Environmental Product Declaration

Color coated with SSAB Zero™ steel sheets and coils

Color coated coil
Color coated sheet
Color coated slit coil

EPD of multiple products, based on the average results of the product group

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

Programme: The International EPD® System, www.environdec.com
Programme operator: EPD International AB
EPD owner: SSAB Europe Oy
EPD registration number: EPD-IES-0018720:002
Version date: 2026-06-04
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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.

Contents

1. General information

PROGRAM INFORMATION

Program:	The International EPD® System
Address:	EPD International AB Box 210 60 SE-100 31 Stockholm Sweden
Website:	www.environdec.com
Email:	support@environdec.com

Accountabilities for PCR, LCA and independent, third-party verification
Product Category Rules (PCR)
Core product category rules: CEN standard EN 15804 serves as the core PCR.
Product category rules: PCR 2019:14 Construction products. Version 2.0.1. Date 2025-06-05.
Product group classification: UN CPC 412.
PCR review was conducted by: The Technical Committee of the International EPD System. A full list of members is available on www.environdec.com. The review panel may be contacted via support@environdec.com. Review chair: Rob Rouwette (chair), Noa Meron (co-chair)
Life Cycle Assessment (LCA)
LCA accountability: Emanuel Lindbäck, SSAB Europe Oy.
Third-party verification
External and independent ('third-party') verification of the declaration and data, according to ISO 14025:2006, via EPD verification through: ☒ Individual EPD verification without a pre-verified LCA/EPD tool Third-party verifier: David Althoff Palm, Dalemarken AB. Approved by: The International EPD® System
Procedure for follow-up of data during EPD validity involves third party verifier: ☒ Yes ☐ No [Procedure for follow-up the validity of the EPD is at minimum required once a year with the aim of confirming whether the information in the EPD remains valid or if the EPD needs to be updated during its validity period. The follow-up can be organized entirely by the EPD owner or together with the original verifier via an agreement between the two parties. In both approaches, the EPD owner is responsible for the procedure being carried out. If a change that requires an update is identified, the EPD shall be re-verified by a verifier]

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.

1.1 SSAB'S VISION – A STRONGER, LIGHTER AND MORE SUSTAINABLE WORLD

SSAB is a global steel company with a leading position in high-strength steels and related services. The company is a frontrunner in the green transformation of the steel industry and aims to largely eliminate carbon dioxide emissions from its operations and together with suppliers and customers create a fossil-free value chain.

SSAB's production sites are in Sweden, Finland and the USA and have an annual crude steel production capacity of 8.8 million tonnes. SSAB Europe is responsible for sales of strip, heavy plate, and tubular products in Europe as well as for the global business in the Automotive customer segment. SSAB Special Steels has global responsibility for sales of SSAB's quenched and tempered (Q&T) steels and advanced high-strength steels (AHSS). SSAB Americas is the largest heavy plate producer in North America and has a strong position based on cost efficiency and quality. During 2023, the company started production of SSAB Zero™, a steel based on recycled steel and made using primary fossil-free electricity, biocoal and biofuels.

SSAB Zero™ steels without the color coatings are 100 % recyclable and are made from a unique production process with the steel being 100 % recycled. This reduces the environmental impacts of steelmaking while maintaining SSAB's strict quality standards.

1.2 COMPANY INFORMATION

EPD owner:
SSAB Europe Oy, Kaisa Ahvonen, Harvialantie 420, 13300 Hämeenlinna, Finland.

Description of the organizations:
- SSAB Europe is responsible for strip, heavy plate, and tubular products in Europe as well as for the global business in the Automotive customer segment. SSAB Europe is also responsible for color coated products.
- SSAB Americas is responsible for heavy plate products in North America and for SSAB Zero™ slabs for SSAB Europe.

Name and location of production sites:
- SSAB Americas (Iowa, USA): 1770 Bill Sharp Boulevard, Muscatine, 52761 Iowa (USA).
- SSAB Europe Oy (Raahe, Finland): Rautaruukintie 155, 92100 Raahe (Finland).
- SSAB EMEA AB (Borlänge, Sweden): Kontorsviksvägen 1, 781 84 Borlänge (Sweden).
- SSAB Europe Oy (Hämeenlinna, Finland): Harvialantie 420, 13300 Hämeenlinna (Finland).

Color coating either in:
- SSAB Europe Oy (Hämeenlinna, Finland): Harvialantie 420, 13300 Hämeenlinna (Finland) or
- SSAB Europe Oy (Kankaanpää, Finland): Rautatienkatu 19, 38700 Kankaanpää (Finland) or
- SSAB EMEA AB (Finspång, Sweden): Brunnshusvägen, 612 37 Finspång (Sweden).

Certifications:
Certificates applicable to SSAB sites are ISO 14001 and ISO 9001.

Contact:
EPDssab@ssab.com.

2. Product information

2.1 PRODUCT TECHNICAL INFORMATION AND APPLICATIONS

GreenCoat® color coated steel products are used in the construction industry, light engineering, indoor applications, and transportation. GreenCoat® products are typically highly resistant to corrosion, UV radiation and mechanical wear. They provide builders with a lightweight material that is easy to work with, even down to -15°C.

GreenCoat® BT products – BT stands for Bio-based Technology - offer a coating where rapeseed oil and other renewable raw materials have been used. SSAB has long experience of Bio-based Technology in GreenCoat® products. GreenCoat® products are free of hexavalent chromium Cr(VI), recyclable and REACH compliant.

GreenCoat® products are available in a wide variety of colors and finishes. The thickness range is from 0.45 mm to 1.5 mm, but availability depends on the product and width concerned. All SSAB color coated products are manufactured according to EN 10169.

This EPD is valid for the following GreenCoat® and color coated products with SSAB Zero™ steels:

- GreenCoat Pural BT – offers the highest level of durability with very scratch resistant and formable coating for roofing and façade applications.
- GreenCoat Pro BT – a highly durable roofing product with optimized properties for tiles and profiles.
- GreenCoat Crown BT – a product with optimized properties for tile profiles and modular roofing. The matt version of the product has excellent color and gloss repeatability.
- GreenCoat Mica BT – a roofing product with an exclusive, glittery surface.

