The choice of surface treatment depends on the specific application environment and project-specific requirements for durability and corrosion protection.

The products can be used in a wide range of structures and technical installations, including:

- steel structures in construction
- components for concrete production and precast concrete elements
- custom-made steel components for industrial plants
- structural elements for assembly and installation solutions

Steel is a material with high strength and a long technical life. The material can also be recycled without significant loss of properties, which means that steel products are generally included in established recycling streams at the end of their service life.

This EPD declares black steel as the main product, while GWP-total results for galvanized steel, painted steel and stainless steel can be found in Annex.

Further information can be found at:
www.rsstaalteknik.dk

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	100	Europe
Minerals	0	-
Fossil materials	0	-
Bio-based materials	0	-

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	5,2

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1000 kg
Mass per declared unit	1000 kg
Functional unit	-
Reference service life	120

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 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.

Raw materials are sourced from local steel suppliers and transported to the manufacturing site using trucks with a load capacity exceeding 32 tonnes and compliant with EURO 6 emission standards. Upon arrival at RS Ståltekniк's production facilities, the materials undergo preparation processes.

Electricity consumption in the manufacturing process is modelled applying the Danish residual electricity mix with an emission factor of 0.50 kg CO_2e/kWh.

Following preparation and cleaning, the steel materials are processed in accordance with product design specifications. Cutting operations are performed using sawing, plasma cutting, drilling, and punching techniques. The cutting stage comprises two primary sawing lines, two primary plasma cutting lines, and additional lines equipped with punching and drilling machinery.

Subsequently, the processed components are assembled through welding, using relevant welding gases and wires. After welding, uncoated (black) steel products may be delivered directly to the customer. The main declared product results presented in this EPD refer to this product category.

In addition, stainless steel products are manufactured by welding purchased stainless steel components into final configurations, after which they are delivered directly to customers. Global Warming Potential (GWP) results for painted, galvanized, and stainless steel products are reported in the Annex.

According to the steel EPDs used in A1, the recycled content (weighted average) of the purchased black steel is 60%.

Off-cut steel scrap generated during manufacturing represents approximately 12,6% of the total steel purchased, meaning 1126 kg steel is purchased to produce 1000 kg steel, as 126 kg scrap steel is discarded as waste. The scrap is collected by a waste management company and is assumed to undergo sorting at a recycling facility prior to being sent to a steel production facility for remelting. Wooden pallets used as support during transport are assumed to be used once and incinerated at end-of-life in A5.

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.

Transportation of final products delivery to construction site (A4) is not covered in this EPD.

The installation module (A5) is not declared, except for the balancing of biogenic carbon leaving the system as the used wooden pallets are incinerated.

PRODUCT USE AND MAINTENANCE (B1-B7)

There are no activities in the use stage and therefore no associated environmental impacts.
Air, soil, and water impacts during the use phase have not been studied.

PRODUCT END OF LIFE (C1-C4, D)

At end-of-life, the steel components are assumed to be deconstructed and directed to recycling processes. All steel is assumed to be transported to a recycling facility and subsequently to a steel production plant for remelting.

C1 – Deconstruction:
Deconstruction of the steel structure is modelled using diesel-powered demolition machinery operated on-site, assuming the use of 102 MJ diesel.

C2 – Transport:
Transport of dismantled steel components to a waste processing facility (recycling station) is included. The transport takes place with a 16-32 ton EURO 6 truck.

