

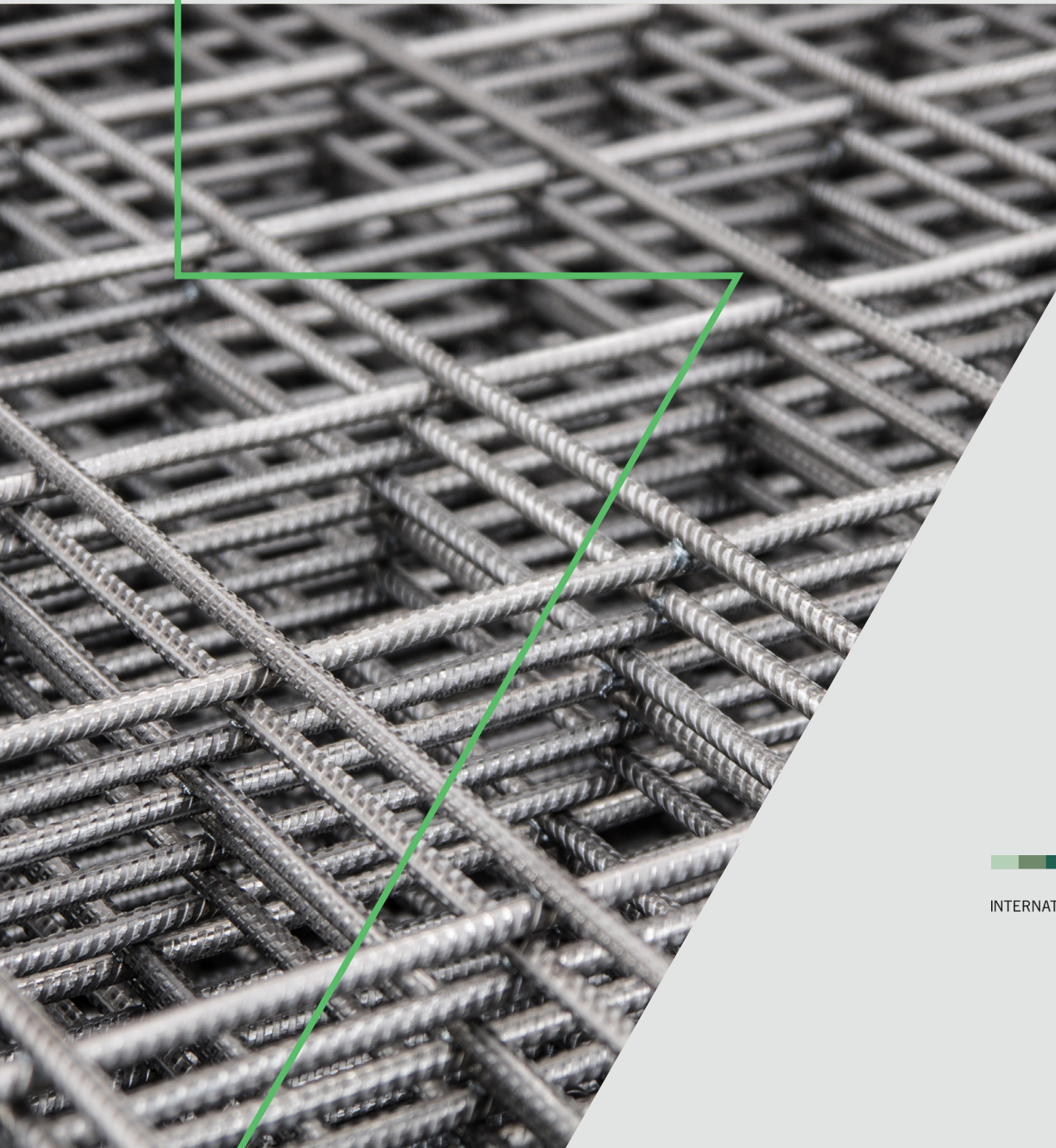
In accordance with ISO 14025:2006 and EN 15804:2012+A2:2019/AC:2021 for:  
**Steel reinforcement products for concrete - Finland production from 7 Steel Service Finland Oy**

Programme: The International EPD System, [www.environdec.com](http://www.environdec.com)  
Programme operator: EPD International AB  
Type of EPD: EPD of multiple products, based on the average results of the product group.

This EPD covers multiple products, the list of products can be found in page 4 of the EPD.

EPD registration number: EPD-IES-0000307:007 (S-P-00307)  
Version date: 2026-04-27  
Validity date: 2031-04-27

An EPD may be updated or depublished if conditions change. To find the latest version of the EPD and to confirm its validity, see [www.environdec.com](http://www.environdec.com).



# General information

<b>Programme:</b>	The International EPD® System
<b>Address:</b>	EPD International AB Box 210 60 SE-100 31 Stockholm Sweden
<b>Website:</b>	www.environdec.com
<b>E-mail:</b>	support@environdec.com

CEN standard EN 15804 serves as the Core Product Category Rules (PCR)	
Product category rules (PCR): PCR 2019:14 Construction products. Version 2.01	
PCR review was conducted by: The Technical Committee of the International EPD® System. Review chair: Rob Rouwette. The review panel may be contacted via the Secretariat <a href="http://www.environdec.com/contact">www.environdec.com/contact</a>	
Independent third-party verification of the declaration and data, according to ISO 14025:2006, via:  <b>Individual EPD verification without a pre-verified LCA/EPD tool</b> Third-party verifier: : Maria Feced Mateu, CERTINALIA SLU Accredited by ENAC, n° 125/C-PR283	
Procedure for follow-up of data during EPD validity involves third party verifier:	
<input type="checkbox"/> Yes	No

The EPD owner has the sole ownership, liability, and responsibility for the EPD.

EPDs within the same product category but published in different EPD programmes, may not be comparable. For two EPDs to be comparable, they shall be based on the same PCR (including the same first-digit version number) or be based on fully aligned PCRs or versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical declared/functional units); have identical scope in terms of included life-cycle stages (unless the excluded life-cycle stage is demonstrated to be insignificant); apply identical impact assessment methods (including the same version of characterisation factors); and be valid at the time of comparison. For further information about comparability, see EN 15804 and ISO 14025.

## Information about the EPD owner

### Owner of the EPD:

7 Steel Service Finland Oy

### Address:

Valssaamontie 171  
10410 Åminnefors  
Finland

### Contact:

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[juha.saaristo@7-steel.com](mailto:juha.saaristo@7-steel.com)

### Address and contact information of the LCA practitioner commissioned by the EPD owner:

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### Description of the organisation:

7 Steel Nordic is a producer of steel reinforcement products in the Nordic countries. 7 Steel Nordic melt shop and rolling mill is located in the northern part of Norway, in the city called Mo i Rana. The steel reinforcement products are distributed through the company's downstream reinforcing services, 7 Steel Service. 7 Steel Service is located in Norway, Sweden, Denmark, and Finland.

