ENVIRONMENTAL PRODUCT DECLARATION

Granab subfloor system - Z Steel

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

Products included in the EPD:

Granab subfloor system - Z Steel

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

EPD of a single product from a manufacturer/service provider

EPD Owner
Bygg och Miljöteknik
GRANAB AB

Programme
International EPD System
www.environdec.com

Programme operator
EPD International AB

Registration number
EPD-IES-0035125:001

Version date
2026-10-02

Validity date
2031-10-02



GENERAL INFORMATION

Programme information

Programme	International EPD System
Address	EPD International AB Box 210 60 SE-100 31 Stockholm Sweden
Website	www.environdec.com
E-mail	support@environdec.com

Product category rules

CEN standard EN 15804 serves as the Core Product Category Rules (PCR)	
Product Category Rules (PCR)	2019:14 Construction products (EN 15804+A2) (version 2.0.1) 2.0.1
PCR review was conducted by	The Technical Committee of the International EPD System. See www.environdec.com for a list of members. Review chair: Rob Rouwette (chair), Noa Meron (co-chair). The review panel may be contacted via the Secretariat www.environdec.com/support.

Verification

Independent third-party verification of the declaration and data, according to ISO 14025:2006, via	☑ EPD verification through an individual EPD verification ☐ EPD verification through EPD Process Certification* ☐ EPD verification through a fully pre-verified tool
Third-party verifier	David Palm (Dalemarken AB)
Approved by	International EPD System
Procedure for follow-up of data during EPD validity involves third party verifier	☐ Yes ☑ No

*EPD Process Certification involves an accredited certification body certifying and periodically auditing the EPD process and conducting external and independent verification of EPDs that are regularly published. More information can be found in the General Programme Instructions on www.environdec.com.

Ownership and limitations on use of EPD

Limitations

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.

Ownership

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

INFORMATION ABOUT EPD OWNER

EPD Owner	Bygg och Miljöteknik GRANAB AB
Contact person name	Fredrik Blom
Contact person e-mail	fredrik@granab.se
Organisation address	Åkerigatan 2 447 37 Vårgårda Sweden
LCA Practitioner	Marta Herrero Alemany, marta.herrero.alemany@ivl.se and elisabet.hallberg@ivl.se, elisabet.hallberg@ivl.se

Description of the organisation of the EPD Owner

GRANAB manufactures subfloor systems for homes, offices, schools and public buildings.

PRODUCT INFORMATION

Product name	Granab subfloor system - Z Steel
Product identification	Not applicable
Product description	Granab subfloor systems are used in homes, offices, schools and public buildings: they are constructed with non-deformable galvanised steel floor girders and an effective sound-dampening resilient suspension system. The subfloor system is secured to the subflooring and set at the desired height. Surface flooring made from chipboard and parquet or carpet is laid over the system.
Product information from external sources	https://www.granab.se/en/
Technical purpose of product	To provide an elevated floor structure with sound insulation and level adjustment capabilities in residential, commercial, educational and public buildings.
Manufacturing or service provision description	Assembly of the various components of the system.
Material properties	Area density: 2.3 kg/m^2 Thickness: 0.045 m
Manufacturing site	GRANAB AB Granab Lidköping 531 53 Lidköping Sweden
UN CPC code	No applicable UN CPC code
Geographical scope(s)	Sweden

PRODUCT IMAGES



CONTENT DECLARATION

Hazardous and toxic substances	The product does not contain any substances from the SVHC candidate list in concentrations exceeding 0.1% of its weight.

PRODUCT CONTENT

Content name	Mass, kg	Post-consumer recycled material, mass-% of product	Biogenic material, mass-% of product	Biogenic material[1], kg C/declared unit
Galvanized steel	1.99	67	0	0
Polypropylene (PP)	0.24	0	0	0
Steel	0.05	0	0	0
Polyurethane (PUR)	0.05	0	0	0
Total	**2.33**	**67**	**0**	**0**
Note 1	1 kg biogenic carbon is equivalent to 44/12 kg of CO_2			

PACKAGING MATERIALS

Material name	Mass, kg	Mass-% (versus the product)	Biogenic material[1], kg C/declared unit
Plastic packaging	0.009	0.4	0
Steel band	0.006	0.2	0
Wood based packaging	0.017	0.7	0.007
Corrugated board	0.005	0.2	0.002
Total	**0.037**	**1.5**	**0.009**
Note 1	1 kg biogenic carbon is equivalent to 44/12 kg of CO_2		

