

Owner: DS Stålprofil A/S
No.: MD-23084-EN
Issued: 16-05-2023
Valid to: 16-05-2028

3rd PARTY VERIFIED

EPD

VERIFIED ENVIRONMENTAL PRODUCT DECLARATION | ISO 14025 & EN 15804



Owner of declaration

DS Stålsprofil A/S
Andrupvej 9
9500 Hobro Denmark
CVR: 25 13 09 44



Issued:

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Valid to:

16-05-2028

Programme

EPD Danmark
www.epddanmark.dk



- Industry EPD
- Product EPD

Basis of calculation

This EPD is developed in accordance with the European standard EN 15804+A2.

Comparability

EPDs of construction products may not be comparable if they do not comply with the requirements in EN 15804. EPD data may not be comparable if the datasets used are not developed in accordance with EN 15804 and if the background systems are not based on the same database.

Validity

This EPD has been verified in accordance with ISO 14025 and is valid for 5 years from the date of issue.

Use

The intended use of an EPD is to communicate scientifically based environmental information for construction products, for the purpose of assessing the environmental performance of buildings.

Declared product

DS Stålsprofil Profiled Steel Sheets and Coverings – Precoated.

The declared product covers steel sheets and coverings with thicknesses of 0.4 mm, 0.5 mm, 0.6 mm, 0.75 mm, 0.88 mm, 1.0 mm, and 1.5 mm and surface coatings Polyester, Pro BT, Pural BT, Pural BT Mat and Palux produced with steel coils from SSAB: EPD on GreenCoat – color coated steel sheets and coils (SSAB, 2020). This is an average EPD based on mass allocation for the above mentioned profile types and thicknesses.

Number of declared datasets/product variations: 1

EPD type

- Cradle-to-gate with modules C1-C4 and D
- Cradle-to-gate with options, modules C1-C4 and D
- Cradle-to-grave and module D
- Cradle-to-gate
- Cradle-to-gate with options

Production site

Andrupvej 9, 9500 Hobro, Denmark
Only one production site.

Product(s) use

Façades and roofs on buildings.

Declared unit

1 kg of DS Stålsprofil Profiled Steel Sheets and Coverings - Precoated.

Year of production site data (A3)

Production year 2021; January 2021 – December 2021

EPD version

Version 1.0

CEN standard EN 15804 serves as the core PCR
Independent verification of the declaration and data, according to EN ISO 14025
<input type="checkbox"/> internal <input checked="" type="checkbox"/> external
Third party verifier: _____ Mirko Miseljic

Martha Katrine Sørensen
EPD Danmark

Life cycle stages and modules (MND = module not declared)																
Product			Construction process		Use							End of life				Beyond the system boundary
Raw material supply	Transport	Manufacturing	Transport	Installation process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Re-use, recovery and recycling potential
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
X	X	X	MND	MND	MND	MND	MND	MND	MND	MND	MND	X	X	X	X	X

Product information

Product description

This EPD covers DS Stålsprofil Profiled Steel Sheets and Coverings – Precoated, produced with steel coils from SSAB: EPD on GreenCoat – color coated steel sheets and coils (SSAB, 2020). This EPD is an average of different profile types and thicknesses, based on mass allocation to declare the average of 1 kg. In Table 1, pg. 8 an overview of the weight per m² sheet profile for the different surface coatings and sheet thickness is listed.

The main product components are shown in the table below.

Material	Weight-% of declared product
SSAB GreenCoat color coated steel sheets and coils	100
TOTAL	100

Product packaging:

The composition of the sales- and transport packaging of the product is shown in the table below.

Material	Weight-% of packaging
Cardboard	3.7
Plastic strips/plates	0.5
Plastic wrap	4.0
Steel strips	0.7
Tape	0.2
Wood block	90.9
TOTAL	100

Representativity

This declaration, including data collection and the modeled foreground system including results, represents the production of 1 kg DS Stålsprofil Profiled Steel Sheets and Coverings – Precoated, with steel input from SSAB’s EPD GreenCoat – color coated steel sheets and coils (SSAB, 2020), from the production site located in Hobro, Denmark. Product specific data are based on average values collected in the period January 2021 to December 2021.