7 Steel Service Finland provides reinforcing steel products and related services for the Finnish concrete construction sector. The company covers the full reinforcement process, from engineering and detailing to manufacturing, delivery, and installation support, offering comprehensive solutions for construction projects across Finland.

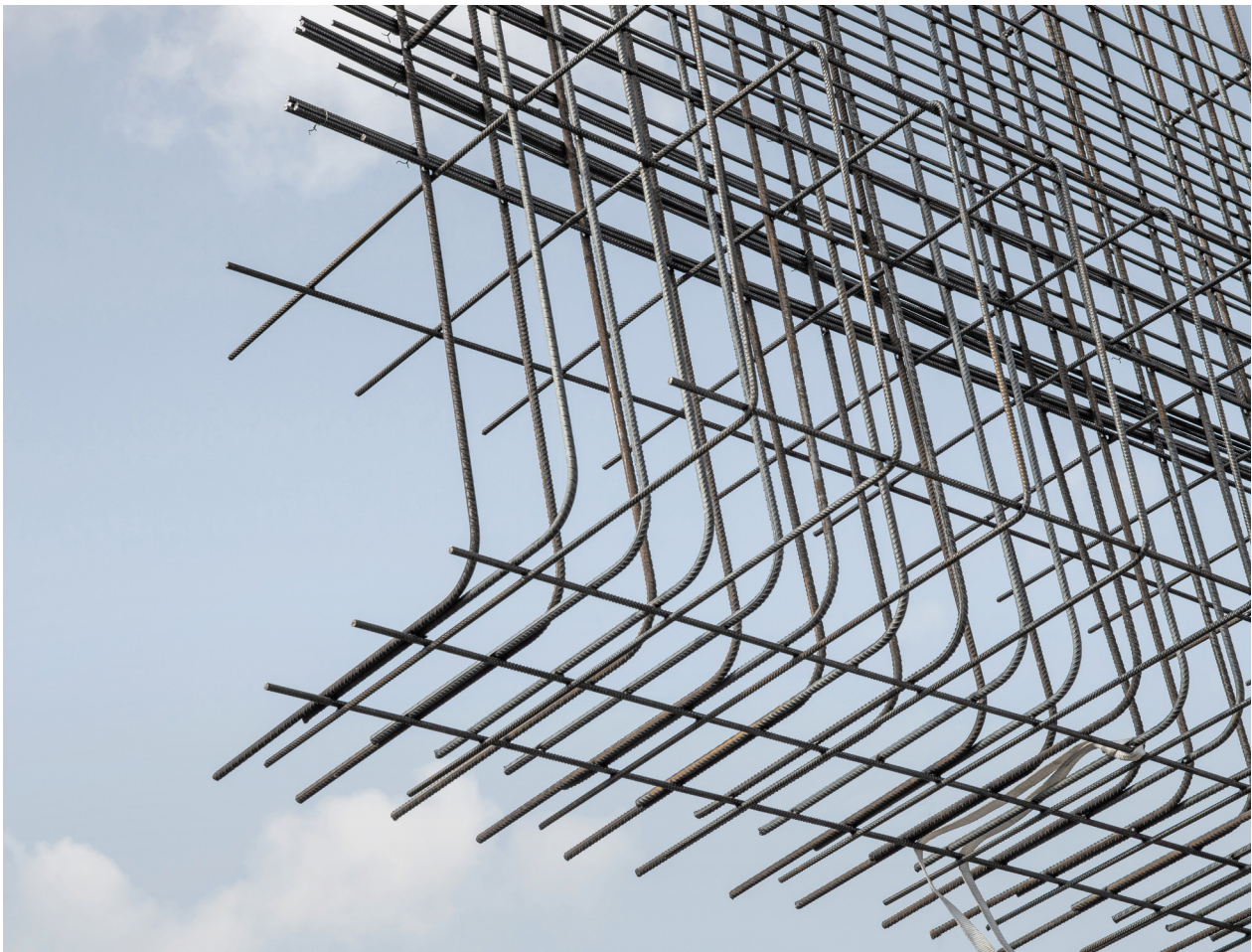
In Finland, operations are supported by production and service facilities in Åminnefors, Espoo and Pälkäne, forming a nationwide network that ensures reliable supply and responsive customer service to the construction industry.

The company is recognized as one of Finland's leading processors and distributors of reinforcing steel, offering a broad range of reinforcement products, prefabricated components, and construction accessories for building sites and precast factories.

Sustainability and innovation are core elements of 7 Steel Nordic's operations. The company relies on electric arc furnace (EAF) technology powered by renewable hydropower, significantly reducing CO<sub>2</sub> emissions compared to traditional blast furnace processes. It also engages in continuous development of low-carbon production methods, including the potential use of hydrogen in steelmaking. Through its circular approach and commitment to responsible growth, 7 Steel Nordic contributes to a more sustainable and competitive steel industry in the Nordic region.

### Management system-related certifications

The company operates under certified management systems and holds certifications in accordance with ISO 9001 (quality management) and ISO 14001 (environmental management).



# Product information

## Product name:

Steel reinforcement products for concrete.

## UN CPC code:

41241 - Bars and rods, hot-rolled, in irregularly wound coils, of alloy steel.

41242 - Other bars and rods of alloy steel, not further worked than hot-rolled, hot-drawn or extruded.

## Product description:

Product range from bars, coils, wire rod, cut and bend reinforcement, mesh, BAMTEC® (Åminnefors) to an extensive production of prefabricated elements (special welded products). This EPD includes two different groups of products, manufactured products and products that are only resold and distributed. To determine the difference in impact between the two types of products, three models were created: one based on the average for the entire plant, one for manufactured products and one for distributed products.

The steel products for which the EPDs are drawn up play their role in the manufacture of the construction sector products for which they are used, which in turn play a role in the buildings and civil works in which they are used as construction elements.

Steel reinforcement products for concrete are structural steel components used as embedded reinforcement in concrete applications. Their primary function is to provide tensile resistance, control cracking, and enhance the overall load-bearing capacity and durability of reinforced concrete structures. They are manufactured according to relevant standards and are intended for use in buildings, infrastructure, and civil engineering works where mechanical performance and compliance with design requirements are essential.

The following table describes the characteristics of the steel reinforcement products for concrete and correspond to the minimum required by the product standard.