LCA INFORMATION

EPD based on declared or functional unit	Declared unit
Declared unit and reference flow	1 m2 of Granab subfloor System Area: 1 m^2
Conversion factor to mass	2.3
Are infrastructure or capital goods included in any upstream, core or downstream processes?	☐ Yes ☑ No
Data sources used for this EPD	GaBi database (general) Sphera MLC (fka GaBi) Databases Edition 2026.1
LCA Software	LCA for Experts (formerly GaBi Software)
Version of the EN 15804 reference package	EF Reference Package 3.1
Characterisation methods	Environmental indicators describing environmental impacts according to EN15804+A2, Version: EF 3.1 Optional indicators describing environmental impacts according to EN15804+A2, Version: EF 3.1 Resource use, waste and output flows
Technology description including background system	The product considered is a steel subfloor system for homes, offices, schools and public buildings. It consists mainly of galvanized steel profiles (85% by weight), together with polypropylene support blocks, steel screws and polyurethane damping elements. The system is manufactured at Granab's facilities in Lidköping, Sweden, using mainly electricity for assembly and processing. The main raw material is SSAB Zero™ galvanized steel produced from recycled steel scrap. At end of life, the steel subfloor system is assumed to be recycled, with steel recovered through a 100% recycling scenario.
Scrap (recycled material) inputs contribution level	Less than 10% of the GWP-GHG results in modules A1-A3 come from scrap inputs

Data quality assessment

Description of data quality assessment and reference years	The data used for this EPD, including product composition, raw material consumption, and manufacturing data, were originally collected by Granab directly from the production sites for the previous EPD and are primarily representative of the 2019 production year. For the 2026 EPD update, these data were reviewed together with Granab and confirmed to remain representative of the current product and manufacturing process. Concerning A1 (upstream raw material production), supplier-specific data from SSAB have been applied for the galvanised steel profiles. The data are based on the Environmental Product Declaration for Metal Coated SSAB Zero™ steel sheets and coils, published according to EN 15804+A2. Generic database data were used for polypropylene (PP) and the steel screws. For the damping element, supplier-specific data based on the EPD for Sylodyn® closed-cell polyurethane elastomer were applied. Generic database data were also used for electricity production and transportation processes. According to the PCR, the data quality assessment shall cover datasets representing at least 80% of the absolute result of each core environmental indicator. Therefore, the assessment was carried out at dataset level for the main raw materials, packaging materials, transport processes and manufacturing activities included in the study. The assessed datasets are considered representative, reliable and appropriate for the goal and scope of the study. Overall, the assessed datasets showed good to very good data quality, with the main environmental contributors represented by supplier-specific EPDs and primary data. Supplier-specific data were used for the galvanized steel profiles and the polyurethane damping element, while manufacturing activities and transport modelling were based on production-specific and primary data. Generic database datasets were applied mainly for minor inputs such as packaging materials, polypropylene and steel screws. All datasets were considered complete, sufficiently precise and consistently modelled according to EN 15804+A2 and PCR 2019:14 requirements. No dataset was rated poor or very poor in terms of geographical, technical or temporal representativeness, including datasets contributing more than 30% to any core environmental indicator.

DATA QUALITY ASSESSMENT

Process name	Source type	Source	Reference year	Data category	Share of primary data, of GWP-GHG results for A1-A3
Steel profiles. galvanised	EPD	SSAB Zero™ steel EPD and energy use at Boxholms Profil AB	2025/2026	73% primary data, secondary data	49%
PP, support block	Database	PlasticsEurope/GaBi data	2014/2026	Secondary data	0%
Steel, expandable screw	Database	Steel Engineering steel (Worldsteel 2018, EU)	2018	Secondary data	0%
PUR (damping element)	EPD	Sylodyn® EPD, Getzner Werkstoffe GmbH	2025	Primary data, secondary data	4%
Plastic packaging	Database	LDPE film (PlasticsEurope 2014 & sphera, EU)	2014	Secondary data	0%