Background data are based on GaBi Professional Database version 2022 and Ecoinvent database

version 3.8 and the data is generally less than 10 years old. Generally, the used background datasets are of high quality, and the majority of the datasets are only a couple of years old. In a few cases, older datasets have been used to avoid data gaps in accordance with EN15804+A2. The data were assessed based in their representativeness and quality.

Hazardous substances

DS Stålsprofil Profiled Steel Sheets and Coverings – Precoated does not contain substances listed on the “Candidate List of Substances of Very High Concern for authorisation” at levels above 0.1% by weight.

<http://echa.europa.eu/candidate-list-table>

Essential characteristics

The declared products from DS Stålsprofil are produced from certified steel coils and supplied in accordance with relevant EU standards.

All the color coated products declared in SSAB’s EPD on GreenCoat color coated steel are manufactured according to EN 10169. This is the steel coil input to DS Stålsprofil Profiled steel sheets and coverings – precoated. Furthermore, the DS Stålsprofil Profiled steel sheets and coverings – precoated has a declaration of performance (DoP) according to DS/EN 14872.

Further technical information can be obtained by contacting the manufacturer DS Stålsprofil A/S or on the manufacturer’s website:

<https://www.ds-staalprofil.dk/da-dk/downloadcenter>

Reference Service Life (RSL)

Not applicable.

DS Stålsprofil has guarantee certificates between 20-30 years on the declared product, which can be obtained by contacting the manufacturer DS Stålsprofil A/S or on the manufacturer’s website:

<https://www.ds-staalprofil.dk/da-dk/downloadcenter>

Picture of product(s)

Below is a picture of the product types of DS Stålprofil Profiled Steel Sheets and Coverings – Precoated, covered by this EPD.

Picture of declared product



The profile types are **Trapezoidal Sheets** (*Trapezplader*), **Sinus Sheets** (*Sinusplader*), **Rib Sheets** (*Pandeplader*) **Markant, Unik** and **Nordic Click Seam** (*Nordic Klikfals*).

The surface coatings from SSAB GreenCoat are *Polyester, Pro BT, Pural BT, Pural BT Mat* and *Palux*.

In Table 1 on pg. 8 an overview of the weight per m² for the different thicknesses, coatings and profile shapes is found.

LCA background

Declared unit

The LCI and LCIA results in this EPD relates to the declared unit of 1 kg DS Stålprofil Profiled Steel Sheets and Coverings – Precoated, used for façade and roofs on buildings.

Name	Value	Unit
Declared unit	1	kg
Density	7850	kg/m ³
Conversion factor to 1 kg.	1	kg/kg

The weights per m² for the different profile type and thickness are listed in Table 1, pg. 8.

An allocation by mass between different products produced at the factory has been applied to calculate the energy use for the different production lines and for the utility. The difference between the sheet thicknesses is less than 1% within all impact categories. An average per 1 kg is declared in this EPD.

Functional unit

Not defined.

PCR

This EPD is developed according to the core rules for the product category of construction products in EN 15804:2012+A2:2019, which serves as the core PCR and NPCR 013 Part B for steel and aluminum construction products (EPD-Norge, 2021) as the c-PCR.