- GreenCoat FoodSafe BT – a sustainable interior product for the food industry's needs.
- Polyester – a product used in warehouses, agricultural constructions, halls and sheds.
- Polyester Indoor – a product with a wide range of special colors and glosses for indoor applications.

For more detailed information about technical product properties and the product portfolio, please visit www.ssab.com.

2.2 PRODUCT DESCRIPTION

The scope of this EPD is GreenCoat® and color coated products with SSAB Zero™ steels listed above. SSAB Zero™ is made using 100 % recycled steel, of which over 90 % comes from external scrap (post- and pre-consumer) and the remainder from internal scrap from the manufacturing process.

The steel is an alloy of mainly iron and carbon, with small amounts of alloying and trace elements. Alloying elements improve the chemical and physical properties of steel, such as strength, ductility, and durability. The exact composition of the steel manufactured by SSAB depends on product requirements, either from national and/or international standards, such as EN 10346, or on customer-specific standards. SSAB's unique products also have their own specific requirements.

The base material in color coated products is typically metal coated steel. The metal coating, which is on both sides of the steel, is lead (Pb) free and has a zinc content of 92–100%. Its role is to prevent corrosion by keeping oxygen and water away from the steel and by acting as a cathodic protection. At cut edges or in case of damage through the metal coating, the coating will sacrifice itself and react to form a protective compound and block further corrosion processes.

SSAB's color coated products typically have two paint layers, on both sides of the strip, and a pre-treatment. These are applied typically to the metal coated steel in an automated process and cured at high temperature in a controlled process.

Pre-treatment improves the corrosion resistance and gives a good adhesion to the primer. The primer also protects the product from corrosion and gives good adhesion to the topcoat. The topcoat is chosen based on the product's end application. It gives the color and other chosen visual effects, but also largely defines the product's overall performance. The total thickness of the color coating varies between 25 – 50 µm, depending on the product.

The sheet reverse side is typically painted with a two-layer gray reverse side coating which further enhances the product's corrosion resistance. The reverse side coating is optimized to give good adhesion for adhesive bonded or foam filled sandwich panels. Where particular technical or esthetic requirements are set for the reverse side, the coating can be selected accordingly. Typical overall reverse side coating thickness is 12 µm.

Content declaration and average chemical composition is presented in section 4.2. More detailed information on the different steel compositions is available from national and international standards, and on www.ssab.com. In Annex 1 the typical chemical contents of SSAB color coatings are presented.

2.3 LABELING AND PACKAGING

SSAB color coated products are labeled to be easily identifiable and traceable. The reverse side of the sheet is stamped with the GreenCoat logo and the product name. The production date is marked to ease material traceability and can be referred to within the guarantee period.

The packaging and protection type of SSAB steel products is specified when ordering.

Steel bands or strappings, wood props, paper or plastic film, corner protection and other accessories supporting packaging are used as appropriate, depending on the protection needed. Paper and plastic film are usually used for cut-to-lengths packaging. The bundles are fastened with strap bands.

Depending on orders, coils can be delivered fastened with or without a base, protected with cardboard or laminated plastic, and plastic or metallic end rings, metallic corner protection and strapping bands.

3. Production and transportation

3.1 PRODUCTION SITES

SSAB Zero™ steel slabs are manufactured at SSAB Iowa in the USA. Production is based on an electric arc furnace (EAF) using scrap steel as a raw material and primary fossil-free electricity and biocoal. Scrap steel along with raw materials, such as charge/injection carbon, lime and other additives, are added to the EAF, where electricity is used to melt the batch and make molten steel. The molten steel is cast into slabs.

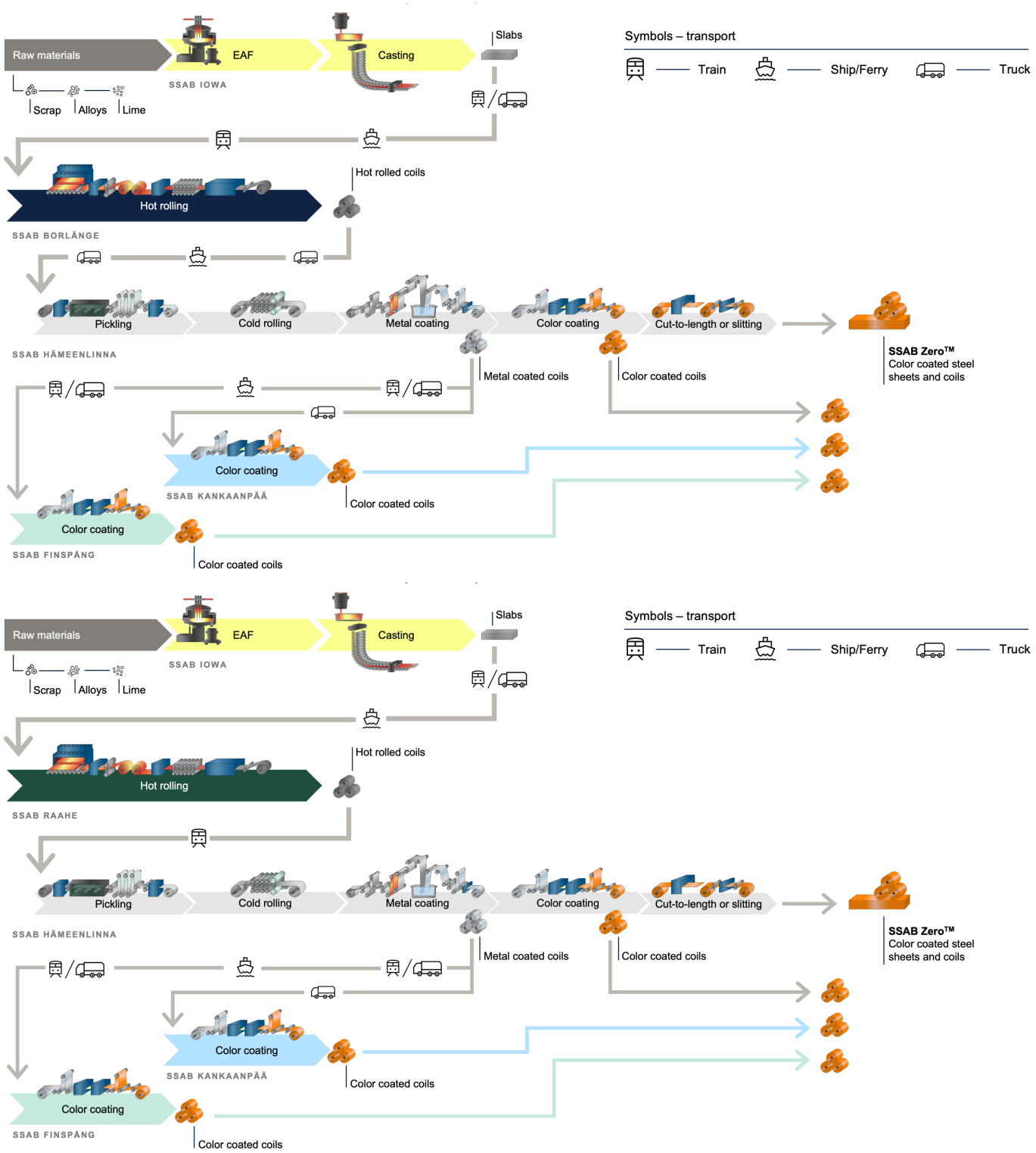
SSAB Zero™ steel slabs are either shipped to Finland, where they are hot rolled at SSAB Raahe or shipped to Sweden, where they are hot rolled at SSAB Borlänge. In both cases:

- pickled, cold rolled and metal coated at SSAB Hämeenlinna (Finland),
- color coated at either SSAB Hämeenlinna, SSAB Kankaanpää (Finland) or SSAB Finspång (Sweden).

Co-products, such as slag, mill scale and iron oxide, generated from SSAB's steel production processes are recycled as industrial raw materials or materials to replace virgin resources. A high percentage of the baghouse dust originating from the EAF process is recycled to reduce waste and improve efficiency. However, no emissions were allocated to co-products in this EPD.

FIGURE 1. SSAB Zero™ production sites and transportation between sites.

Color Coated Steel with SSAB Zero™ – main production processes



3.2 TRANSPORTATION

SSAB Zero™ steel slabs from SSAB Iowa are transported via rail or truck to a port and shipped either to Finland, SSAB Raahe and after hot rolling transported by rail to SSAB Hämeenlinna or the slabs are shipped to Sweden, where they are transported by rail to SSAB Borlänge to be hot rolled. SSAB Zero™ hot rolled coils are shipped from SSAB Borlänge to Finland and transported by truck to SSAB Hämeenlinna to be pickled, cold rolled and metal coated. After metal coating, the coils are color coated either at SSAB Hämeenlinna, SSAB Kankaanpää (Finland) or at SSAB Finspång (Sweden). The metal coated coils are transported from Hämeenlinna to Kankaanpää by truck and to Finspång by truck or train and ferry.

4. LCA

4.1 LCA INFORMATION

Declared unit:
1 kg of product

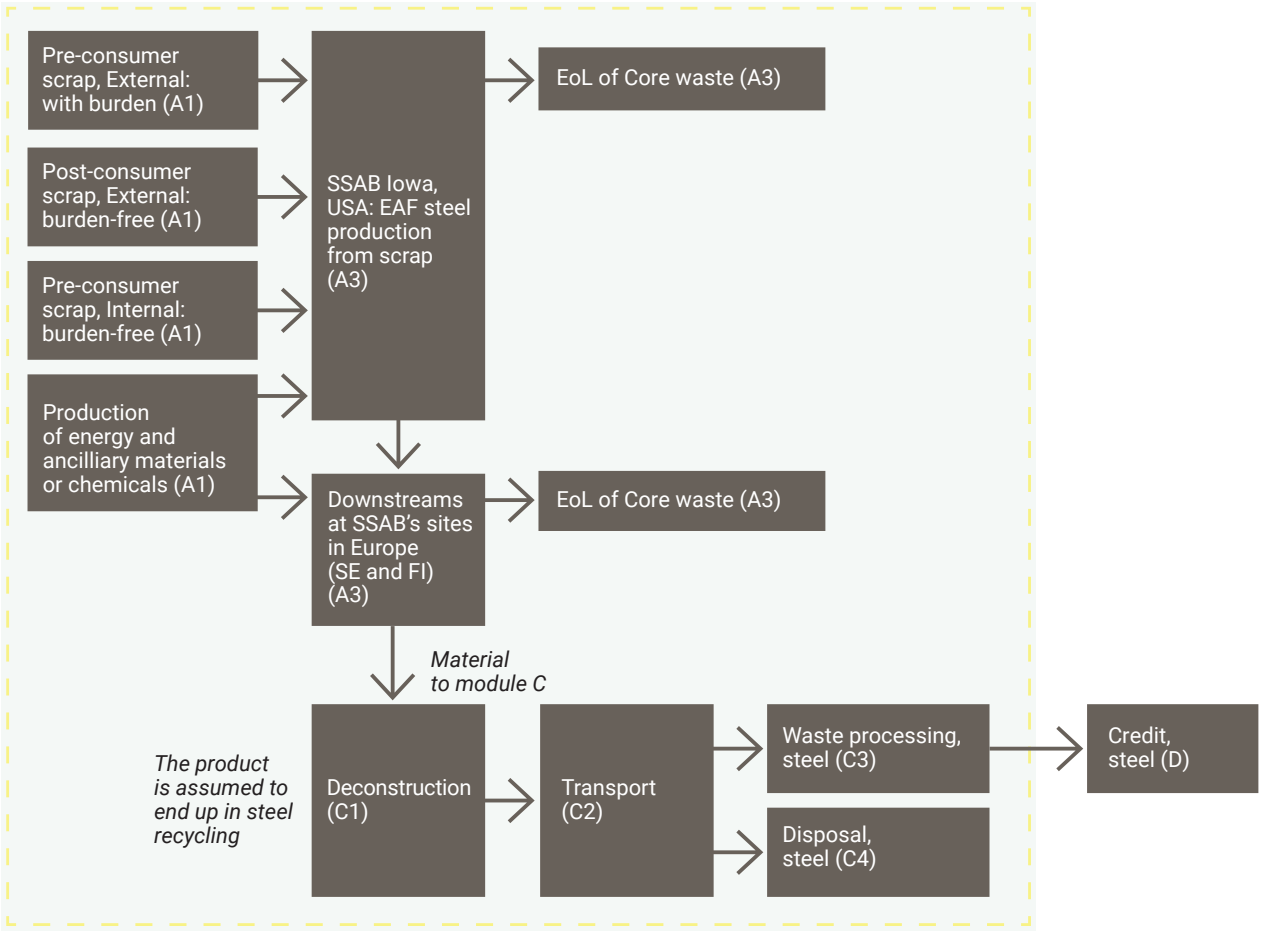
Reference service life:
The minimum service life equal to the technical performance guarantee time for the respective product defined in the GreenCoat® European guarantee provided that the coating is maintained according the SSAB's GreenCoat® Maintenance instructions. Both the Guarantee and Maintenance instructions are published on www.ssab.com/GreenCoat and are also available from SSAB technical support upon request.