Steel band	Database	Steel Engineering steel (Worldsteel 2018, EU)	2018	Secondary data	0%
Wood based packaging	EPD	EPD by Swedish wood 2021	2021	Primary data, secondary data	1%
Corrugated board	Database	Corrugated board box (Fefco 2018)	2018	Secondary data	0%
Transport of raw materials	Database	Gabi/sphera database	2026	Primary data	4%
Manufacturing of the subfloor system	Collected data	Granab production data from 2019, reviewed and validated in 2026	2019, validated 2026	Primary data	2%
Total share of primary data, of GWP-GHG results for A1-A3					**60%**
Note	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				

Comment on the data sources and other information in the table	The reported share of primary data is associated with uncertainty, as EPD for PUR and Wood based packing used as data source lack information on the share of primary data.

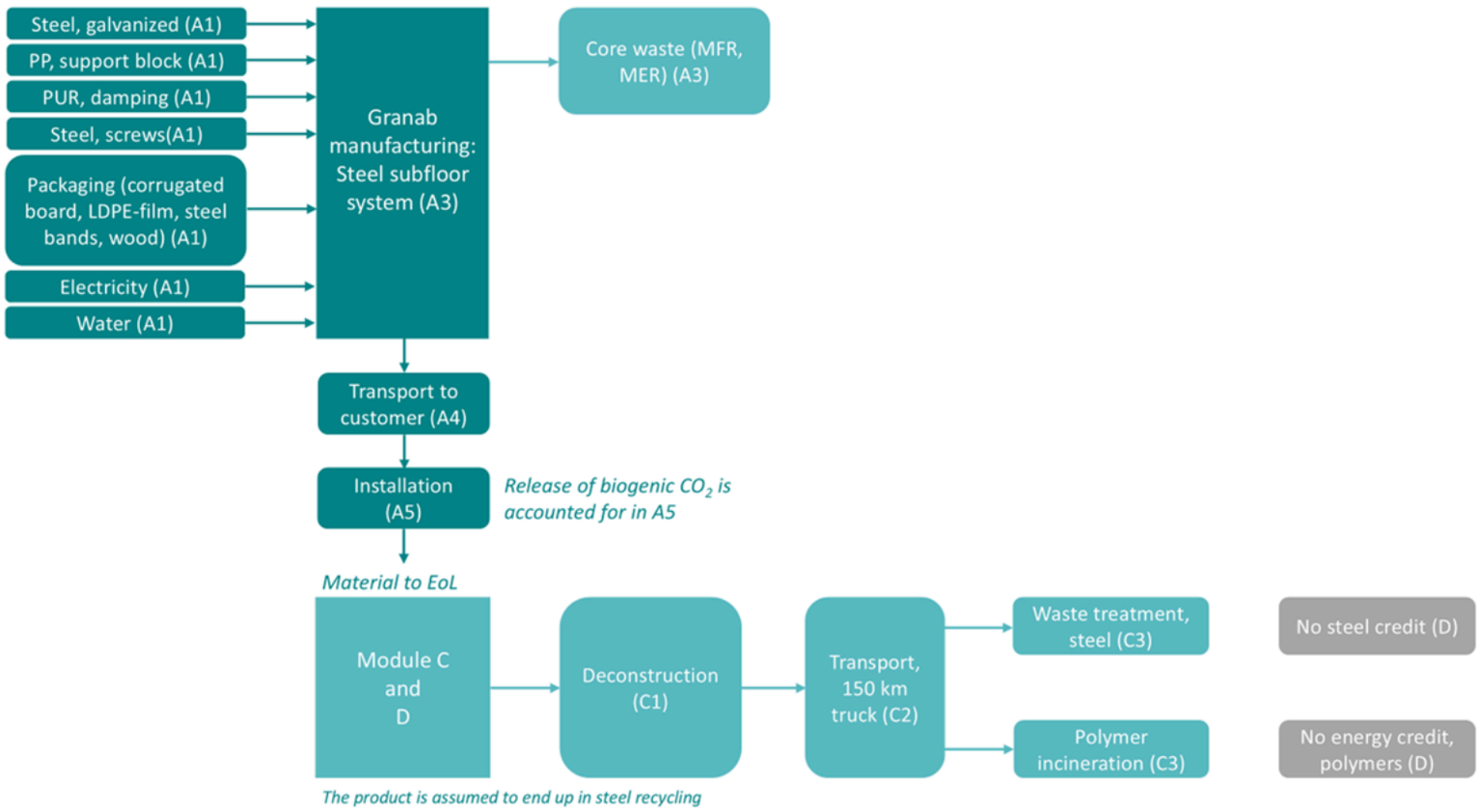
ELECTRICITY USED IN THE MANUFACTURING PROCESS IN A3 (A5 FOR SERVICES)		
Type of electricity mix	Residual electricity mix on the market	
Energy sources	Hydro	7.28%
	Wind	7.75%
	Solar	28.2%
	Biomass	7.47%
	Geothermal	0%
	Waste	0%
	Nuclear	32.54%
	Natural gas	2%
	Coal	0.08%
	Oil	1.22%
	Peat	0%
	Other	13.78%
Climate impact (GWP-GHG):	0.12 kg CO_2 eq./kWh	