## Technical properties

Material Characteristics	Value, units
Product diameter range	5.0 – 40 mm
Yield stress, Re	As per material standard
Tensile/yield ratio (Rm/Re)	As per material standard
Elongation Agt	As per material standard
Density	7850 kg/m <sup>3</sup>
Bundle weight	1-5 ton
Product content	Value, units
Iron	98-99 %
Carbon	0,05-0,2 %
Manganese	0,3-0,7 %
Silicon	0,2 %

## Material standard

SFS 1300:2020

## Location of production site:

Åminnefors, Espoo and Pälkäne in Finland.

## Product Certification

Kiwa No. 6346-06, 9957-04, 4470-10, 4612-09, 4380-12, 9369-05, 5963-05

## Reference to website for more information:

[www.7-steelnordic.com](http://www.7-steelnordic.com)

# Content declaration

This content declaration is for 1 ton of final product of reinforcement products and refers to the average of the 2024 production.

Product range from bars, coils, wire rod, cut and bend reinforcement, mesh, BAMTEC® (Åminnefors) to an extensive production of prefabricated elements (special welded products).

## Product

The products for which this EPD is prepared are produced from scrap. The melt shop utilizes the electric arc furnace (EAF) technology to produce billets from recovered ferrous scrap (76% post-consumer and 24% pre-consumer), cast iron (90% post-consumer and 10% pre-consumer), and other components (ferrous alloys, etc.). The steel products do not contain any renewable or biogenic material inputs.

Product content	Mass, kg	Post-consumer recycled material, mass-% of product	Biogenic material, mass-% of product	Biogenic material*, kg C/ product or declared unit
Steel scrap	1000	70.60%	0%	0
TOTAL	1000	70.60%	0%	0

\*1 kg biogenic carbon is equivalent to 44/12 kg of CO<sub>2</sub>

## Packaging

The product uses steel and polyester as packaging.

Packaging materials	Mass, kg	Mass-% (versus the product)	Biogenic material*, kg C/product or declared unit
Steel	1,47E+00	0.146%	0
Polyester bands	2,88E-01	0.028%	0
Wood packaging	9,83E-01	0.098%	4,33E-01
TOTAL	2,74E+00	0.273%	4,33E-01

\*1 kg biogenic carbon is equivalent to 44/12 kg of CO<sub>2</sub>

The manufacturer declares that during the life cycle of the studied product, no hazardous substances listed in the "Candidate List of Substances of Very High Concern (SVHC) for authorisation" are used in a percentage over of 0.1% of the weight of the product.

# LCA information

## Declared unit

The declared unit is one tonne of welded fabric mesh products for concrete. (1000 kg).

## Reference service life (RSL)

RSL not specified - product use stage has not been included in the study.

## Time representativeness

The data used correspond to the year 2024, a period with representative production data.

## Geographical scope:

Product manufactured in Finland and distributed to Nordic region. The LCA study was conducted with European parameters.

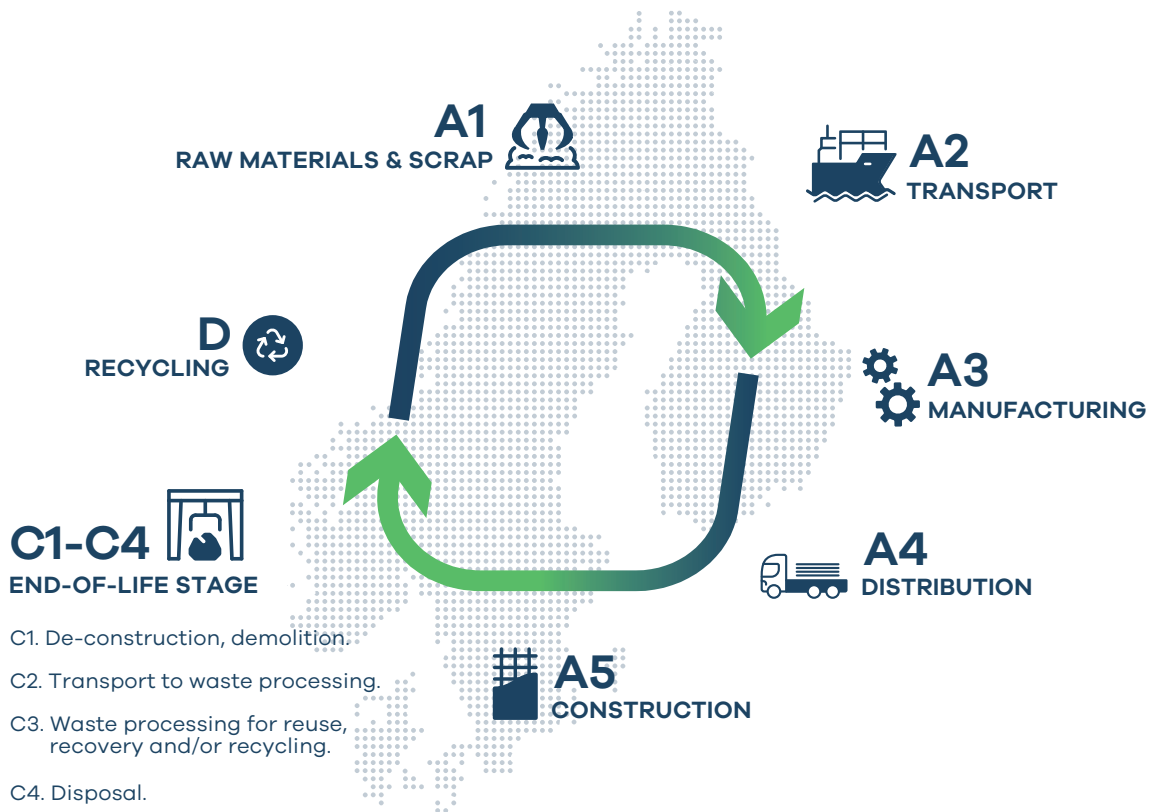
## Database(s) and LCA software used

Data source: ecoinvent v3.11, system model 'Allocation, cut-off'.  
LCA software SimaPro 10.3.0.1.

## Description of system boundaries

Cradle to gate (A1 - A3) with modules C1 - C4 and module D and optional modules (A1-A3 + A4 + C + D).

## System boundaries (A1 to D)



### Product stage (A1-A3):

**A1** – raw material supply. Extraction of resources and production of raw materials; transport to raw materials treatment/production centres; energy and fuel consumption during the production of raw materials; consumption of other resources (such as water) during the production of raw materials; generation of waste and emissions into the air and discharges into water and soil during the production of raw materials; generation of electricity and heat from primary energy resources.

**A2** – transport to the manufacturer

**A3** – manufacturing. Consumption of auxiliary materials for production has been considered; the production of the packaging necessary for the distribution of the product to the customer and its transport to the plant; and the transport and treatment to the waste manager of the waste generated during the product stage.