Description of system boundaries:
The system boundaries are type a, cradle-to-gate with modules C1– C4 and module D (A1–A3 + C + D).

Time representativeness:
2025 for the slabs production at SSAB Iowa,
2022 for the steel processing at SSAB Borlänge,
2025 for the slabs production atSSAB Raahe,
2025 for the steel processing at SSAB Hämeenlinna, Kankaanpää, and Finspång.

Database(s) and LCA software used:
The LCA was modelled using the LCA software LCA for Experts and corresponding database (version 2026.1) provided by Sphera.

System diagram:



- Module A1: Production of raw materials and production of fuels
- Module A2: Transportation of raw materials to SSAB's manufacturing site (including transport of steel between SSAB sites)
- Module A3: Manufacturing of steel products and management of production waste
- Module C1: Deconstruction of the product
- Module C2: Transport to waste processing and disposal
- Module C3: Waste processing of the product, to be sent to steel recycling
- Module C4: Disposal of the remaining part of the product in a landfill
- Module D: Benefits from recycling the steel

Allocation:
Pre-consumer scrap is used in the production of steel. The environmental burden from the use of this scrap is allocated based on economic value by making a conservative assumption equal to 5% of virgin (blast-furnace based) steel. This corresponds to a value of 0.1 kg CO_2eq per kg of pre-consumer scrap.

Co-product allocation has been applied to the scrap generated in modules A1 – A3 as per PCR 2019:14, wherein the impacts are allocated to the declared product, based on negligible economic value to scrap as compared to the steel products.

Cut-off criteria:
The maximum cut-off criteria established by the PCR and EN 15804:2012+A2:2019 standard is 1 % of all material and energy flows to a single unit process and 5 % of total inflows (mass and energy) to the upstream and core module. No cut-offs exceeding this limit have been made.

Inclusion of infrastructure and capital goods:
Infrastructure and capital goods are not included in any of the modules covered in this EPD. For the electricity sources of renewable origin (within the residual mix), the infrastructure of the power plant is included.

Electricity information:
The electricity used in the production of the steel slabs at SSAB Iowa is a mix supported by a contractual document. The mix is based on 91.3 % wind and 8.7 % nuclear, corresponding to a GWP-GHG impact of 0.0093 kg CO_2 eq per kWh.

At SSAB Raahe some of the electricity used is produced internally (corresponding to a GWP-GHG impact of 2.0 kg CO_2eq per kWh, respectively). For external electricity, the residual electricity mix for Finland has been applied (corresponding to a GWP-GHG impact of 0.59 kg CO_2eq per kWh, respectively).

At SSAB Borlänge, SSAB Hämeenlinna, SSAB Kankaanpää and SSAB Finspång only external electricity is used. The residual electricity mix for Sweden has been applied (corresponding to a GWP-GHG impact of 0.12 kg CO_2eq per kWh). The residual electricity mix for Finland has been applied (corresponding to a GWP-GHG impact of 0.59 kg CO_2eq/kWh).

Scenario for module C1:
The product is being deconstructed by a machine powered by diesel.

Scenario for module C2:
The waste is transported 80 km by truck to waste processing (C3) and disposal (C4). (Truck, diesel, Euro VI, 26-28t gross weight, 50% utilization)

Scenario for module C3:
98 % of the product is assumed to be processed in order to be sent for recycling in an EAF.

Scenario for module C4:
2 % of the product is assumed to be disposed of as waste at a landfill.

Scenario for module D:
The environmental benefit of the recycled steel is gained through the avoided production of primary steel. This benefit corresponds to -1.7 kg CO_2eq per kg of scrap in module D. The net flow of the recycled steel being credited in module D corresponds to 0.12 kg and is based on an assumed recycling rate of 98 % and an assumption of yield losses in the steel recycling process.

The same net flow to Module D is assumed for color coated and non-coated steel, representing a conservative approach.

Weighted average for the EPD:
The results represent a weighted average based on the production volumes for the product group.

Modules declared, geographical scope, share of specific data (in GWP-GHG indicator) and data variation

Life cycle stage	Module		Modules declared	Geography	Share of primary data	Variation - products	Variation - sites
Product stage	Raw material supply	A1	X	GLO	59 %	+4 % -4 %	<10 %
	Transport	A2	X	US & EU			
	Manufacturing	A3	X	US, SE & FI			
Construction process stage	Transport	A4	ND	-	-	-	-
	Construction installation	A5	ND	-	-	-	-
Use stage	Use	B1	ND	-	-	-	-
	Maintenance	B2	ND	-	-	-	-
	Repair	B3	ND	-	-	-	-
	Replacement	B4	ND	-	-	-	-
	Refurbishment	B5	ND	-	-	-	-
	Operational energy use	B6	ND	-	-	-	-
	Operational water use	B7	ND	-	-	-	-
End of life stage	De-construction demolition	C1	X	EU	-	-	-
	Transport	C2	X	EU	-	-	-
	Waste processing	C3	X	EU	-	-	-
	Disposal	C4	X	EU	-	-	-
Resource recovery stage	Reuse-Recovery-Recycling-potential	D	X	EU	-	-	-

X: Module Declared
ND: Module not declared
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.

4.2 DATA QUALITY ASSESSMENT

A data quality assessment has been performed for the processes that together account for at least 80% of the environmental impact for any of the reported indicators within life cycle stages A1–A3. Processes contributing more than 10% to GWP GHG are listed below.

