

# Environmental Product Declaration



In accordance with ISO 14025 and EN 15804:2012+A2:2019 for:

## SubFloor System Metal

from

**Prästängen Sverige AB, Kylarvägen 7, 541 34 Skövde**



Programme:

The International EPD® System, [www.environdec.com](http://www.environdec.com)

Programme operator:

EPD International AB

EPD registration number:

S-P-05445

Publication date:

2023-06-09

Valid until:

2028-06-09

*An EPD should provide current information and may be updated if conditions change. The stated validity is therefore subject to the continued registration and publication at [www.environdec.com](http://www.environdec.com)*



## General information

### Programme 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>	<a href="http://www.environdec.com">www.environdec.com</a>
<b>E-mail:</b>	<a href="mailto:info@environdec.com">info@environdec.com</a>

### Accountabilities for PCR, LCA and independent, third-party verification

CEN standard EN 15804 serves as the Core Product Category Rules (PCR)2019

PCR 2019:14 Construction products (EN 15804:A2) (1.11) 2021-02-05

PCR review was conducted by: The Technical Committee of the International EPD® System. Chair: Claudia A. Peña. Contact via [info@environdec.com](mailto:info@environdec.com)

### Life Cycle Assessment (LCA)

LCA accountability: Freelance consultant: Fredrik Broberg

### Third-party verification

Independent third-party verification of the declaration and data, according to ISO 14025:2006, via:

EPD verification by individual verifier

Third-party verifier: David Althoff Palm, Ramboll Sweden AB/ Dalemarken AB

Approved by: The International EPD® System

Procedure for follow-up of data during EPD validity involves third party verifier:

Yes  No

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

EPDs within the same product category but from different programmes may not be comparable. EPDs of construction products may not be comparable if they do not comply with EN 15804. For further information about comparability, see EN 15804 and ISO 14025.

## Company information

### Owner of the EPD:

Prästängen Sverige AB

Contact: Jens Ljungkvist

**Description of the organisation:** Prästängen Sverige AB manufactures subfloor systems for homes, offices, schools, and public buildings.

Many substrates are uneven due to rough cast concrete and settlements. When renovating, SubFloor solves these challenges in a simple way. With a dry and fast installation work with laser precision, the floor ends up at the right height. A big advantage of fixed floors is that you get it exactly as even and neat as you want. The air gap that is formed is also a perfect space for pulling and hiding installations. The smart solution is that the floor joists are held up with adjustable screws that provide a precise height to eliminate the unevenness and level differences found in the substrate. A floor chipboard is mounted on top of the joists and then you are free to choose exactly the surface layer you have in mind for the room. Parquet, laminate and plastic carpet and, together with plaster/putty, also tiles.

**Product-related or management system-related certifications:** Nordic Ecolabel, EU Ecolabel, Sunda Hus, Basta and Byggvarubedömningen. The product is also certified and monitored by RISE Institute, certification nr: SC0692-17

### Name and location of production site(s):

Prästängen Logistikcentrum  
Fabriksgatan  
543 50 Tibro  
Sweden

## Product information

**Product name:** SubFloor System

### Product description:

Property	Value
Size	1 m <sup>2</sup>
Weight per m <sup>2</sup>	2 Kg

Subfloor system is metal bars with plastic support for flooring. Many substrates are uneven due to rough cast concrete and settlements. When renovating, SubFloor solves these challenges in a simple way. With a dry and fast installation work with laser precision, the floor ends up at the right height.

### DESCRIPTION OF PRODUCTION ACTIVITIES

The bars are delivered in required length by truck to Prästängen production site, the bars contain 2,6% recycled steel. The bars are then packed in a bundle together with screws for each project with plastic film. The production waste is collected and sent to a waste treatment facility where it's sorted and recycled according to general Swedish conditions.