The LCA results are presented in an aggregated format for the product stage, where modules A1, A2, and A3 are consolidated into a single module, denoted as A1-A3.

**Distribution Stage (A4):** In this stage, we considered the transportation of final products from the 7 Steel’s facilities to the building site. The data represents over 80% of the distributed production. For the calculation, the weighted average of the different locations was assumed. No product losses during transport are assumed.

Parameter A4	Value
Fuel type and consumption: - EURO6 truck (gross weight 29,96t)	Diesel: 0.044 l/tkm
Average distance - Truck	136,64 km by truck
Capacity utilization (including empty return)	50 % *
Density of transported products	7850 kg/m3.
Volume capacity utilisation factor	1

\* Data from Ecoinvent database

**Installation stage (A5):** Non-relevant modules. Shipping to customer and usage scenarios depend on multiple factors, so it cannot represent a single scenario. The A5 is included solely to balance the biogenic carbon and inherent energy of the packaging.

**Use stage (B1-B7):** Non-relevant modules. The product studied is integrated into larger structures, so it does not require any material or energy consumption.

**End-of-life stage (C1-C4):** Stage C1 – de-construction/demolition. To represent the deconstruction/demolition process, a generic process from the Ecoinvent database has been used to represent the demolition process. The manufacturer declares that operations during the disassembly of its products do not generate particulate emissions into the air. Energy required by the process according to PCR 2019:14 v2.0.1.

**Stage C2** – transport to the waste processing according to PCR 2019:14 v2.0.1

**Stage C3 and C4** – Default rates for reuse, recycling and landfill of these two types of steel products were sourced from EN 17662 (Annex H) (CEN, 2021). Such EoL rates were defined as 90% recycling and 10% landfilling for hot rolled products.

Parameter	Value
Demolition	Diesel consumption, 1,1 kWh/tonne
Waste processing	900 kg for recycling.
	100 kg to landfill site.
Disposal	100 kg sent for landfill
Scenario development assumptions (transport of waste to waste manager)	Average distance – EURO 5 truck (16-32 ton) - for recycling and landfill: 80 km

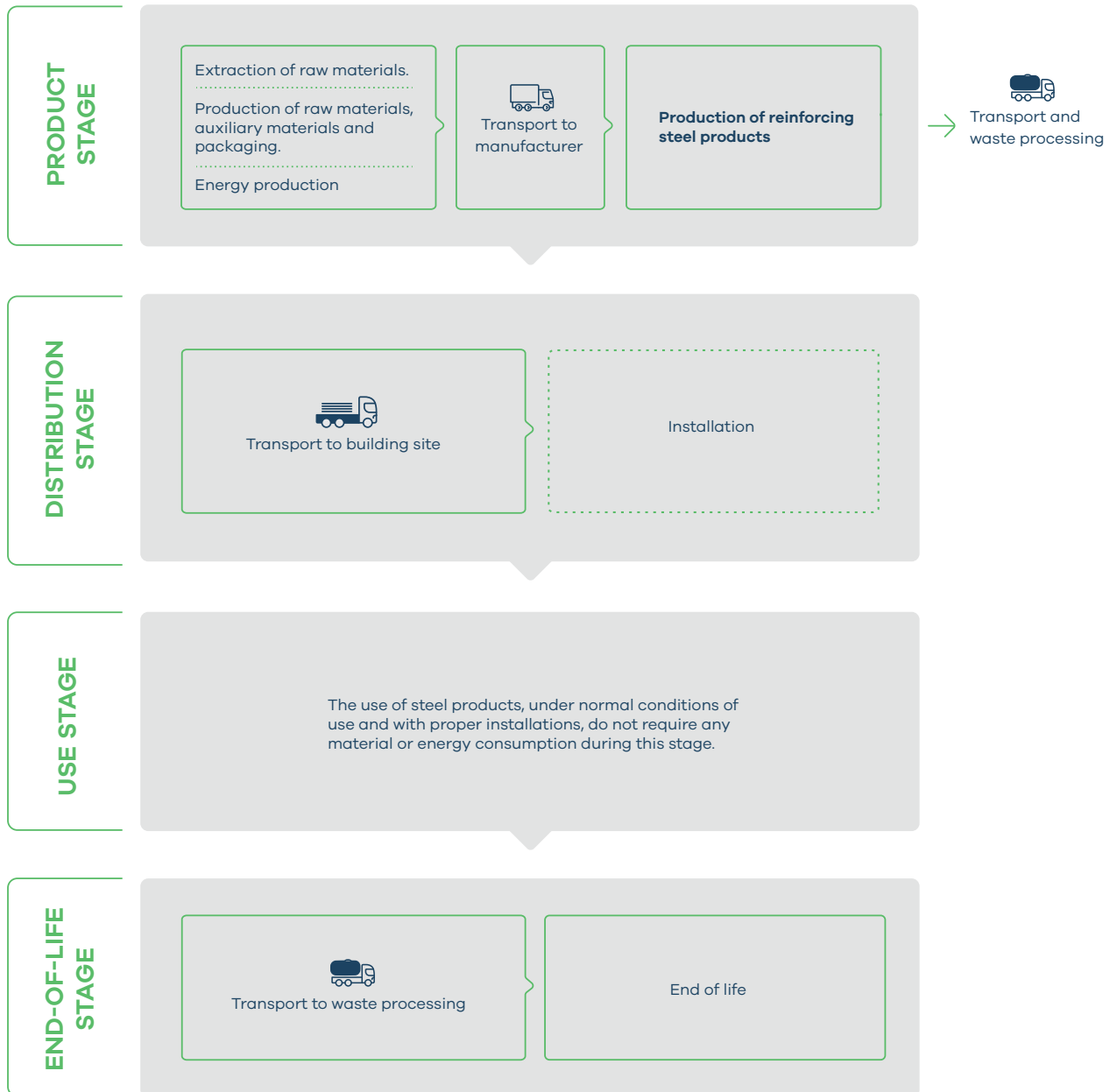
### Module D:

Module D includes the reuse and recycling potential expressed as net charges and benefits related to the secondary material recovered when leaving the product system, calculating material substitution effects only for the resulting net outflow from the product stage excluding the secondary material used as input to the product stage (A1-A3).

In reinforcement steel products case more scrap is used than is generated at the end of life, so in module D there are no environmental benefits; instead the environmental burdens of producing the virgin raw material needed to supply the missing scrap used in Melt Shop to produce the steel billets are accounted for.