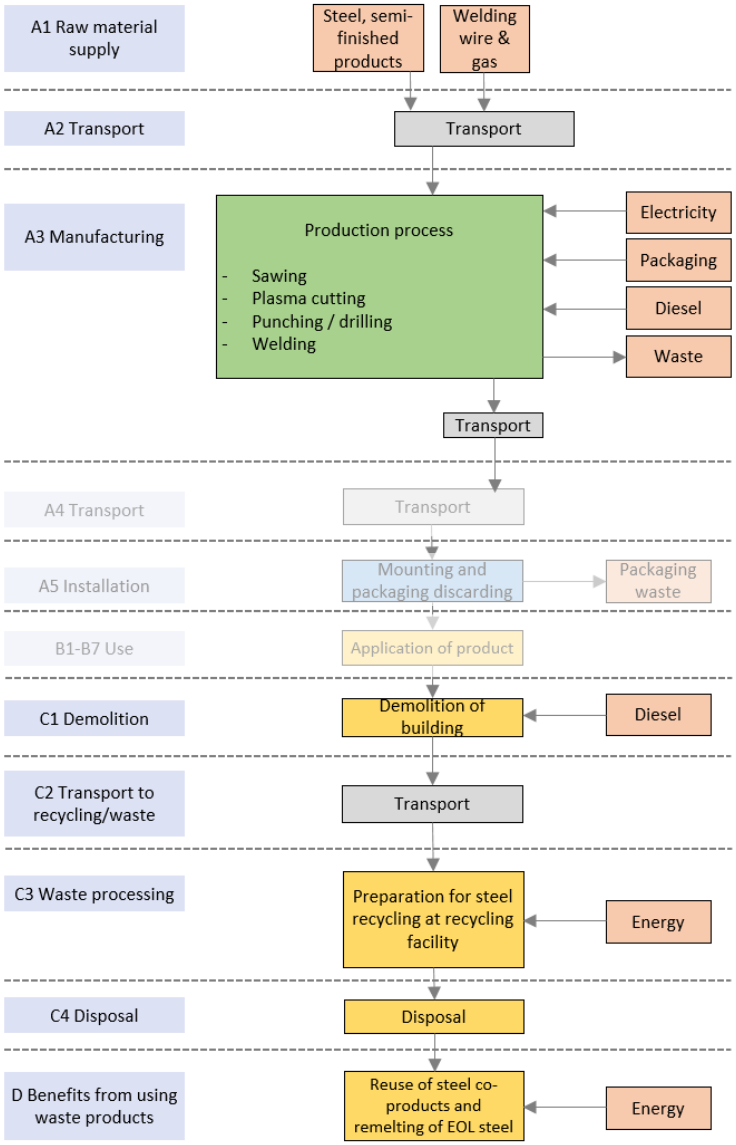
C3 – Waste processing:
Steel scrap is sorted at the recycling facility and prepared for recycling. The transport takes place with a 16-32 ton EURO 6 truck. It is assumed that all collected steel is directed to remelting, with only minor pre-processing required (e.g. cutting and sorting).

C4 – Disposal:
No steel is assumed to be disposed of in landfill or by incineration prior to recycling. The transport takes place with a 16-32 ton EURO 6 truck.

Module D – Benefits and loads beyond the system boundary:
At the end of its life, all recovered steel is assumed to be recycled. A substitution method is used to account for environmental benefits, but only the virgin (newly produced) portion of the steel is considered eligible for this credit. Since the steel used in the product contains 60% recycled material and 40% virgin material, only the 40% virgin share is counted for substitution. This means that the recycling benefit reflects replacing primary (new) steel production equivalent to that virgin portion. As a result, Module D includes credit for avoiding the production of 400 kg of primary steel (modeled as pig iron, which is entirely virgin material).

At the same time, the environmental loads associated with recycling – specifically the remelting of 400 kg of steel – are also included.

SYSTEM 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.

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 made according to the reference standards and the applied PCR. In this study, allocation has been done in the following ways:

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

PRODUCT & MANUFACTURING SITES GROUPING

Type of grouping	No grouping
Grouping method	Not applicable
Variation in GWP-fossil for A1-A3, %	-

This EPD is product and factory specific.

LCA SOFTWARE AND BIBLIOGRAPHY

This EPD has been created using One Click LCA EPD Generator for EPD Hub V3 and EPD Process Certification v3.2.4. The LCA and EPD have been prepared according to the reference standards and ISO 14040/14044. The EPD Generator uses Ecoinvent v3.10.1/3.11/3.12 and One Click LCA databases as sources of environmental data. Allocation used in Ecoinvent 3.10.1/3.11/3.12 environmental data sources follow the methodology 'allocation, Cut-off, EN 15804+A2'.