Process	Source type	Source	Reference year	Data category	Share of primary data, of GWP-GHG results for A1–A3
Metal coated steel production*	Collected data Database data	EPD owner Sphera MLC 2026.1	2022-2025	Primary data Secondary data	48 %
Fuels used in manufacturing	Collected data Database data	EPD owner Sphera MLC 2026.1	2022-2025	Primary data	7 %
Color coating	Collected data	Supplier data	2020-2024	Secondary data	0 %
Other processes	Collected data Database data	Sphera MLC 2026.1	2022-2025	Primary data Secondary data	4 %
Total share of primary data, of GWP-GHG results for A1– A3					59 %

**Some alloying materials used in slab production are based on secondary data that have been evaluated as poor or very poor with respect to geographical and/or technical representativeness in the data quality assessment. In addition, certain alloying materials contribute more than 30% to one or more core environmental impact indicators. These specific datasets have been evaluated as Fair with respect to geographical and technical representativeness.*

4.3 PRODUCT CONTENT DECLARATION

Pre- and post-consumer scrap content is 81.4 %. Recycled material content with internal pre-consumer scrap is 88.4 %. SSAB's scrap management and recycled content methodology are aligned with ISO 14021.

Content declaration and average chemical composition of GreenCoat® and color coated products with SSAB Zero™ steels per kg produced is:

Product Composition	Weight (%)	Weight (kg)	Biogenic carbon, weight (%)	Biogenic carbon, weight (kg)
Pre-consumer scrap	2.9 %	0.03	0 %	0
Post-consumer scrap	78.5 %	0.79	0 %	0
Internal scrap	7.0 %	0.07	0 %	0
Alloys	1.8 %	0.02	0 %	0
Metal Coating	6.4 %	0.06	0 %	0
Color coatings	3.3 %	0.03	0.04 %	0.0004
Average chemical composition*				
Iron (Fe)	> 88 %			
Manganese (Mn)	0.2 %			
Silicon (Si)	0.1 %			
Carbon (C)	0.2 %			
Zinc (Zn)	6.5 %			
Polymeric coating	3.4 %			
Other	< 1.5 %			

**SSAB Zero™ is based on recycled scrap, which may contain small amounts of residual elements such as copper and tin. The figures provided represent the best estimate at the time of publication.*

Content Declaration of packaging material	Weight (kg)	Weight % (of product)	Biogenic carbon, weight (kg/declared unit)
Wood	0.0059	0.59 %	0.0025
Steel straps	0.0023	0.23 %	

The production of the packaging materials has been omitted since it falls under the cut-off limit. The content of biogenic material in the packaging is 0.0025 kg per kg of steel.

The products do not contain any of the substances of very high concern (SVHC) regulated by the Regulation (EC) No 1907/2006 (REACH) of the European Parliament and of the Council.

4.4 ENVIRONMENTAL PERFORMANCE INDICATOR RESULTS

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. 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).

Potential environmental impact – mandatory indicators according to EN 15804+A2 (version EF 3.1)

Results per declared unit: 1 kg of product								
Indicator		**Unit**	**A1 – A3**	**C1**	**C2**	**C3**	**C4**	**D**
Global warming potential (GWP)	Climate Change - fossil	kg CO_2 eq	**1.1**	3.7E-04	8.7E-03	3.7E-03	1.1E-05	-2.0E-01
	Climate Change - biogenic	kg CO_2 eq	2.0E-03	3.7E-07	1.9E-05	1.0E-04	1.1E-08	4.2E-05
	Climate Change - land use and land use change (LULUC)	kg CO_2 eq	1.3E-03	1.5E-06	8.6E-05	1.4E-05	4.2E-08	-2.6E-05
	Climate Change - total	kg CO_2 eq	**1.1**	3.7E-04	8.8E-03	3.9E-03	1.1E-05	-2.0E-01
Depletion potential of the stratospheric ozone layer (ODP)		kg CFC-11 eq	1.2E-08	7.0E-17	9.8E-16	3.2E-14	2.0E-18	2.7E-13
Acidification potential (AP)		mole H+ eq	5.5E-03	3.1E-06	1.3E-05	2.7E-05	9.1E-08	-4.9E-04
Eutrophication potential (EP)	Freshwater	kg P eq	2.0E-05	8.7E-10	2.3E-08	7.9E-09	2.5E-11	-4.6E-08
	Marine	kg N eq	1.1E-03	1.5E-06	5.2E-06	1.3E-05	4.4E-08	-7.8E-05
	Terestrial	mole N eq	1.2E-02	1.7E-05	5.5E-05	1.4E-04	4.8E-07	-7.0E-04
Formation potential of tropospheric ozone (POCP)		kg NMVOC eq	3.3E-03	4.1E-06	1.1E-05	3.5E-05	1.2E-07	-3.2E-04
Abiotic depletion potential (ADP)	Minerals and metals*	kg Sb eq	1.4E-04	2.5E-11	5.5E-10	3.8E-10	7.2E-13	-1.1E-06
	Fossil resources*	MJ	1.6E+01	4.4E-03	1.1E-01	5.0E-02	1.3E-04	-2.0E+00
Water scarcity potential (WDP)*		m^3 world eq	2.5E+00	1.2E-06	3.3E-05	1.5E-04	3.4E-08	-1.3E-02

** Disclaimer: The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator.*
Note: Biogenic carbon in packaging is balanced in A1 – A3.

Additional mandatory and voluntary impact category indicators

Results per declared unit: 1 kg of product								
Indicator		**Unit**	**A1 – A3**	**C1**	**C2**	**C3**	**C4**	**D**
Global warming potential (GWP)	GWP-GHG (1)	kg CO_2 eq	**1.1**	3.7E-04	8.8E-03	3.8E-03	1.1E-05	-2.0E-01

(1) 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 characterisation factor for biogenic CO_2 is set to zero.