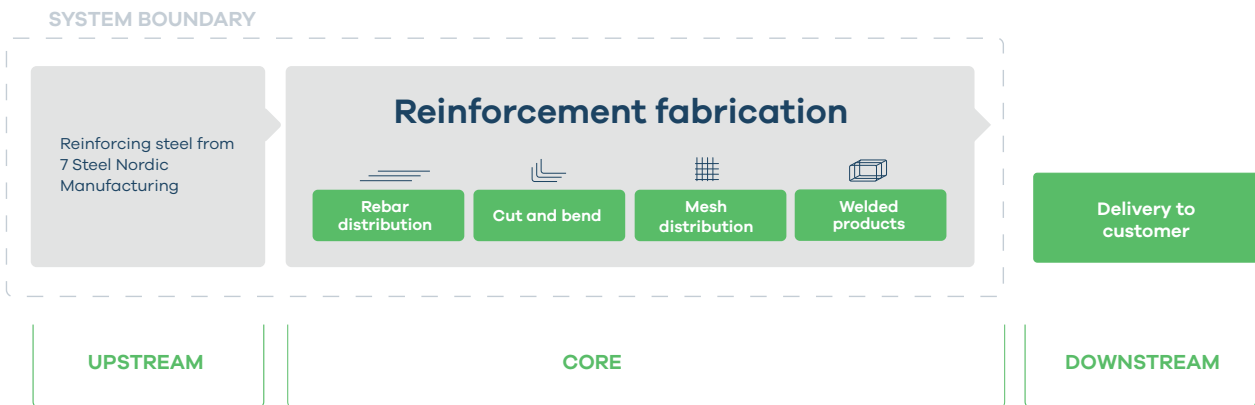
Plant	Overview
7 Steel Service Finland	Material input: 1,02 tons of Hot Rolled Upstream scrap input: 1,16 tons Output: 0,90 tons Scrap balance: 0,261 tons

# Process flow diagram



Reinforcing steel in form of bars and coils are supplied to 7 Steel Service Finland from the production site in Mo i Rana. The different production processes at 7 Steel Service Finland produces tailor made products for concrete reinforcement for the construction industry. Reinforcing steel products according to customer specifications are manufactured by cut and bend operations. Special welded products in form of pre-fabricated solutions for concrete reinforcement for crane foundation, beam corners, elevator pits and pile foundations among other things are produced directly on 7 Steel Service Finland sites. Mesh products are manufactured from wire rod or reinforcing steel in coils in mesh machines where they are welded together to mesh.

The different products manufactured by 7 Steel Service Finland help customers to save time at the construction site by allowing fewer work steps, but also help improving ergonomics for the work force at site.



### Representativeness, quality and selection of data:

In order to model the manufacturing process of the 7 Steel Service Finland steel products, production data corresponding to the year 2024 have been used. Data on material and energy consumption, distances from suppliers and waste generation have been obtained for the plant.

To assess the quality of the primary data used, the semi-quantitative evaluation criteria for data quality proposed by the European Union in its Guide to the Environmental Footprint of Products and Organizations are applied, obtaining a Data Quality Rating (DQR) = 1.80, which indicates that the quality of the data is high.

### The data quality criteria assessed for the primary data are:

Representation of technology (TeR) – 1,80

Geographical representation (GeR) – 2,40

Temporal representativeness (TiR) – 1

Precision (P) – 2

### Data quality summary according to EN 15941

The EPD is based on data collected by 7 Steel Services Finland from their three manufacturing sites located in Åminnefors, Espoo and Pälkäne, Finland, over one year from 2024. The EPD is representative of the production and distribution of reinforcement steel produced in Finland and data are collected directly from production sites. The end-of-life stage of the EPD covers Finland.

The EPD uses background data from the Ecoinvent database v3.11 and from EPD for Hot rolled steel Norwegian production from 7 Steel Nordic Manufacturing AS.

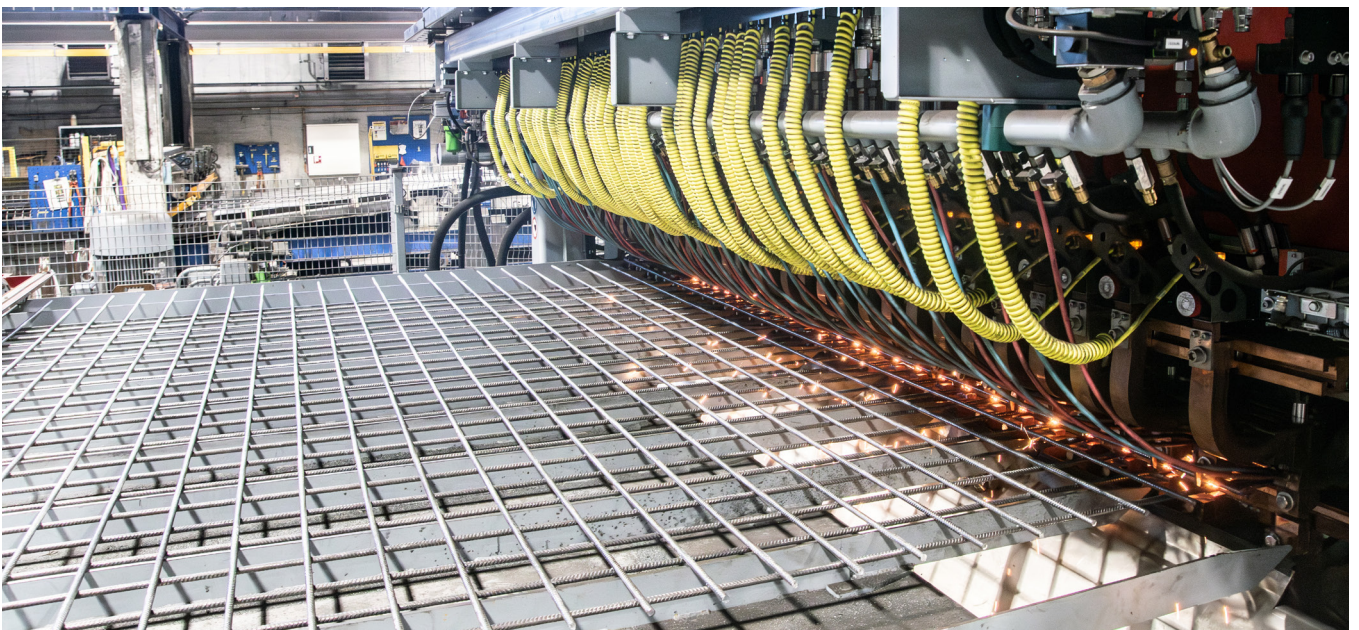
The quality of the relevant data used for the EPD in terms of its time, geography and technology representativeness using EN 15804:2012+A2:2019, Annex E, E.2 is mainly high. Datasets that represents Ship transport (Transport, freight, sea, container ship, heavy fuel oil {GLO}) transport, freight, sea, container ship, heavy fuel oil | Cut-off, U) is from 2018, resulting in a fair time representativeness. This dataset has 11,6% contribution towards Climate change. As no specific data could be obtained for this process, these have been assessed as best available data.