Guarantee of Origin – certificates

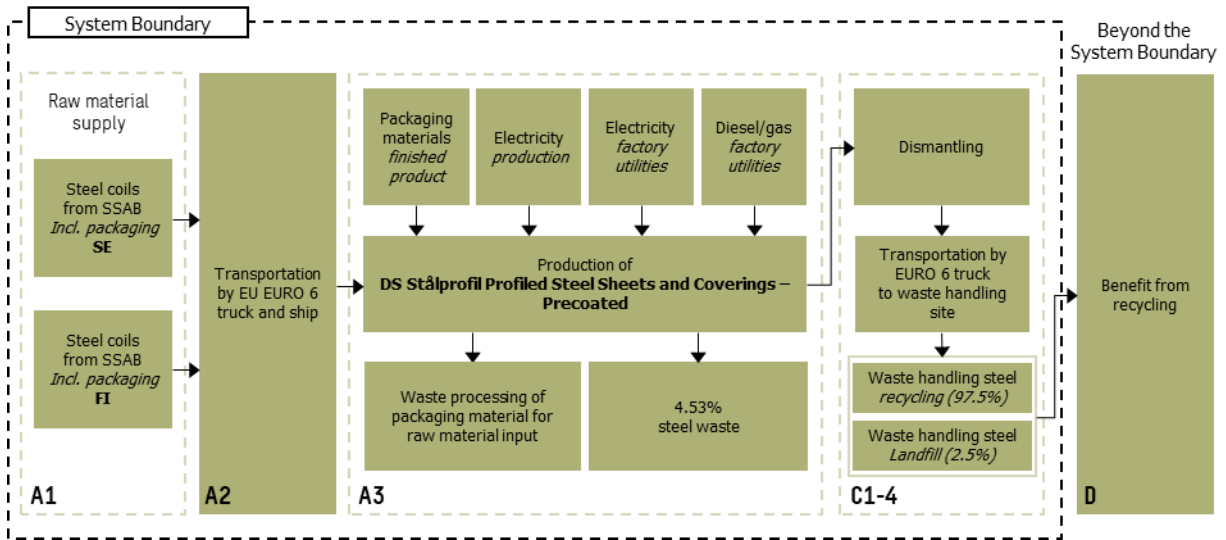
Foreground system:

No use of certified green electricity in the foreground system. The product is produced using electricity modelled as Danish residual electricity mix from 2021 in the production.

Background system:

No use of certified green electricity in the background system. Upstream processes are modelled using national energy mixes. Downstream processes are modelled using national energy mixes.

Flow diagram



System boundary

This EPD is based on a cradle-to-gate LCA with life cycle modules A1-3, C1-4 and D declared, in which 100 weight-% has been accounted for. In the production of 1 kg of DS Stålprofil Profiled Steel Sheets and Coverings – Precoated a waste of 4.53% occurs.

The general rules for the exclusion of inputs and outputs follows the requirements in EN 15804+A2, §6.3.5, where the total of neglected input flows per module shall be a maximum of 5% of energy usage and mass and 1% of energy usage and mass for unit processes. No processes have been excluded from the life cycle inventory.

Product stage (A1-A3) includes:

A1 – Extraction and processing of raw materials

A2 – Transport to the production site

A3 – Manufacturing processes

The product stage includes raw materials as input material, transport to the manufacturer's production site, energy for production and production site, packaging materials for the finished product and waste processing of the raw materials' packaging materials and the materials from waste in the production, up to the "end-of-waste" state or final disposal, according to EN15804+A2 §6.3.5.2. The LCA results for the product stage are declared as an aggregated result for the life cycle modules A1, A2 and A3 in A1-3.

The production of the declared product DS Stålprofil Profiled Steel Sheets and Coverings – Precoated is located at the manufacturer's factory in Hobro, Denmark. The raw materials are GreenCoat color coated steel coils from the manufacturer SSAB and this background data is based on SSAB's published EPD (SSAB, 2020) on this product. The GreenCoat steel coils are allocated with 41% from the SSAB factory in Finland and 59% from the SSAB factory in Sweden and consists of approximately 20% scrap steel. The packaging materials for the GreenCoat steel coils consists of steel strips and cardboard. These materials are not included in the SSAB GreenCoat EPD and are therefore modelled in A1 in this EPD to account for all the raw materials in A1.

The transportation of the GreenCoat steel coils is also included in the product stage and consists of transportation by truck from Sweden and transportation by truck and ship from Finland.

The production at the factory in Hobro consists of different production lines, where the steel coils are unrolled and shaped into the different profile types. The machines for the different production lines uses electricity to run. Besides electricity for the shaping of profiles, diesel for a wheel loader, gas for a truck, water, heating from a straw-fired unit and electricity for utilities for the factory are also included in the production stage.