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	1,75E+03	1,53E+01	8,12E+01	1,84E+03	ND	1,57E+01	ND	ND	ND	ND	ND	ND	ND	1,02E+01	9,34E+00	2,39E+01	0,00E+00	-4,67E+02
GWP – fossil	kg CO_2e	1,62E+03	1,53E+01	9,63E+01	1,73E+03	ND	2,35E-01	ND	ND	ND	ND	ND	ND	ND	1,02E+01	9,33E+00	1,56E+01	0,00E+00	-4,73E+02
GWP – biogenic	kg CO_2e	1,30E+02	3,33E-03	-1,52E+01	1,15E+02	ND	1,54E+01	ND	ND	ND	ND	ND	ND	ND	1,04E-03	6,05E-03	8,30E+00	0,00E+00	5,90E+00
GWP – LULUC	kg CO_2e	5,18E-01	5,94E-03	6,09E-02	5,85E-01	ND	6,11E-05	ND	ND	ND	ND	ND	ND	ND	1,05E-03	3,15E-03	1,77E-02	0,00E+00	1,11E-01
Ozone depletion pot.	kg CFC-$_{11}$e	2,56E-05	3,18E-07	1,84E-06	2,77E-05	ND	3,71E-09	ND	ND	ND	ND	ND	ND	ND	1,57E-07	2,03E-07	1,34E-07	0,00E+00	-5,72E-07
Acidification potential	mol H^+e	7,55E+00	3,60E-02	4,16E-01	8,01E+00	ND	1,92E-03	ND	ND	ND	ND	ND	ND	ND	9,23E-02	2,00E-02	9,01E-02	0,00E+00	-1,51E+00
EP-freshwater[2)]	kg Pe	7,13E-02	1,07E-03	4,49E-02	1,17E-01	ND	5,88E-05	ND	ND	ND	ND	ND	ND	ND	2,95E-04	6,47E-04	7,35E-03	0,00E+00	-1,44E-01
EP-marine	kg Ne	1,74E+00	9,43E-03	8,83E-02	1,84E+00	ND	9,80E-04	ND	ND	ND	ND	ND	ND	ND	4,28E-02	4,83E-03	3,09E-02	0,00E+00	-3,77E-01
EP-terrestrial	mol Ne	1,43E+02	1,02E-01	9,31E-01	1,44E+02	ND	9,53E-03	ND	ND	ND	ND	ND	ND	ND	4,69E-01	5,21E-02	2,27E-01	0,00E+00	-4,17E+00
POCP ("smog")[3)]	kg NMVOCe	4,70E+01	6,25E-02	2,64E-01	4,73E+01	ND	2,57E-03	ND	ND	ND	ND	ND	ND	ND	1,40E-01	3,18E-02	6,45E-02	0,00E+00	-1,37E+00
ADP-minerals & metals[4)]	kg Sbe	6,13E-03	4,37E-05	8,82E-04	7,05E-03	ND	6,13E-07	ND	ND	ND	ND	ND	ND	ND	3,67E-06	3,27E-05	3,91E-04	0,00E+00	2,23E-04
ADP-fossil resources	MJ	2,11E+04	2,29E+02	1,58E+03	2,29E+04	ND	2,53E+00	ND	ND	ND	ND	ND	ND	ND	1,34E+02	1,33E+02	1,54E+02	0,00E+00	-4,47E+03
Water use[5)]	m^3e depr.	4,98E+02	1,17E+00	2,27E+01	5,22E+02	ND	3,55E-01	ND	ND	ND	ND	ND	ND	ND	3,34E-01	7,04E-01	4,37E+00	0,00E+00	7,18E+01

1) GWP = Global Warming Potential; 2) EP = Eutrophication potential. Required characterisation method and data are in kg P-eq. Multiply by 3,07 to get PO4e; 3) POCP = Photochemical ozone formation; 4) ADP = Abiotic depletion potential; 5) EN 15804+A2 disclaimer for Abiotic depletion and Water use and optional indicators except Particulate matter and Ionizing radiation, human health. The results of these environmental impact indicators shall be used with care as the uncertainties on these results are high or as there is limited experience with the indicator.