Resource use indicators

Results per declared unit: 1 kg of product								
Indicator		**Unit**	**A1 – A3**	**C1**	**C2**	**C3**	**C4**	**D**
Primary energy resources – Renewable	Used as energy carrier (PERE)	MJ	7.7E+00	3.1E-04	7.8E-03	1.3E-02	8.9E-06	7.8E-02
	Used as raw materials (PERM)	MJ	4.2E-02	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
	Total (PERT)	MJ	7.8E+00	3.1E-04	7.8E-03	1.3E-02	8.9E-06	7.8E-02
Primary energy resources – Non-renewable	Used as energy carrier (PENRE)	MJ	1.5E+01	4.4E-03	1.1E-01	5.0E-02	1.3E-04	-2.0E+00
	Used as raw materials (PENRM)	MJ	1.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
	Total (PENRT)	MJ	1.6E+01	4.4E-03	1.1E-01	5.0E-02	1.3E-04	-2.0E+00
Use of secondary material (SM)		kg	1.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Use of renewable secondary fuels (RSF)		MJ	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Use of non renewable secondary fuels (NRSF)		MJ	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Net use of fresh water (FW)		m^3	6.0E-02	9.0E-08	3.8E-06	7.2E-06	2.6E-09	-2.0E-02

Note: Primary energy calculated using PCR option B.
As the color coatings are burned during the recycling of steel, PERM and PENRM adjustment in module C is not relevant (option B in PCR-annex 3 has been applied).

Waste indicators

Results per declared unit: 1 kg of product							
Indicator	**Unit**	**A1 – A3**	**C1**	**C2**	**C3**	**C4**	**D**
Hazardous waste disposed (HWD)	kg	4.7E-06	1.9E-13	3.9E-12	2.2E-11	5.4E-15	-1.5E-08
Non-hazardous waste disposed (NHWD)	kg	1.9E-01	8.2E-07	1.4E-05	1.8E-05	2.4E-08	2.4E-02
Radioactive waste disposed (RWD)	kg	9.1E-04	4.7E-09	1.4E-07	1.9E-06	1.4E-10	2.2E-07

Output indicators

Results per declared unit: 1 kg of product							
Indicator	**Unit**	**A1 – A3**	**C1**	**C2**	**C3**	**C4**	**D**
Components for re-use (CRU)	kg	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Materials for recycling (MFR)	kg	0.0E+00	0.0E+00	0.0E+00	9.8E-01	0.0E+00	0.0E+00
Material for energy recovery (MER)	kg	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Exported electrical energy (EEE)	MJ	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Exported thermal energy EET)	MJ	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

Disclaimer

ILCD classification	Indicator	Disclaimer
ILCD Type 1	Global warming potential (GWP)	None
	Depletion potential of the stratospheric ozone layer (ODP)	None
	Potential incidence of disease due to PM emissions (PM)	None
ILCD Type 2	Acidification potential, Accumulated Exceedance (AP)	None
	Eutrophication potential, Fraction of nutrients reaching freshwater end compartment (EP-freshwater)	None
	Eutrophication potential, Fraction of nutrients reaching marine end compartment (EP-marine)	None
	Eutrophication potential, Accumulated Exceedance (EP-terrestrial)	None
	Formation potential of tropospheric ozone (POCP)	None
	Potential Human exposure efficiency relative to U235 (IRP)	1
ILCD Type 3	Abiotic depletion potential for non-fossil resources (ADP-minerals&metals)	2
	Abiotic depletion potential for fossil resources (ADP-fossil)	2
	Water (user) deprivation potential, deprivation-weighted water consumption (WDP)	2
	Potential Comparative Toxic Unit for ecosystems (ETP-fw)	2
	Potential Comparative Toxic Unit for humans (HTP-c)	2
	Potential Comparative Toxic Unit for humans (HTP-nc)	2
	Potential Soil quality index (SQP)	2

Disclaimer 1 – 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.

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.

Variation in environmental indicators

The table below shows the variation for modules A – C where the difference between products is greater than 10 %.

GreenCoat® with SSAB Zero™ steel sheets and coils	
Environmental impact indicator	**Difference (%)**
GWP-biogenic	16 %
GWP-LUC	43 %
ODP	53 %
EP-fresh	33 %
EP-marine	15 %
EP-terrest	13 %
POCP	12 %
ADP-fossil	13 %
Water scarcity	75 %

4.5 END-OF-LIFE STAGE SCENARIO FOR 100% RECYCLING

Potential environmental impact – mandatory indicators according to EN 15804+A2 (version EF 3.1)

Results per declared unit: 1 kg of product							
Indicator		**Unit**	**C1**	**C2**	**C3**	**C4**	**D**
Global warming potential (GWP)	Climate Change - fossil	kg CO_2 eq	3.7E-04	8.7E-03	3.8E-03	0.0E+00	-2.0E-01
	Climate Change - biogenic	kg CO_2 eq	3.7E-07	1.9E-05	1.1E-05	0.0E+00	4.3E-05
	Climate Change - land use and land use change (LULUC)	kg CO_2 eq	1.5E-06	8.6E-05	1.4E-05	0.0E+00	-2.7E-05
	Climate Change - total	kg CO_2 eq	3.7E-04	8.8E-03	3.8E-03	0.0E+00	-2.0E-01
Depletion potential of the stratospheric ozone layer (ODP)		kg CFC-11 eq	7.0E-17	9.8E-16	3.2E-14	0.0E+00	2.7E-13
Acidification potential (AP)		mole H+ eq	3.1E-06	1.3E-05	2.8E-05	0.0E+00	-5.0E-04
Eutrophication potential (EP)	Freshwater	kg P eq	8.7E-10	2.3E-08	8.0E-09	0.0E+00	-4.7E-08
	Marine	kg N eq	1.5E-06	5.2E-06	1.3E-05	0.0E+00	-8.0E-05
	Terestrial	mole N eq	1.7E-05	5.5E-05	1.4E-04	0.0E+00	-7.2E-04
Formation potential of tropospheric ozone (POCP)		kg NMVOC eq	4.1E-06	1.1E-05	3.6E-05	0.0E+00	-3.2E-04
Abiotic depletion potential (ADP)	Minerals and metals*	kg Sb eq	2.5E-11	5.5E-10	3.9E-10	0.0E+00	-1.2E-06
	Fossil resources*	MJ	4.4E-03	1.1E-01	5.1E-02	0.0E+00	-2.0E+00
Water scarcity potential (WDP)*		m^3	1.2E-06	3.3E-05	1.5E-04	0.0E+00	-1.4E-02

** Disclaimer: The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator.*
Note: Biogenic carbon in packaging is balanced in A1 – A3.

Additional mandatory and voluntary impact category indicators

Results per declared unit: 1 kg of product							
Indicator		**Unit**	**C1**	**C2**	**C3**	**C4**	**D**
Global warming potential (GWP)	GWP-GHG (1)	kg CO_2 eq	3.7E-04	8.8E-03	3.8E-03	0.0E+00	-2.0E-01

(1) 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 characterisation factor for biogenic CO_2 is set to zero.