Once the profiled steel sheets and coverings are produced, they are packaged in packaging materials consisting of cardboard, plastic strips, plastic film, steel wires, tape, wood blocks and steel sheets from the productions which are unsellable because of marks or scratches. All packaging materials are also included in the production stage. The tape is assumed to consist of 95% PP plastic film and 5% acrylic dispersion. For the packaging materials in A3 the biogenic carbon content from renewable materials (cardboard and wood), is calculated based on the standard EN16485 as 0.5 kg C/kg dry matter. The cardboard has a moisture content of 7.5% and the wood has a moisture content of 15%. There is no biogenic carbon content in the declared product leaving the system boundary.

The packaging materials for the GreenCoat steel coils appearing in module A1 are treated up to "end-of-waste-state" in module A3 including a process for sorting of waste at the waste facility before the materials are recycled. The cardboard is modelled with a waste treatment of 99.4% recycling and 0.6% incineration, and the steel is modelled with a waste treatment of 97.5% recycling and 2.5% landfill. Both scenarios are based on national waste statistics (Miljøministeriet Miljøstyrelsen, 2020).

End of Life (C1-C4) includes:

- C1 – De-construction, demolition
- C2 – Transport to waste processing
- C3 – Waste processing for reuse, recovery, and/or recycling
- C4 – Disposal

The deconstruction of a building at the End of Life (EoL) stage, C1, has been modeled based on a study about energy consumptions of a building's life cycle (Ö. Bozdağ, 2007) instead of assuming it to be zero. An energy use of 10 kWh/m² with an average mass of 1000 kg/m² of a concrete building has been assumed for the demolition of the building. Thus, the energy consumption is 0.01 kWh/kg. As a conservative assumption, it is assumed that the energy consumption for deconstruction of the steel sheets is the same. The energy for the demolition is assumed to be diesel used by trucks on site.

In C2, the transport distances from the factory in Hobro to the nearest waste processing facility after the use of the product is included. According to the c-PCR default scenarios for life cycle module C2 transport to waste processing should be based on national statistics and is set to 50 km by truck.

In C3-C4 97.5% of the steel sheets and coverings are recycled and 2.5% of the steel sheets and coverings are disposed on landfills. This waste scenario is based on an average of Danish and German waste statistics (Miljøministeriet Miljøstyrelsen, 2020) (Destatis, 2020). The EoL scenario is modelled as an average of Danish and German waste shares, because the market for the declared product is approximately 50/50% between Denmark and Germany. The generated waste in module C3-C4 is included up to the "end-of-waste" state, including a process for sorting of waste at the waste facility before the materials are recycled. The potential for the recycling of the

material beyond the system boundary is calculated in module D.

Re-use, recovery and recycling potential (D) includes:

Module D includes reuse, recovery and/or recycling potential, expressed as net impact and benefits, due to reuse, recycling and incineration of materials with energy recovery in modules C3-C4. The product is modelled with a recycling rate of 97.5%. To calculate the amount of net-scrap for credit in module D, the input of 20% scrap steel has been deducted from the amount of steel for recycling, resulting in 0.78 kg steel for crediting in module D. The credit is calculated as the difference between production of new primary steel using the blast furnace route (BF) and production of secondary steel from scrap using the electric arc furnace route (EAF). This model assumption takes into account the difference in production routes whereas the credit in module D is not an overestimation.

Note

It should be noted that the packaging material, cardboard and wood block, has an uptake of biogenic carbon in life cycle module A3. This biogenic carbon is released again in life cycle module A5, but module A5 is not declared in this EPD. However, the uptake of biogenic carbon from the packaging material is very small as related to the total climate change (GWP-total) for life cycle modules A1-3.

The averaging of the different profile types and thicknesses was possible because the difference in all impact categories was less than 1%. This is in accordance with the General Program Instructions for EPD Denmark, where the maximum variation allowed is +/- 10%.

The cut-off criteria have not been applied in this EPD. Packaging material for the SSAB steel coil has been modelled to avoid cut-offs.