SYSTEM BOUNDARY

Description of the System boundary	b) Cradle to gate with options, modules C1-C4, module D and with optional modules (A1-A3 + C + D and additional modules).
Excluded modules	No, there is no excluded module, or there are no excluded modules

	Product stage			**Construction process stage**		**Use stage**							**End of life stage**				**Beyond product life cycle**
	Raw material supply	Transport	Manufacturing	Transport to site	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	X	X	ND	ND	ND	ND	ND	ND	ND	X	X	X	X	X
Geography	Finland	Europe	Sweden	Sweden	Sweden	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Sweden	Sweden	Sweden	Sweden	Sweden
Share of specific data	60%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation - products	0%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation - sites	0%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Disclaimer	The share of specific/primary data and both variations (products and sites) refer to GWP-GHG results only.																

Process flow diagram(s) related images



DEFAULT SCENARIO

Name of the default scenario	Baseline
Description of the default scenario	This EPD are assessed to have no significant limitations worth mentioning, since for instance the main materials are based on certified EPDs from the suppliers. The end of life treatment of a small amount of plastic waste (polyethylene: PE) from the core process is assumed to be negligible. It corresponds to 0.003 kg per declared unit (or 0.0015 kg per kg floor system). If applying waste incineration for this plastic waste it would only add about 0.01 kg fossil carbon dioxide (0.003 kg PE *3.1 kg CO2 oer kg PE) which should be within the uncertainty of the final GWP fossil results. The transport to customer (A4) is based on a more or less representative average (400 km by truck) which in reality varies from customer to customer. Transport A4 corresponds to around 2.5% of the GWP-GHG A1-A4. The assumptions made and the data used to model module C are the most uncertain.

Module A4: Transport to the building site

Explanatory name of the default scenario in module A4	Transport to customer
Description of the default scenario in module A4	When declaring the life cycles stages A1-A3 in an EPD, the A4 transport shall not be included. The reason however for including this transport is to be comparable with the Norwegian EPD system, since this transport is required in this EPD system. An average distance of 400 km by truck was estimated by Granab. The fuel mix applied for the truck transport follows the HBEFA 2025 assumptions used in the sphera transport datasets and consists of 84.7% conventional fossil diesel, 3.3% RME and 12.0% HVO on an energy-content basis.

Module A4 information	Value	Unit
Distance	400	km
Capacity utilization (including empty returns)	60	%
Bulk density of transported products	Unknown	N/A
Volume capacity utilization factor (factor: =1 or <1 or ≥1 for compressed or nested packaged products)	Not applicable	N/A
Fuel type	84.7% conventional fossil diesel, 3.3% RME and 12.0% HVO on an energy-content basis	N/A

Module A5: Installation in the building

Explanatory name of the default scenario in module A5	Installation
Description of the default scenario in module A5	The construction installation stage (A5) has only been included to account for the release of biogenic carbon contained in the packaging materials. The packaging materials consist of corrugated board and wood-based packaging, which contain biogenic carbon. During production, the uptake of biogenic carbon is reported in modules A1-A3. Biogenic carbon stored in the packaging materials is then released in module A5. Waste treatment of packaging materials was considered negligible and therefore excluded from the system boundary. Consequently, no packaging-related energy recovery is modelled in A5. As PERM and PENRM were calculated according to Option B in Annex 3 of PCR 2019:14, the energy content of packaging materials becoming waste in module A5 is not considered useful recovered energy. Consequently, it remains accounted for as energy used as raw material (PERM/PENRM) and is not transferred to PERE/PENRE.