## Modules declared, geographical scope, share of primary data (in GWP-GHG results) and data variation (in GWP-GHG results):

	Product stage			Installation stage		Use stage							End of life stage			Beyond product life cycle	
	Raw material supply	Transport	Manufacturing	Transport	Installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	DeOconstruction 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	X	X	X	X	X	ND	ND	ND	ND	ND	ND	ND	X	X	X	X	x
Geography	NO	EU 27	FI	EU 27	EU 27	-	-	-	-	-	-	-	EU 27	EU 27	EU 27	EU 27	EU27
Share of primary data	32,9% GWP-GHG			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – products	<10%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – sites	<10%			-	-	-	-	-	-	-	-	-	-	-	-	-	-

\* ND: not declared module

The share of primary data is calculated based on GWP-GHG results. It is a simplified indicator for data quality that supports the use of more primary data to increase the representativeness of and comparability between EPDs. Note that the indicator does not capture all relevant aspects of data quality and is not comparable across product categories.



## The percentages used to assess the representativeness of the data are detailed in the following table:

Process name	Source type	Source	Reference year	Data category	Share of primary data, of GWP-GHG
Hot Rolled	EPD	Environdec	2026	20,4% Primary data	16,4%
Electricity	Database	Ecoinvent v3.11	2023	Primary data	0,1%
Transport (ship)	Database	Ecoinvent v3.11	2018	Primary data	11,6%
Transport (truck)	Database	Ecoinvent v3.11	2022	Primary data	1,7%
Heating fuel oil	Database	Ecoinvent v3.11	2015	Primary data	2,5%
Natural gas	Database	Ecoinvent v3.11	2023	Primary data	0,6%
Textile band	Database	Ecoinvent v3.11	2019	Secondary data - Proxy data	0,0%
					<b>32,9%</b>

### Energy information

7 Steel Service Finland purchases 100% GoO from nuclear power and produces its own energy using solar panels for its facilities.

This electricity mix has been modelled using background inventory data from ecoinvent 3.11, including electricity losses and import values reported for Finland (Electricity, high voltage [FI]) electricity production, nuclear 7 STEEL SERVICE FINLAND) and the photovoltaic electricity production (Electricity, low voltage [FI]) electricity production, photovoltaic, 3kWp slanted-roof installation, single-Si, panel, mounted | Cut-off, U).

The carbon footprint (GWP-GHG) of the electricity mix used is 0,0036 kg CO<sub>2</sub>eq./kWh

### Cut-off rules:

As general rule, according to the criteria of the reference standard 95% of the total inflows (mass and energy) used in the manufacturing process have been included in the LCA. In addition, at least 95% of the environmental impacts of each module have been considered.

There has been no exclusion of energy consumption.

### Allocation rules applied:

In accordance with the criteria of the reference standard, where allocation could not be avoided, the inputs and outputs of the system were allocated based on mass. This allocation criterion has been applied for the general consumption of 7 Steel Service Finland plants (consumption of raw materials and energy), emissions and discharges, and for waste.

Following a conservative approach, no environmental burden is assigned to scrap generated in the manufacturing process. Scrap is considered a by-product with very low economic value; therefore, economic allocation is not applied.

### Study exlusions:

The LCA did not include:

- All equipment with a useful life of more than 3 years, because it is considered capital equipment and its impact on the declared unit is insignificant.
- The construction of plant buildings and other capital assets.
- Staff business travel: nor staff travel to and from work.
- Research and development activities.
- Long-term emissions.
- Infrastructure processes from Ecoinvent datasets.

# Environmental performance

## LCA results of the product(s) - main environmental performance results

The results of the end-of-life stage (modules C1-C4) should be considered when using the results of the product stage (modules A1-A3). The estimated impact results are only relative statements, which do not indicate the endpoints of the impact categories, exceeding threshold values, safety margins and/or risks.

### Mandatory impact category indicators according to EN 15804 (reference package EF 3.1)

Indicator	Unit	A1-A3	A4	A5**	C1	C2	C3	C4	D
GWP-GHG*	kg CO2 eq.	2,30E+02	1,04E+01	0,00E+00	3,75E-01	2,45E+01	1,10E-01	2,63E-01	4,44E+02
GWP-total	kg CO2 eq.	2,28E+02	1,04E+01	1,59E+00	3,75E-01	2,45E+01	1,10E-01	2,63E-01	4,44E+02
GWP-fossil	kg CO2 eq.	2,29E+02	1,04E+01	0,00E+00	3,75E-01	2,45E+01	1,10E-01	2,63E-01	4,44E+02
GWP-biogenic	kg CO2 eq.	-1,52E+00	3,72E-04	1,59E+00	1,88E-05	8,52E-04	5,80E-04	5,78E-05	5,06E-02
GWP-luluc	kg CO2 eq.	3,25E-01	1,69E-04	0,00E+00	1,54E-05	3,88E-04	1,69E-05	1,61E-05	6,86E-02
ODP	kg CFC 11 eq.	7,38E-06	2,44E-07	0,00E+00	5,70E-09	5,57E-07	2,91E-09	4,04E-09	1,06E-06
AP	mol H+ eq.	1,63E+00	1,32E-02	0,00E+00	3,46E-03	6,33E-02	7,10E-04	2,38E-03	1,50E+00
EP-freshwater	kg P eq.	8,01E-03	6,62E-06	0,00E+00	3,53E-07	1,51E-05	2,13E-07	2,53E-07	1,43E-02
EP-marine	kg N eq.	4,08E-01	2,94E-03	0,00E+00	1,63E-03	2,41E-02	3,30E-04	1,12E-03	3,11E-01
EP-terrestrial	mol N eq.	4,51E+00	3,19E-02	0,00E+00	1,79E-02	2,64E-01	3,58E-03	1,23E-02	3,62E+00
POCP	kg NMVOC eq.	1,29E+00	2,59E-02	0,00E+00	5,34E-03	1,05E-01	1,07E-03	3,67E-03	1,23E+00
ADP-minerals & metals <sup>2</sup>	kg Sb eq.	7,77E-05	2,80E-07	0,00E+00	1,31E-08	6,39E-07	3,11E-08	9,10E-09	6,08E-05
ADP-fossil <sup>2</sup>	MJ	3,23E+03	1,43E+02	0,00E+00	4,90E+00	3,26E+02	1,14E+01	3,44E+00	4,39E+03
WDP <sup>2</sup>	m <sup>3</sup>	1,66E+02	4,68E-02	0,00E+00	4,02E-03	1,07E-01	9,09E-02	2,84E-03	1,93E+01

#### Acronyms

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; EP-marine = Eutrophication potential. fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential. Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential. deprivation-weighted water consumption

\* This indicator accounts for all greenhouse gases except biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. As such, the indicator is identical to GWP-total except that the CF for biogenic CO2 is set to zero.