**UN CPC code:** 42190

**Geographical scope:** Sweden

## LCA information

### Functional unit / declared unit:

1m<sup>2</sup> SubFloor System

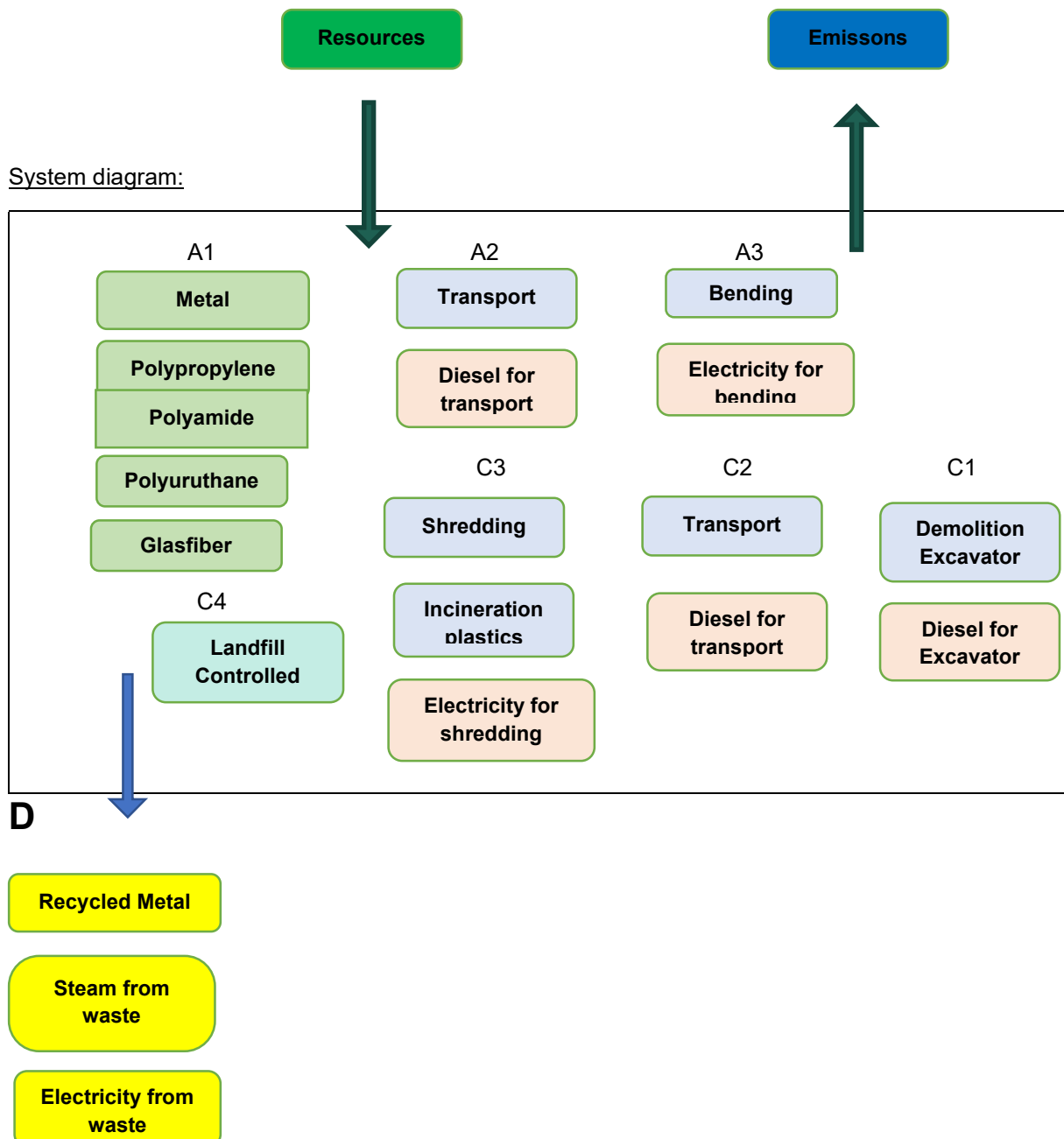
**Time representativeness:** Data where collected by Prästängen AB and are representative of 2021 manufacturing.

**Database(s) and LCA software used:** Database used is GaBi Software (version 10.6.2).

### Description of system boundaries:

Type of EPD: cradle to gate, with modules C1-C4+D

### System diagram:



More information:

Website: <https://subfloor.se/>

**Allocation:**

No allocation is made in the study as the process does not share any flow with other goods.

**Cut-Off criteria**

material and energy flows less than 1% per module. .>99,9% of all flows are included.

**Type of EPD:**

Specific

**List of assumptions:**

Assumption to knock down 1/m<sup>2</sup> floor, 1 minute. Distance to waste treatment plant, is set to be 100 km, with 50% load. Assumptions the collected goods is mixed with construction waste. The metal rule is recycled to 95% and remaining 5% goes to controlled landfill. The remaining plastic parts goes to energy recovery.

**Emissions:**

The factors used for this LCA are EN 15804 reference based on EF 3.0.

**Content of substances**

The subfloor product does not contain substances of very high concern (SVHC) as defined and listed in the European Chemicals Agency (ECHA) Candidate List of substances of very high concern for Authorization, in levels above 0.01% by weight for the products.

**Data**

About 95% of the steel subfloor is assumed to end up at steel recycling(going through C3), while the rest end sup in C4. However since about 2,6% of the steel is based on external scrap in the first place(SSAB), the amount of steel to be credited in module D is 92,4% and another additional 10% is withdrawn to account for the losses in the steel recycling process which results in 83,4% to module D.