Resource use indicators

Results per declared unit: 1 kg of product							
Indicator		**Unit**	**C1**	**C2**	**C3**	**C4**	**D**
Primary energy resources – Renewable	Used as energy carrier (PERE)	MJ	3.1E-04	7.8E-03	1.3E-02	0.0E+00	8.0E-02
	Used as raw materials (PERM)	MJ	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
	Total (PERT)	MJ	3.1E-04	7.8E-03	1.3E-02	0.0E+00	8.0E-02
Primary energy resources – Non-renewable	Used as energy carrier (PENRE)	MJ	4.4E-03	1.1E-01	5.1E-02	0.0E+00	-2.0E+00
	Used as raw materials (PENRM)	MJ	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
	Total (PENRT)	MJ	4.4E-03	1.1E-01	5.1E-02	0.0E+00	-2.0E+00
Use of secondary material (SM)		kg	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Use of renewable secondary fuels (RSF)		MJ	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Use of non renewable secondary fuels (NRSF)		MJ	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Net use of fresh water (FW)		m^3	9.0E-08	3.8E-06	7.3E-06	0.0E+00	-2.1E-02

Note: Primary energy calculated using PCR option B.

Waste indicators

Results per declared unit: 1 kg of product						
Indicator	**Unit**	**C1**	**C2**	**C3**	**C4**	**D**
Hazardous waste disposed (HWD)	kg	1.9E-13	3.9E-12	2.2E-11	0.0E+00	-1.5E-08
Non-hazardous waste disposed (NHWD)	kg	8.2E-07	1.4E-05	1.9E-05	0.0E+00	2.4E-02
Radioactive waste disposed (RWD)	kg	4.7E-09	1.4E-07	1.9E-06	0.0E+00	2.2E-07

Output indicators

Results per declared unit: 1 kg of product						
Indicator	**Unit**	**C1**	**C2**	**C3**	**C4**	**D**
Components for re-use (CRU)	kg	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Materials for recycling (MFR)	kg	0.0E+00	0.0E+00	1.0E+00	0.0E+00	0.0E+00
Material for energy recovery (MER)	kg	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Exported electrical energy (EEE)	MJ	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Exported thermal energy (EET)	MJ	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

4.6 END-OF-LIFE STAGE SCENARIO FOR 100% LANDFILL

Potential environmental impact – mandatory indicators according to EN 15804+A2 (version EF 3.1)

Results per declared unit: 1 kg of product							
Indicator		**Unit**	**C1**	**C2**	**C3**	**C4**	**D**
Global warming potential (GWP)	Climate Change - fossil	kg CO_2 eq	3.7E-04	8.7E-03	0.0E+00	5.4E-04	0.0E+00
	Climate Change - biogenic	kg CO_2 eq	3.7E-07	1.9E-05	0.0E+00	5.3E-07	0.0E+00
	Climate Change - land use and land use change (LULUC)	kg CO_2 eq	1.5E-06	8.6E-05	0.0E+00	2.1E-06	0.0E+00
	Climate Change - total	kg CO_2 eq	3.7E-04	8.8E-03	0.0E+00	5.4E-04	0.0E+00
Depletion potential of the stratospheric ozone layer (ODP)		kg CFC-11 eq	7.0E-17	9.8E-16	0.0E+00	1.0E-16	0.0E+00
Acidification potential (AP)		mole H+ eq	3.1E-06	1.3E-05	0.0E+00	4.5E-06	0.0E+00
Eutrophication potential (EP)	Freshwater	kg P eq	8.7E-10	2.3E-08	0.0E+00	1.3E-09	0.0E+00
	Marine	kg N eq	1.5E-06	5.2E-06	0.0E+00	2.2E-06	0.0E+00
	Terestrial	mole N eq	1.7E-05	5.5E-05	0.0E+00	2.4E-05	0.0E+00
Formation potential of tropospheric ozone (POCP)		kg NMVOC eq	4.1E-06	1.1E-05	0.0E+00	6.0E-06	0.0E+00
Abiotic depletion potential (ADP)	Minerals and metals*	kg Sb eq	2.5E-11	5.5E-10	0.0E+00	3.6E-11	0.0E+00
	Fossil resources*	MJ	4.4E-03	1.1E-01	0.0E+00	6.4E-03	0.0E+00
Water scarcity potential (WDP)*		m^3	1.2E-06	3.3E-05	0.0E+00	1.7E-06	0.0E+00

** Disclaimer: The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator.*
Note: Biogenic carbon in packaging is balanced in A1 – A3.

Additional mandatory and voluntary impact category indicators

Results per declared unit: 1 kg of product							
Indicator		**Unit**	**C1**	**C2**	**C3**	**C4**	**D**
Global warming potential (GWP)	GWP-GHG [(1)]	kg CO_2 eq	3.7E-04	8.8E-03	0.0E+00	5.4E-04	0.0E+00

(1) 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 characterisation factor for biogenic CO_2 is set to zero.

Resource use indicators

Results per declared unit: 1 kg of product							
Indicator		**Unit**	**C1**	**C2**	**C3**	**C4**	**D**
Primary energy resources – Renewable	Used as energy carrier (PERE)	MJ	3.1E-04	7.8E-03	0.0E+00	4.5E-04	0.0E+00
	Used as raw materials (PERM)	MJ	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
	Total (PERT)	MJ	3.1E-04	7.8E-03	0.0E+00	4.5E-04	0.0E+00
Primary energy resources – Non-renewable	Used as energy carrier (PENRE)	MJ	4.4E-03	1.1E-01	0.0E+00	6.5E-03	0.0E+00
	Used as raw materials (PENRM)	MJ	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
	Total (PENRT)	MJ	4.4E-03	1.1E-01	0.0E+00	6.5E-03	0.0E+00
Use of secondary material (SM)		kg	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Use of renewable secondary fuels (RSF)		MJ	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Use of non renewable secondary fuels (NRSF)		MJ	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Net use of fresh water (FW)		m^3	9.0E-08	3.8E-06	0.0E+00	1.3E-07	0.0E+00

Note: Primary energy calculated using PCR option B.