Table 1 - DS Stålprofil Profiled Steel Sheets and Coverings – Precoated: overview of profile weight per m²

DS Stålprofil – Profile overview weight per m ²												
Surface coating	Polyester				GreenCoat Pro BT Mat	GreenCoat Pural BT			GreenCoat Pural BT Mat		Palux	
Surface thickness	25 µm				36 µm	50 µm			50 µm			
Corrosion resistance Class	RC3				RC5	RC5+			RC5+			
Profile name / Thickness in mm	0.4	0.5	0.6	0.75	0.6	0.5	0.6	0.75	0.5	0.6	0.5	0.6
Sinusplade 18-75		4.66	5.55	6.99	5.55	4.66	5.55		4.66	5.55		
Sinusplade 35-143		4.86	5.79	6.85	5.79	4.86	5.79		4.86	5.79		
Markant 1050		4.86	6.80			4.86			4.86		4.86	
Markant 1070		4.86	6.80			4.86			4.86		4.86	
Markant 200		4.86	6.80			4.86			4.86		4.86	
Markant 350		4.86	6.80			4.86			4.86		4.86	
Markant 460		4.86	6.80			4.86			4.86		4.86	
Markant (variable)		4.86	6.80			4.86			4.86		4.86	
Nordic Klikfals 275					7.38			9.28				
Nordic Klikfals 475					6.50			8.13				
Pandplade 22-270		4.50	5.36	7.05	5.36	4.50	5.36	7.05	4.50	5.36	4.50	5.36
Trapezplade, tag 20-115	4.40	4.72	5.65	7.05	5.65	4.72	5.65	7.05	4.72	5.65	4.72	5.65
Trapezplade, tag 25-275	4.18	4.50										
Trapezplade, tag 35-190		5.12	6.09	7.65	6.09	5.12	6.09	7.65	5.12	6.09	5.12	6.09
Trapezplade, tag 35-206	4.40	4.72	5.65	7.05	5.65	4.72	5.65	7.05	4.72	5.65	4.72	5.65
Trapezplade, tag 45-333		4.92	5.90	7.38		4.92	5.90		4.92	5.90	4.92	5.90
UNIK		4.58	5.58									
Trapezplade, væg 20-115	4.40	4.72	5.65	7.05	5.65	4.72	5.65	7.05	4.72	5.65	4.72	5.65
Trapezplade, væg 22-270		4.50	5.36	7.05	5.35		5.35			5.35		5.35
Trapezplade, væg 35-190	4.40	4.72	5.65	7.05	5.65	4.72	5.65	7.05	4.72	5.65	4.72	5.65
Trapezplade, væg 35-206	4.40	4.72	5.65	7.05	5.65	4.72	5.65	7.05	4.72	5.65	4.72	5.65

LCA results

ENVIRONMENTAL IMPACTS PER 1 kg DS Stålsprofil Profiled Steel Sheets and Coverings – Precoated							
Parameter	Unit	A1-A3	C1	C2	C3	C4	D
GWP-total	[kg CO ₂ eq.]	2.88E+00	2.43E-05	3.82E-03	6.86E-02	1.20E-03	-1.30E+00
GWP-fossil	[kg CO ₂ eq.]	2.95E+00	3.51E-05	3.83E-03	3.17E-02	1.21E-03	-1.31E+00
GWP-biogenic	[kg CO ₂ eq.]	-7.05E-02	-1.23E-05	-3.75E-05	3.68E-02	-1.26E-05	2.09E-03
GWP-luluc	[kg CO ₂ eq.]	1.34E-03	1.55E-06	2.59E-05	2.36E-05	7.26E-07	-3.50E-04
ODP	[kg CFC 11 eq.]	5.01E-10	2.25E-17	3.77E-16	3.11E-09	1.59E-15	3.62E-12
AP	[mol H ⁺ eq.]	8.19E-03	1.70E-07	4.29E-06	1.57E-04	3.81E-06	-3.58E-03
EP-freshwater	[kg P eq.]	4.93E-06	8.20E-10	1.37E-08	9.67E-06	9.26E-10	-2.33E-07
EP-marine	[kg N eq.]	2.18E-03	3.91E-08	1.38E-06	7.11E-05	9.28E-07	-7.47E-04
EP-terrestrial	[mol N eq.]	2.33E-02	5.04E-07	1.65E-05	4.76E-04	1.02E-05	-8.09E-03
POCP	[kg NMVOC eq.]	6.42E-03	1.33E-07	3.69E-06	1.35E-04	2.94E-06	-2.49E-03
ADPm ¹	[kg Sb eq.]	1.82E-04	2.31E-11	3.87E-10	7.38E-07	8.42E-11	2.88E-08
ADPf ¹	[MJ]	3.68E+01	3.01E-03	5.04E-02	3.28E-01	1.71E-02	-9.71E+00
WDP ¹	[m ³] world eq. deprived	-2.08E-02	2.57E-06	4.29E-05	7.12E-03	-1.14E-05	2.74E-02
Caption	GWP-total = Global Warming Potential - total; 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 = Ozone Depletion; AP = Acidification; EP-freshwater = Eutrophication – aquatic freshwater; EP-marine = Eutrophication – aquatic marine; EP-terrestrial = Eutrophication – terrestrial; POCP = Photochemical zone formation; ADPm = Abiotic Depletion Potential – minerals and metals; ADPf = Abiotic Depletion Potential – fossil fuels; WDP = water use						
Disclaimer	¹ The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.						