SE

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

	Product stage			Construction process stage		Use stage							End of life stage				Resource recovery stage
	Raw material supply	Transport	Manufacturing	Transport	Construction installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling-potential
Module	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Modules declared	X	X	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	X	X	X	X	X
Geography	SE	SE	SE										EU-28	EU-28	SE	SE	SE
Specific data used	72%	>90%	>90%	-	-	-	-	-	-	-	-	-	0	0	0	0	0

**Data**

About 95% of the steel subfloor is assumed to end up at steel recycling (going through C3), while the rest ends up in C4. However since about 3% of the steel is based on external scrap in the first place (SSAB), the amount of steel to be credited in module D is 92% and another additional 10% is withdrawn to account for the losses in the steel recycling process which results in 83% to module D

## Content information

Product components	Weight, kg	Post-consumer material, weight-%	Renewable material, weight-%
Steel treated with zinc	1,54	2%	
Polypropylene	0,11		
Polyamide	0,12		
Glas Fiber	0,13		
Thermoplastic Polyuruthane	0,09		
TOTAL	1,99		
Packaging materials	Weight, kg	Weight-% (versus the product)	
Plastic Film	0,024		
...			
TOTAL	0,024		

## Environmental Information

Indicator	Unit	A1	A2	A3	Tot.A1-A3	C1	C2	C3	C4	D
GWP-fossil	kg CO2 eq.	5,31E+00	2,36E-02	7,21E-02	5,41E+00	1,24E-03	4,11E-03	1,13E+00	1,91E-01	-3,81E+00
GWP-biogenic	kg CO2 eq.	5,49E-03	6,94E-04	1,26E-04	6,31E-03	0,00+00	0,00+00	2,80E-04	2,30E-04	-4,79E-03
GWP-luluc	kg CO2 eq.	1,21E-03	9,88E-05	1,69E-05	1,33E-03	1,11E-05	2,44E-04	3,74E-05	8,00E-06	-1,63E-04
GWP-total	kg CO2 eq.	5,32E+00	2,44E-02	7,22E-02	5,41E+00	1,25E-03	4,35E-03	1,13E+00	1,91E-01	-3,81E+00
ODP	kg CFC 11 eq.	4,64E-12	1,39E-15	3,69E-13	5,01E-12	1,56E-16	3,42E-15	1,15E-12	-3,17E-14	-2,68E-13
AP	mol H+ eq.	1,51E-02	1,26E-04	1,02E-04	1,53E-02	6,26E-06	1,99E-05	3,22E-04	3,80E-04	-7,60E-03
EP-freshwater	kg PO43- eq.	8,71E-07	1,18E-07	6,33E-07	1,62E-06	1,20E-08	2,21E-07	6,50E-06	5,06E-06	-2,12E-06
EP-freshwater	kg P eq.	3,43E-05	3,90E-08	2,09E-07	3,45E-05	4,38E-09	9,62E-08	9,96E-07	1,67E-06	-5,33E-06
EP-marine	kg N eq.	3,68E-03	6,36E-05	3,39E-05	3,78E-03	2,93E-06	4,75E-06	9,19E-05	8,00E-05	-1,66E-03
EP-terrestrial	mol N eq.	3,84E-02	7,03E-04	3,56E-04	3,95E-02	3,25E-05	6,04E-05	1,30E-03	8,00E-04	-1,60E-02
POCP	kg NMVOC eq.	1,11E-02	1,18E-04	1,53E-04	1,14E-02	8,20E-06	1,59E-05	2,24E-04	4,20E-05	-5,71E-04
ADP- minerals&metals*	kg Sb eq.	2,71E-04	7,02E-10	5,17E-09	2,71E-04	7,89E-11	1,73E-09	2,72E-08	3,17E-07	-6,34E-06
ADP-fossil*	MJ	7,80E+01	1,45E-01	1,88E+00	8,00E+01	1,63E-02	3,58E-01	5,08E+00	1,66E-02	-3,42E+01
WDP	m3	5,87E+00	1,29E-04	1,36E-03	5,87E+00	1,45E-05	3,18E-04	1,37E-01	3,43E-02	-6,87E-01