ADDITIONAL (OPTIONAL) ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, EF 3.1

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Particulate matter	Incidence	2,90E-05	1,49E-06	3,82E-06	3,43E-05	ND	2,55E-08	ND	ND	ND	ND	ND	ND	ND	2,62E-06	6,99E-07	1,39E-06	0,00E+00	-4,11E-05
Ionizing radiation[6]	kBq U235e	1,05E+01	2,76E-01	1,64E+01	2,72E+01	ND	4,10E-03	ND	ND	ND	ND	ND	ND	ND	5,92E-02	1,60E-01	2,32E+00	0,00E+00	4,15E+01
Ecotoxicity (freshwater)	CTUe	9,56E+03	2,70E+01	3,13E+02	9,90E+03	ND	3,78E+00	ND	ND	ND	ND	ND	ND	ND	7,36E+00	1,13E+02	1,65E+02	0,00E+00	-2,30E+04
Human toxicity, cancer	CTUh	1,85E-06	2,54E-09	2,01E-06	3,86E-06	ND	2,57E-10	ND	ND	ND	ND	ND	ND	ND	1,05E-09	1,57E-09	1,63E-08	0,00E+00	-8,52E-07
Human tox. non-cancer	CTUh	1,50E-05	1,48E-07	1,19E-06	1,64E-05	ND	1,75E-08	ND	ND	ND	ND	ND	ND	ND	1,66E-08	8,36E-08	4,90E-07	0,00E+00	1,36E-06
SQP[7]	-	8,55E+02	2,30E+02	1,79E+03	2,87E+03	ND	1,13E+00	ND	ND	ND	ND	ND	ND	ND	9,37E+00	7,96E+01	8,41E+02	0,00E+00	-6,55E+02

6) EN 15804+A2 disclaimer for Ionizing radiation, human health. This impact category deals mainly with the eventual impact of low-dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator; 7) SQP = Land use related impacts/soil quality.

USE OF NATURAL RESOURCES

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Renew. PER as energy[8]	MJ	1,29E+03	3,73E+00	3,92E+02	1,68E+03	ND	-1,76E+02	ND	ND	ND	ND	ND	ND	ND	8,47E-01	2,19E+00	3,06E+01	0,00E+00	3,85E+02
Renew. PER as material	MJ	4,38E+00	0,00E+00	1,39E+02	1,43E+02	ND	1,76E+02	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Total use of renew. PER	MJ	1,29E+03	3,73E+00	5,31E+02	1,83E+03	ND	6,45E-02	ND	ND	ND	ND	ND	ND	ND	8,47E-01	2,19E+00	3,06E+01	0,00E+00	3,85E+02
Non-re. PER as energy	MJ	2,17E+04	2,29E+02	1,57E+03	2,35E+04	ND	2,53E+00	ND	ND	ND	ND	ND	ND	ND	1,34E+02	1,33E+02	1,54E+02	0,00E+00	-4,47E+03
Non-re. PER as material	MJ	9,34E-03	0,00E+00	9,46E+00	9,47E+00	ND	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
Total use of non-re. PER	MJ	2,17E+04	2,29E+02	1,58E+03	2,35E+04	ND	2,53E+00	ND	ND	ND	ND	ND	ND	ND	1,34E+02	1,33E+02	1,54E+02	0,00E+00	-4,47E+03
Secondary materials	kg	6,02E+02	9,90E-02	4,92E+00	6,07E+02	ND	3,97E-03	ND	ND	ND	ND	ND	ND	ND	5,56E-02	6,01E-02	3,05E-01	0,00E+00	4,46E+02
Renew. secondary fuels	MJ	9,23E-03	1,25E-03	4,56E+00	4,57E+00	ND	1,44E-05	ND	ND	ND	ND	ND	ND	ND	1,45E-04	7,89E-04	2,42E-02	0,00E+00	3,58E-02
Non-ren. secondary fuels	MJ	2,29E-22	0,00E+00	0,00E+00	2,29E-22	ND	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	6,70E+01	3,38E-02	6,18E-01	6,76E+01	ND	2,26E-03	ND	ND	ND	ND	ND	ND	ND	8,84E-03	1,62E-02	9,33E-02	0,00E+00	1,98E+00

8) PER = Primary energy resources.