ADDITIONAL ENVIRONMENTAL IMPACTS PER 1 kg DS Stålsprofil Profiled Steel Sheets and Coverings – Precoated							
Parameter	Unit	A1-A3	C1	C2	C3	C4	D
PM	[Disease incidence]	9.14E-08	1.40E-12	2.95E-11	2.38E-09	4.08E-11	-4.68E-08
IRP ²	[kBq U235 eq.]	8.04E-02	8.48E-07	1.42E-05	3.47E-03	3.05E-05	1.67E-02
ETP-fw ¹	[CTUe]	1.03E+01	2.14E-03	3.57E-02	3.13E+00	5.08E-03	-1.69E+00
HTP-c ¹	[CTUh]	6.61E-10	4.40E-14	7.36E-13	5.20E-11	6.02E-13	-2.06E-09
HTP-nc ¹	[CTUh]	2.86E-08	2.35E-12	3.99E-11	8.20E-10	6.06E-11	-7.43E-09
SQP ¹	-	1.77E+01	1.28E-03	2.13E-02	9.84E-01	1.33E-03	7.48E-01
Caption	PM = Particulate Matter emissions; IRP = Ionizing radiation – human health; ETP-fw = Eco toxicity – freshwater; HTP-c = Human toxicity – cancer effects; HTP-nc = Human toxicity – non cancer effects; SQP = Soil Quality (dimensionless)						
Disclaimers	¹ The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator. ² 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.						

RESOURCE USE PER 1 kg DS Stålprofil Profiled Steel Sheets and Coverings – Precoated							
Parameter	Unit	A1-A3	C1	C2	C3	C4	D
PERE	[MJ]	2.56E+00	2.09E-04	3.49E-03	2.98E-02	1.40E-03	1.41E+00
PERM	[MJ]	7.82E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	[MJ]	3.35E+00	2.09E-04	3.49E-03	2.98E-02	1.40E-03	1.41E+00
PENRE	[MJ]	3.67E+01	3.03E-03	5.06E-02	3.29E-01	1.71E-02	-9.82E+00
PENRM	[MJ]	1.60E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRT	[MJ]	3.68E+01	3.03E-03	5.06E-02	3.29E-01	1.71E-02	-9.82E+00
SM	[kg]	3.45E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	[MJ]	2.49E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	[MJ]	3.40E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	[m ³]	2.08E-03	2.41E-07	4.03E-06	1.66E-04	2.40E-07	-8.49E-04
Caption	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 resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non renewable secondary fuels; FW = Net use of fresh water						

WASTE CATEGORIES AND OUTPUT FLOWS PER 1 kg DS Stålprofil Profiled Steel Sheets and Coverings – Precoated							
Parameter	Unit	A1-A3	C1	C2	C3	C4	D
HWD	[kg]	6.73E-02	1.60E-14	2.68E-13	0.00E+00	2.59E-12	4.86E-10
NHWD	[kg]	8.29E-02	4.93E-07	8.24E-06	0.00E+00	2.50E-02	-1.85E-02
RWD	[kg]	7.53E-04	5.62E-09	9.39E-08	0.00E+00	2.06E-07	1.62E-04