**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**

*\* 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*

**Potential environmental impact – additional mandatory and voluntary indicators**



## Use of resources

Results per declared unit										
Indicator	Unit	A1	A2	A3	Tot.A1-A3	C1	C2	C3	C4	D
PERE	MJ	7,09E+00	1,06E-02	1,87E-01	7,29E+00	1,19E-03	2,61E-02	4,28E+00	6,90E-03	-1,31E+01
PERM	MJ	0,00+00	0,00+00	0,00+00	0,00E+00	0,00+00	0,00+00	0,00+00	0,00+00	0,00+00
PERT	MJ	7,09E+00	1,06E-02	1,87E-01	7,29E+00	1,19E-03	2,61E-03	4,28E+00	6,90E-03	-1,31E+01
PENRE	MJ	7,88E+01	1,46E-01	1,88E+00	8,08E+01	1,64E-02	3,60E-01	5,08E+00	1,71E+00	-3,25E+01
PENRM	MJ	0,00+00	0,00+00	0,00+00	0,00E+00	0,00+00	0,00+00	0,00+00	0,00+00	0,00+00
PENRT	MJ	7,88E+01	1,46E-01	1,88E+00	8,08E+01	1,64E-02	3,60E-01	5,08E+00	1,71E+00	-3,25E+01
SM	kg	5,08E-02	0,00+00	0,00+00	5,08E-02	0,00+00	0,00+00	0,00+00	0,00+00	0,00+00
RSF	MJ	1,31E-22	0,00+00	0,00+00	1,31E-22	0,00+00	0,00+00	0,00+00	0,00+00	0,00+00
NRSF	MJ	1,54E-21	0,00+00	0,00+00	1,54E-21	0,00+00	0,00+00	0,00+00	0,00+00	0,00+00
FW	m <sup>3</sup>	7,53E-04	1,16E-05	4,35E-04	1,20E-03	1,30E-06	2,86E-05	8,36E-03	8,05E-04	-1,52E-02
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 production and output flows

Results per declared unit										
Indicator	Unit	A1	A2	A3	Tot.A1-A3	C1	C2	C3	C4	D
Hazardous waste disposed	kg	9,80E-02	4,52E-13	1,41E-10	9,80E-02	5,07E-14	1,11E-13	8,31E-10	1,56E-11	-1,27E-09
Non-hazardous waste disposed	kg	1,52E-01	2,22E-05	8,04E-04	1,53E-01	2,50E-06	5,48E-05	1,09E-01	4,94E-03	-2,25E-01
Radioactive waste disposed	kg	1,87E-03	2,73E-07	1,93E-05	1,89E-03	3,06E-08	6,73E-07	1,57E-03	1,10E-06	-3,15E-05

## Output flows

Output flows per declared unit 1/m2

Results per declared unit										
Indicator	Unit	A1	A2	A3	Tot.A1-A3	C1	C2	C3	C4	D
Components for re-use	kg	0,00+00	0,00+00	0,00+00	0,00E+00	0,00+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Material for recycling	kg	0,00+00	0,00+00	0,00+00	0,00E+00	0,00E+00	0,00E+00	1,46E+00	7,70E-02	-1,38E+00
Materials for energy recovery	kg	0,00+00	0,00+00	0,00+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electricity	MJ	0,00+00	0,00+00	0,00+00	0,00E+00	0,00E+00	0,00E+00	1,66E+00	0,00E+00	-1,66E+00
Exported energy, thermal	MJ	0,00+00	0,00+00	0,00+00	0,00E+00	0,00E+00	0,00E+00	3,85E+00	0,00E+00	-3,85E+00

### 1.1.1. Tabell: GWP GHG

Results per functional or declared unit											
Indicator	Unit	A1	A2	A3		Tot. A1-A3	C1	C2	C3	C4	D
<a href="#">GWP-GHG[1]</a>	kg CO <sub>2</sub> eq.	5,29E+00	2,34E-02	7,12E-02		5,38E+00	1,24E-03	4,17E-03	1,13E+00	1,86E-02	-3,75E+00

### Information on biogenic carbon content

Results per functional or declared unit		
BIOGENIC CARBON CONTENT	Unit	QUANTITY
Biogenic carbon content in product	kg C	0
Biogenic carbon content in packaging	kg C	0

Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO<sub>2</sub>.

## References

General Programme Instructions of the International EPD® System. Version 3.11

PCR 2019:14 Construction products (EN 15804:A2) (1.11) 2021-02-05

PCR review was conducted by: The Technical Committee of the International EPD® System. Chair: Claudia A. Peña. Contact via [info@environdec.com](mailto:info@environdec.com)

EN 15804+A2 Sustainability of construction works – Environmental product declarations – Core rules for the product category of construction products.

**Data for separate collection and recycling of dry recyclable materials**, Carolina Liljenström and Göran Finnveden

Livscykelanalys Subfloor Golvregelsystem, by Fredrik Broberg 2023-03-19

SSAB EPD S-P-01921 made to EN15804+A1 with EN15804+A2 indicators provided by SSAB