Module C: End-of-life

Explanatory name of the default scenario in module C	End of life
Description of the default scenario in module C	For the end of life (module C) generic data has been used to estimate C1 Deconstruction, C2 Transport (150 km by truck), C3 Waste processing. The steel subfloor is considered to end up at steel recycling due to the large content of steel, and before that the product is probably not sorted out into the different material parts. This in turn means that the other materials than steel (polymers) is burned in the electric arc furnace (EAF) when the steel is melted. All steel in the subfloor system is assumed to end up at steel recycling (module C3), corresponding to a 100% recycling scenario. The polymers (PP and PUR) are as mentioned assumed to burn off in the EAF and for the incineration (C3) data (Gabi/sphera) has been applied. This data has been considered as sufficient enough even though based on incineration in a waste incineration plant.

Module D: Beyond product life cycle

Explanatory name of the default scenario in module D	No credit
Description of the default scenario in module D	Since SSAB Zero steel is produced from 100% recycled scrap, no net withdrawal of primary material can be considered avoided through recycling at end of life. Consequently, no credit for recovered steel is assigned in Module D. Since the polymer parts end up together with the product in steel recycling, module D (i.e. credit for generated energy) is not relevant since no “valuable” energy is generated.

ENVIRONMENTAL PERFORMANCE

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 environmental performance indicators according to EN 15804

Impact category	Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Climate change - total	GWP-total	kg CO_2 eq.	2.45E+0	5.68E-2	3.50E-2	ND	ND	ND	ND	ND	ND	ND	1.01E-3	2.68E-2	8.53E-1	0.00E+0	0.00E+0
Climate change - fossil	GWP-fossil	kg CO_2 eq.	2.47E+0	5.61E-2	0.00E+0	ND	ND	ND	ND	ND	ND	ND	1.01E-3	2.64E-2	8.53E-1	0.00E+0	0.00E+0
Climate change - biogenic	GWP-biogenic	kg CO_2 eq.	-2.84E-2	1.50E-4	3.50E-2	ND	ND	ND	ND	ND	ND	ND	1.08E-6	7.05E-5	3.44E-5	0.00E+0	0.00E+0
Climate change - land use and land-use change	GWP-luluc	kg CO_2 eq.	6.31E-3	5.61E-4	0.00E+0	ND	ND	ND	ND	ND	ND	ND	4.32E-6	2.64E-4	2.24E-5	0.00E+0	0.00E+0
Ozone depletion	ODP	kg CFC-11 eq.	5.71E-9	8.91E-18	0.00E+0	ND	ND	ND	ND	ND	ND	ND	2.07E-16	4.20E-18	5.25E-14	0.00E+0	0.00E+0
Acidification	AP	mol H^+ eq.	1.12E-2	8.12E-5	0.00E+0	ND	ND	ND	ND	ND	ND	ND	7.01E-6	4.04E-5	2.67E-4	0.00E+0	0.00E+0
Eutrophication aquatic freshwater	EP-freshwater	kg P eq.	1.80E-5	3.46E-7	0.00E+0	ND	ND	ND	ND	ND	ND	ND	2.57E-9	1.63E-7	2.68E-8	0.00E+0	0.00E+0
Eutrophication aquatic marine	EP-marine	kg N eq.	2.51E-3	2.79E-5	0.00E+0	ND	ND	ND	ND	ND	ND	ND	3.51E-6	1.42E-5	9.38E-5	0.00E+0	0.00E+0
Eutrophication terrestrial	EP-terrestrial	mol N eq.	2.69E-2	3.50E-4	0.00E+0	ND	ND	ND	ND	ND	ND	ND	3.82E-5	1.77E-4	1.35E-3	0.00E+0	0.00E+0
Photochemical ozone formation	POCP	kg NMVOC eq.	7.79E-3	6.52E-5	0.00E+0	ND	ND	ND	ND	ND	ND	ND	6.63E-6	3.27E-5	2.45E-4	0.00E+0	0.00E+0
Depletion of abiotic resources - minerals and metals	ADP-minerals&metals[1]	kg Sb eq.	1.50E-4	5.20E-9	0.00E+0	ND	ND	ND	ND	ND	ND	ND	7.36E-11	2.45E-9	6.80E-9	0.00E+0	0.00E+0
Depletion of abiotic resources - fossil fuels	ADP-fossil[1]	MJ, net calorific value	4.97E+1	7.37E-1	0.00E+0	ND	ND	ND	ND	ND	ND	ND	1.31E-2	3.47E-1	2.58E-1	0.00E+0	0.00E+0
Water use	WDP[1]	m^3 world eq. deprived	6.05E-1	7.44E-4	0.00E+0	ND	ND	ND	ND	ND	ND	ND	3.50E-6	3.50E-4	8.02E-2	0.00E+0	0.00E+0
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																
General disclaimer	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/A1-A5 for services).																
Disclaimer 1	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																