CRU	[kg]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MFR	[kg]	2.79E-02	0.00E+00	0.00E+00	9.75E-01	0.00E+00	0.00E+00
MER	[kg]	6.56E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EE	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Caption	HWD = Hazardous waste disposed; NHWD = Non hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EE = Exported energy						

BIOGENIC CARBON CONTENT PER 1 kg DS Stålprofil Profiled Steel Sheets and Coverings – Precoated		
Parameter	Unit	At the factory gate
Biogenic carbon content in product	kg C	0.00E+0
Biogenic carbon content in accompanying packaging	kg C	1.75E-02
Note	1 kg biogenic carbon is equivalent to 44/12 kg of CO ₂	

Additional information

LCA interpretation

Modules A1-3 contributes the most to the environmental impacts across 11 of 13 indicators. Considering the Climate Change impact, these life cycle stages account for 98% of the impact, whereas the production of coated steel coils (Module A1) is responsible for the greater part, predominantly stemming from the steel coils. Other material inputs consist of packaging materials, where both biogenic and fossil materials are used. The negative contribution of the biogenic Climate Change indicator, in comparison to the fossil, is very modest, and the effect is therefore not remarkable.

In modules C1-4, the waste handling (C3) constitutes the largest impact to Climate Change. The declared product has a 97.5% recycling rate, and the remaining 2.5% is sent to landfill. The processes behind the results are found to be more equal across fossil and biogenic contributions to the Climate Change impact, than what is found for modules A1-3.

As mentioned, 97.5% of the product is considered as recycled. The potential benefits from recycling, beyond the system boundary (Module D), decreases the Climate change impact by 44%.

Technical information on scenarios

Transport to the building site (A4)

Scenario information	Value	Unit
Not relevant		-

Installation of the product in the building (A5)

Scenario information	Value	Unit
Output materials, packaging: cardboard	0.296	g
Output materials, packaging: Plastic strips/plates (PP)	1.68	g
Output materials, packaging: Plastic wrap (PE)	1.81	g
Output materials, packaging: Steel strips	0.0975	g
Output materials, packaging: Tape (PP film and acrylic dispersion)	0.218	g
Output materials, packaging: Wood block (15% moisture content)	40.9	g
Total packaging material	45	g

Reference service life

RSL information		Unit
Reference service Life – not applicable		-

Use (B1-B7)

Scenario information	Value	Unit
Not relevant		

End of life (C1-C4)

Scenario information	Value	Unit
Collected separately	1	kg
Collected with mixed waste	-	kg
For reuse	-	kg
For recycling	0.975	kg
For energy recovery	-	kg
For final disposal	0.025	kg
Assumptions for scenario development	-	As appropriate

Re-use, recovery and recycling potential (D)

Scenario information/Materiel	Value	Unit
Displaced material	0.78	kg

Indoor air

The EPD does not give information on release of dangerous substances to indoor air because the horizontal standards on the relevant measurements are not available. Read more in EN15804+A1 chapter 7.4.1.

Soil and water

The EPD does not give information on release of dangerous substances to soil and water because the horizontal standards on the relevant measurements are not available. Read more in EN15804+A1 chapter 7.4.2.

References

Publisher	 www.epddanmark.dk <small>Template version 2022.2</small>
Programme operator	Danish Technological Institute Buildings & Environment Gregersensvej DK-2630 Taastrup www.teknologisk.dk
LCA-practitioner	Nana Lin Rasmussen Morten Ryberg Sweco A/S Ørestads Blvd. 41, 2300 København, Denmark 
LCA software / background data	GaBi (version 10.6.2) Generic data are primarily based on life cycle inventory data from GaBi Professional database 2022.2 and Ecoinvent database 3.8. Input material for steel coils area based on product specific data from SSAB EPD: GreenCoat - color coated steel sheets and coils (EPD International S-P-01922, version 1.0 UN CPC 412)
3rd party verifier	Mirko Miseljic FORCE Technology Denmark

General programme instructions

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