Waste indicators

Results per declared unit: 1 kg of product						
Indicator	**Unit**	**C1**	**C2**	**C3**	**C4**	**D**
Hazardous waste disposed (HWD)	kg	1.9E-13	3.9E-12	0.0E+00	2.7E-13	0.0E+00
Non-hazardous waste disposed (NHWD)	kg	8.2E-07	1.4E-05	0.0E+00	1.2E-06	0.0E+00
Radioactive waste disposed (RWD)	kg	4.7E-09	1.4E-07	0.0E+00	6.8E-09	0.0E+00

Output indicators

Results per declared unit: 1 kg of product						
Indicator	**Unit**	**C1**	**C2**	**C3**	**C4**	**D**
Components for re-use (CRU)	kg	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Materials for recycling (MFR)	kg	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Material for energy recovery (MER)	kg	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Exported electrical energy (EEE)	MJ	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Exported thermal energy (EET)	MJ	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

5. Abbreviations

Abbreviation	Definition
EPD	Environmental product declaration
PCR	Product category rules
LCA	Life cycle assessment
EN	European norm (Standard)
ISO	International Organization for Standardization
Q&T	Quenched & tempered
AHSS	Advanced high-strength steel
OEM	Original equipment manufacturer
EAF	Electric arc furnace
CEN	European Committee for Standardization
CPC	Central product classification
EU	Europe
SE	Sweden
FI	Finland
GLO	Global
ND	Not declared
SVHC	Substances of Very High Concern

6. References

- General Programme Instructions of the International EPD® System. Version 5.0.0.
- PCR 2019:14 Construction products. Version 2.0.1 (2025-06-05)
- CEN European Committee for Standardisation (2021). EN15804:2012+A2:2019/ AC:2021 (CEN 2021), Sustainability of construction works – Environmental product declarations – Core rules for the product category of construction products.
- LCA for experts Software System and database for Life Cycle Engineering, sphera, Leinfelden-Echterdingen, Germany
- Lindbäck, E., LCA methodology report – SSAB Zero steel, as basis for the publication of EPDs within the International EPD® System, April 2026

7. Version history

Version 001:

- The original version of the EPD.

Version 002 updates include:

- The EPD has been updated to PCR 2.0.1.
- The background database has been updated to the Sphera MLC database version 2026.1.
- SSAB Raahe has been added as production site.
- The reference year for data collection has been updated to 2025 for SSAB Iowa, SSAB Hämeenlinna, SSAB Kankaanpää and SSAB Finspång.

Annex 1.

Typical chemical contents of SSAB color coatings.

In the table, the weight percentage of a substance is reported if it represents at least 0.1 % of the product's weight and has been calculated for a color coated product with 0.45 mm steel thickness and Z100 zinc coating.

Typical chemical content of SSAB color coatings				
SSAB color coatings	**Substance type**	**Substance content**	**Min [wt%]**	**Max [wt%]**
GreenCoat Pural BT	Organic binders	Polyester binders (saturated)	0.4	1.5
		Polyurethane binders	0.2	0.4
		Epoxy*	0.0	0.4
		Other organic binders	0.0	0.1
		Natural oil alkyd esters (BT)	Yes	Yes
	Filler materials	Titanium dioxide	0.0	0.8
		Other pigments	0.1	0.4
		Organic fillers	0.0	0.0
		Inorganic fillers	0.0	0.3
		Organic additives	0.0	0.0
	Nanoparticles		0.0	0.0
GreenCoat Pro BT	Organic binders	Polyester binders (saturated)	0.3	1.8
		Other organic binders	0.0	0.4
		Epoxy*	0.0	0.2
		Natural oil alkyd esters (BT)	Yes	Yes
	Filler materials	Titanium dioxide	0.0	0.5
		Other pigments	0.0	0.2
		Organic fillers	0.0	0.1
		Inorganic fillers	0.0	0.2
		Organic additives	0.0	0.0
	Nanoparticles		0.0	0.0
GreenCoat Mica BT	Organic binders	Polyester binders (saturated)	0.3	1.4
		Other organic binders	0.0	0.4
		Epoxy*	0.0	0.2
		Natural oil alkyd esters (BT)	Yes	Yes
	Filler materials	Titanium dioxide	0.0	0.5
		Other pigments	0.0	0.2
		Organic fillers	0.0	0.1
		Inorganic fillers	0.0	0,2
		Organic additives	0.0	0.0
	Nanoparticles		0.0	0.0

GreenCoat Crown BT	Organic binders	Polyester binders (saturated)	0.3	1.2
		Polyurethane binders	0.1	0.1
		Epoxy*	0.0	0.4
		Other organic binders	0.0	0.2
		Natural oil alkyd esters (BT)	Yes	Yes
	Filler materials	Titanium dioxide	0.0	0.4
		Other pigments	0.0	0.3
		Organic fillers	0.0	0.1
		Inorganic fillers	0.0	0.2
		Organic additives	0.0	0.1
	Nanoparticles		0.0	0.0
SSAB Polyester	Organic binders	Polyester binders (saturated)	0.6	1.4
		Epoxy*	0.0	0.4
		Other organic binders	0.0	0.2
	Filler materials	Titanium dioxide	0.0	0.6
		Other pigments	0.0	0.1
		Organic fillers	0.0	0.0
		Inorganic fillers	0.0	0.3
		Organic additives	0.0	0.0
	Nanoparticles		0.0	0.0
SSAB Polyester Indoor	Organic binders	Polyester binders (saturated)	0.6	1.4
		Epoxy*	0.0	0.4
		Other organic binders	0.0	0.2
	Filler materials	Titanium dioxide	0.0	0.6
		Other pigments	0.0	0.1
		Organic fillers	0.0	0.0
		Inorganic fillers	0.0	0.3
		Organic additives	0.0	0.0
	Nanoparticles		0.0	0.0
GreenCoat FoodSafe BT	Organic binders	Polyester binders (saturated)	0.6	1.2
		Epoxy*	0.0	0.4
		Other organic binders	0.0	0.1
		Natural oil alkyd esters (BT)	Yes	Yes
	Filler materials	Titanium dioxide	0.4	0.7
		Other pigments	0.0	0.1
		Organic fillers	0.0	0.0
		Inorganic fillers	0.0	0.1
		Organic additives	0.0	0.0
	Nanoparticles		0.0	0.0

** Substance appears in the reverse side coating.*

SSAB

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