\*\* The A5 is included solely to offset the carbon footprint of the packaging.

### Additional mandatory and voluntary impact category indicators

Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
PM	Disease Incidence	2,18E-05	8,13E-07	0,00E+00	9,97E-08	1,63E-06	1,84E-08	6,98E-08	4,43E-05
IRP 1	kBq U235 eq.	2,99E+01	1,37E-02	0,00E+00	4,07E-04	3,13E-02	2,90E-01	4,82E-04	1,06E+00
ETP-fw 2	CTUe	7,90E+02	5,75E+00	0,00E+00	1,40E-01	1,17E+01	7,30E-02	9,91E-02	1,36E+03
HTP-c 2	CTUh	4,36E-07	6,90E-10	0,00E+00	2,00E-11	1,65E-09	9,89E-12	1,47E-11	5,66E-07
HTP-nc 2	CTUh	1,07E-06	8,91E-08	0,00E+00	3,68E-10	1,63E-07	2,84E-10	2,88E-10	9,19E-07
SQP 2	dimensionless	4,62E+02	1,81E-01	0,00E+00	8,32E-03	4,14E-01	3,92E-01	4,23E+00	5,02E+02

\* This indicator accounts for all greenhouse gases except biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. As such, the indicator is identical to GWP-total except that the CF for biogenic CO2 is set to zero

#### Acronyms:

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

Disclaimer 1. This impact category primarily addresses the potential impacts of low doses of ionizing radiation on human health from the nuclear fuel cycle. It does not consider effects from potential nuclear accidents or occupational exposure due to radioactive waste disposal at underground facilities. The ionizing radiation potential of soil, due to radon or some building materials, is also not measured in this parameter.

Disclaimer 2. The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.

## Resource use indicators

Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
PERE	MJ	5,34E+03	3,50E-01	0,00E+00	1,05E-02	8,01E-01	2,83E+01	2,05E+00	4,90E+01
PERM*	MJ	4,46E+01	0,00E+00	-2,49E+01	0,00E+00	0,00E+00	-1,77E+01	-1,96E+00	0,00E+00
PERT	MJ	5,38E+03	3,50E-01	-2,49E+01	1,05E-02	8,01E-01	1,06E+01	8,24E-02	4,90E+01
PENRE	MJ	3,84E+03	1,43E+02	0,00E+00	4,90E+00	3,26E+02	4,13E+01	6,75E+00	4,39E+03
PENRM*	MJ	3,32E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-2,98E+01	-3,32E+00	0,00E+00
PENRT	MJ	3,87E+03	1,43E+02	0,00E+00	4,90E+00	3,26E+02	1,14E+01	3,44E+00	4,39E+03
SM	Kg	1,15E+03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	MJ	6,09E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	m <sup>3</sup>	4,47E+01	2,76E-03	0,00E+00	1,48E-04	6,31E-03	2,97E-02	1,25E-04	7,83E-01

\* To calculate the primary energy indicators, the indications provided in PCR Annex 3, Option A, has been followed.

### Acronyms

PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water

## Waste indicators

Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Hazardous waste disposed	kg	1,03E-02	9,48E-04	0,00E+00	3,36E-05	2,17E-03	9,18E-06	2,35E-05	5,09E-02
Non-hazardous waste disposed	kg	1,37E+01	4,80E-03	0,00E+00	1,75E-04	1,10E-02	1,16E-03	9,99E+01	5,67E+00
Radioactive waste disposed	kg	1,61E-02	8,60E-06	0,00E+00	2,29E-07	1,97E-05	1,51E-04	2,63E-07	6,72E-04

## Output flow indicators

Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Components for re-use	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Material for recycling	kg	8,99E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,00E+02	0,00E+00	0,00E+00
Materials for energy recovery	kg	5,82E-01	0,00E+00	0,00E+00	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	0,00E+00	0,00E+00	0,00E+00
Exported energy. thermal	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

## Additional end-of-life scenarios

The following tables show the environmental impact of the end-of-life stages, if 100% of 1 ton of product is sent to a landfill, incinerated, or recycled.

### End-of-life scenario with 100% recycling (per declared unit)

Indicator	Unit	C1	C2	C3	C4
GWP-GHG	kg CO <sub>2</sub> eq.	3,75E-01	2,45E+01	1,22E-01	0
GWP-total	kg CO <sub>2</sub> eq.	3,75E-01	2,45E+01	1,22E-01	0
GWP-fossil	kg CO <sub>2</sub> eq.	3,75E-01	2,45E+01	1,22E-01	0
GWP-biogenic	kg CO <sub>2</sub> eq.	1,88E-05	8,52E-04	6,45E-04	0
GWP-luluc	kg CO <sub>2</sub> eq.	1,54E-05	3,88E-04	1,88E-05	0
ODP	kg CFC 11 eq.	5,70E-09	5,57E-07	3,23E-09	0
AP	mol H+ eq.	3,46E-03	6,33E-02	7,89E-04	0
EP-freshwater	kg P eq.	3,53E-07	1,51E-05	2,37E-07	0
EP-marine	kg N eq.	1,63E-03	2,41E-02	3,67E-04	0
EP-terrestrial	mol N eq.	1,79E-02	2,64E-01	3,98E-03	0
POCP	kg NMVOC eq.	5,34E-03	1,05E-01	1,19E-03	0
ADP-minerals&metals	kg Sb eq.	1,31E-08	6,39E-07	3,45E-08	0
ADP-fossil	MJ	4,90E+00	3,26E+02	1,27E+01	0
WDP	m <sup>3</sup>	4,02E-03	1,07E-01	1,01E-01	0