END OF LIFE – WASTE

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste	kg	1,60E+00	3,31E-01	2,73E+01	2,92E+01	ND	5,15E-02	ND	ND	ND	ND	ND	ND	ND	1,49E-01	1,93E-01	1,70E+00	0,00E+00	1,92E+02
Non-hazardous waste	kg	6,59E+01	6,63E+00	2,30E+02	3,02E+02	ND	1,09E+01	ND	ND	ND	ND	ND	ND	ND	2,03E+00	4,13E+00	8,17E+01	0,00E+00	-7,28E+02
Radioactive waste	kg	5,06E-01	6,84E-05	1,26E-02	5,18E-01	ND	1,02E-06	ND	ND	ND	ND	ND	ND	ND	1,45E-05	3,95E-05	5,95E-04	0,00E+00	1,05E-02

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	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	3,40E+01	0,00E+00	1,34E-01	3,42E+01	ND	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 energy rec	kg	5,11E-02	0,00E+00	0,00E+00	5,11E-02	ND	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
Exported energy	MJ	4,39E+00	0,00E+00	7,35E-02	4,47E+00	ND	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
Exported energy – Electricity	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	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
Exported energy – Heat	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	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

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	1,62E+03	1,53E+01	9,64E+01	1,73E+03	ND	2,35E-01	ND	ND	ND	ND	ND	ND	ND	1,02E+01	9,34E+00	1,56E+01	0,00E+00	-4,73E+02

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. Liquified petroleum gas, World, One Click LCA
2. Electricity, low voltage, residual mix, Denmark, Ecoinvent, 0.50 kgCO2e/kWh

End of life (C1-C4) - Scenario documentation

Scenario information	Value
Collection process: collected separately (kg)	1000
Collection process: Mixed waste (kg)	-
Recovery: re-use (kg)	-
Recovery: recycling (kg)	1000
Recovery: energy recovery (kg)	-
Disposal (kg)	-
Scenario assumptions e.g. transportation (mode, km) & other	Truck, 16-32 ton, EURO 6 50 km to recycling and/or 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 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

Afzal khan Peerukhan as an authorized verifier for EPD Hub Limited 28.04.2026

ANNEX

The following result table sums up the GWP-total for all the product variants studied. The product in bold is the main one declared.

GWP-TOTAL – PRODUCT GROUP, EN 15804+A2, EF 3.1

Product variant	Unit	A1	A2	A3	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
Black steel	**kg CO_2e**	**1,75E+03**	**1,53E+01**	**8,12E+01**	**1,84E+03**	**ND**	**1,57E+01**	**ND**	**1,02E+01**	**9,34E+00**	**2,39E+01**	**0,00E+00**	**-4,67E+02**
Galvanized steel	kg CO_2e	1,66E+03	1,45E+01	2,77E+02	1,95E+03	ND	1,57E+01	ND	1,02E+01	9,34E+00	2,39E+01	0,00E+00	-5,80E+02
Painted steel	kg CO_2e	1,77E+03	1,51E+01	2,28E+02	2,02E+03	ND	1,57E+01	ND	1,02E+01	9,44E+00	2,39E+01	1,15E-01	-4,62E+02
Stainless steel	kg CO_2e	3,65E+03	1,66E+01	8,12E+01	3,75E+03	ND	1,57E+01	ND	1,02E+01	9,34E+00	2,39E+01	0,00E+00	-9,40E+02

Stainless steel is purchased, processed and sold directly as products without any surface treatment. For stainless steel the recycled content is 80% according to the raw material EPDs applied in the LCA.

Where required, black steel products undergo surface treatment to ensure corrosion protection. Two types of surface treatment are applied: painting and galvanization. These processes are performed externally by local service providers. Following treatment, the coated products are transported back to RS Ståltekniк for final preparation and delivery to the customer. For black steel the recycled content is 60% according to the raw material EPDs applied in the LCA.

Regarding end-of-life, only in the case of painted steel the paint component is assumed to become slag during smelting and is transported 50 km by truck to a residual material landfill.