### End-of-life scenario with 100% landfill (per declared unit)

Indicator	Unit	C1	C2	C3	C4
GWP-GHG	kg CO <sub>2</sub> eq.	3,75E-01	2,45E+01	0	2,63E+00
GWP-total	kg CO <sub>2</sub> eq.	3,75E-01	2,45E+01	0	2,63E+00
GWP-fossil	kg CO <sub>2</sub> eq.	3,75E-01	2,45E+01	0	2,63E+00
GWP-biogenic	kg CO <sub>2</sub> eq.	1,88E-05	8,52E-04	0	5,78E-04
GWP-luluc	kg CO <sub>2</sub> eq.	1,54E-05	3,88E-04	0	1,61E-04
ODP	kg CFC 11 eq.	5,70E-09	5,57E-07	0	4,04E-08
AP	mol H+ eq.	3,46E-03	6,33E-02	0	2,38E-02
EP-freshwater	kg P eq.	3,53E-07	1,51E-05	0	2,53E-06
EP-marine	kg N eq.	1,63E-03	2,41E-02	0	1,12E-02
EP-terrestrial	mol N eq.	1,79E-02	2,64E-01	0	1,23E-01
POCP	kg NMVOC eq.	5,34E-03	1,05E-01	0	3,67E-02
ADP-minerals&metals	kg Sb eq.	1,31E-08	6,39E-07	0	9,10E-08
ADP-fossil	MJ	4,90E+00	3,26E+02	0	3,44E+01
WDP	m <sup>3</sup>	4,02E-03	1,07E-01	0	2,84E-02

#### Acronyms:

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; EP-marine = Eutrophication potential. fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential. Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential. deprivation-weighted water consumption.

### Variation in mandatory environmental impact indicators for the product

The best and worst values are shown compared to the weighted average declared in the EPD:

Indicator	Variation (modules A - C) Manufactured / Distributed
GWP-GHG	6% / -6%
GWP-total	6% / -6%
GWP-fossil	6% / -6%
GWP-biogenic	7% / -7%
GWP-luluc	16% / -15%
ODP	61% / -60%
AP	2% / -2%
EP-freshwater	3% / -3%
EP-marine	2% / -2%
EP-terrestrial	2% / -2%
POCP	3% / -3%
ADP-minerals& metals	9% / -9%
ADP-fossil	21% / -20%
WDP	6% / -6%

# Additional environmental information

## By-products

The manufacture of reinforcement steel products do not generate by-products.

## Indoor air emissions

The manufacturer declares that reinforcement steel products does not generate indoor air emissions during its useful life.

## Emissions to soil and water

The manufacturer declares that reinforcement steel products does not generate emissions to soil or water during its useful life.

# Abbreviations

Abbreviation	Definition
<b>General Abbreviations</b>	
EN	European Norm (Standard)
EF	Environmental Footprint
GPI	General Programme Instructions
ISO	International Organization for Standardization
CEN	European Committee for Standardization
SVHC	Substances of Very High Concern
ND	Not Declared
EPD	Environmental Product Declaration
EUR	European Union
GLO	Global
LCA	Life Cycle Assessment
PCR	Product Category Rules
DQR	Data Quality Rating

# References

- A. PCR 2019:14 Construction products, version 2.0.1 Date 2025-06-05. Valid until: 2030-04-07
- B. EN 15804:2012+A2:2019/AC:2021. Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products.
- C. General Programme Instructions for the Internacional EPD® System. Version 5.0.1 (Date 2025-02-27).
- D. Databases and methodologies of environmental impact applied through SimaPro 10.3.0.1.
- E. UNE-EN ISO 14025:2010. Environmental labels and declarations. Type III environmental declarations. Principles and procedures (ISO 14025:2006).
- F. UNE-EN ISO 14040:2006/A1:2021. Environmental management. Life cycle assessment. Principles and framework. Amendment 1 (ISO 14040:2006/Amd 1:2020).
- G. UNE-EN ISO 14044:2006/A2:2021. Environmental management. Life cycle assessment. Requirements and guidelines. Amendment 2 (ISO 14044:2006/Amd 2:2020).
- H. Life Cycle Assessment report for the Environmental Product Declarations for Reinforcement Steel Products Manufactured At 7 Steel Service Finland by Abaleo S.L., February 2026. Version 1.
- I. EPD-IES-0004910:006– Steel billets Norwegian production from 7 Steel Nordic Manufacturing AS. Valid until 2031-03-12.

# Version history

## Original Version of the EPD, 2012-04-26

### Revision 1 EPD Version: 2021-09-22

The value in the current EPD is thus decreased by the value in the previous EPD. A positive difference thus gives an increase in relation to the previous EPD. The decrease in A1 has been achieved by the exchange of carbon monoxide as a fuel for primary and secondary petroleum fuels and by a decreased use of calcined dolomite at the mill in Mo i Rana.

The calculated increase in A3 is due to a minor increase in the reported use of thermal energy from fuel oil and propane. It is hardly significant, nor is the calculated increase in A2.

### Revision 2: 2026-04-27

Differences between the EPD and previous version:

- The methodology has been updated from EF 3.0 to EF 3.1.
- Ecoinvent database has been updated from v3.7 to v3.11.
- Software has been changed from GaBi (Sphera Solutions GmbH) to SimaPro 10.3.0.1.
- PCR version updated to 2019:14 v version 2.0.1.
- This EPD includes the average of two different groups of products, manufactured products and products that are only resold and distributed.
- Updated to 2024 data.

## VERIFICATION STATEMENT CERTIFICATE CERTIFICADO DE DECLARACIÓN DE VERIFICACIÓN

Certificate No. / Certificado nº: EPD14905

CERTINALIA, S.L.U., confirms that independent third-party verification has been conducted of the Environmental Product Declaration (EPD) on behalf of:

*CERTINALIA, S.L.U., confirma que se ha realizado verificación de tercera parte independiente de la Declaración Ambiental de Producto (DAP) en nombre de:*

**7 Steel Service Finland Oy  
Valssaamontie 171  
10410 Äminnefors  
Finland**

for the following products:  
*para los siguientes productos:*

**Steel reinforcement products for concrete - Finland production**  
***Armadura de acero hormigón fabricado en Finlandia***

with registration number **EPD-IES-0000307** in the International EPD® System ([www.environdec.com](http://www.environdec.com))  
*con número de registro EPD-IES-0000307 en el Sistema Internacional EPD® (www.environdec.com)*

it's in conformity with:  
*es conforme con:*

- **ISO 14025:2010 Environmental labels and declarations. Type III environmental declarations.**
- **General Programme Instructions for the International EPD® System v5.**
- **PCR 2019:14 Construction products (EN 15804:A2) version 2.0.**
- **UN CPC 41241 Bars and rods, hot-rolled, in irregularly wound coils, of alloy steel.**
- **UN CPC 41242 Other bars and rods of alloy steel, not further worked than hot-rolled, hot-drawn or extruded.**

Issued date / Fecha de emisión: 27/04/2026  
Update date / Fecha de actualización: 27/04/2026  
Serial N° / N° Serie: EPD1490500-E



Carlos Nazabal Alsua  
Manager



*The validity of this certificate is subject to the validity of its related EPD.  
La validez de este certificado está sujeta a la vigencia de su correspondiente EPD.*

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