Additional mandatory environmental performance indicators

Impact category	Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Climate change - GWP-GHG	GWP-GHG[1]	kg CO_2 eq.	2.46E+0	5.68E-2	0.00E+0	ND	ND	ND	ND	ND	ND	ND	1.01E-3	2.68E-2	8.53E-1	0.00E+0	0.00E+0
Acronyms	GWP-GHG = Global warming potential greenhouse gas.																
General disclaimer	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/A1-A5 for services).																
Disclaimer 1	The GWP-GHG indicator is termed GWP-IOBC/GHG in the ILCD+EPD+ data format. The 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 CO_2 is set to zero.																

Additional voluntary environmental performance indicators according to EN 15804

Impact category	Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Particulate matter emissions	PM	Disease incidence	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ionizing radiation - human health	IRP[1]	kBq U235 eq.	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Eco-toxicity - freshwater	ETP-fw[2]	CTUe	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Human toxicity - cancer effects	HTP-c[2]	CTUh	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Human toxicity - non-cancer effects	HTP-nc[2]	CTUh	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Land-use related impacts/soil quality	SQP[2]	Dimensionless	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acronyms	PM = Potential incidence of disease due to particulate matter emissions; IRP = Potential human exposure efficiency relative to U235; ETP-fw = Potential comparative toxic unit for ecosystems; HTP-c = Potential comparative toxic unit for humans; HTP-nc = Potential comparative toxic unit for humans; SQP = Potential soil quality index.																
General disclaimer	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/A1-A5 for services).																
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 of these results are high or as there is limited experience with the indicator.																

Resource use indicators according to EN 15804

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PERE	MJ, net calorific value	1.97E+1	6.70E-2	0.00E+0	ND	ND	ND	ND	ND	ND	ND	9.09E-4	3.16E-2	4.55E-2	0.00E+0	0.00E+0
PERM	MJ, net calorific value	3.61E-1	0.00E+0	0.00E+0	ND	ND	ND	ND	ND	ND	ND	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
PERT	MJ, net calorific value	2.00E+1	6.70E-2	0.00E+0	ND	ND	ND	ND	ND	ND	ND	9.09E-4	3.16E-2	4.55E-2	0.00E+0	0.00E+0
PENRE	MJ, net calorific value	3.73E+1	7.38E-1	0.00E+0	ND	ND	ND	ND	ND	ND	ND	1.31E-2	3.48E-1	2.58E-1	0.00E+0	0.00E+0
PENRM	MJ, net calorific value	1.24E+1	0.00E+0	0.00E+0	ND	ND	ND	ND	ND	ND	ND	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
PENRT	MJ, net calorific value	4.97E+1	7.38E-1	0.00E+0	ND	ND	ND	ND	ND	ND	ND	1.31E-2	3.48E-1	2.58E-1	0.00E+0	0.00E+0
SM	kg	2.19E+0	0.00E+0	0.00E+0	ND	ND	ND	ND	ND	ND	ND	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
RSF	MJ, net calorific value	0.00E+0	0.00E+0	0.00E+0	ND	ND	ND	ND	ND	ND	ND	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
NRSF	MJ, net calorific value	0.00E+0	0.00E+0	0.00E+0	ND	ND	ND	ND	ND	ND	ND	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
FW	m^3	2.03E-2	8.49E-5	0.00E+0	ND	ND	ND	ND	ND	ND	ND	2.65E-7	4.00E-5	1.90E-3	0.00E+0	0.00E+0
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 resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water.															
General disclaimer	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/A1-A5 for services).															

Waste indicators according to EN 15804

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
HWD	kg	1.28E-5	4.08E-11	0.00E+0	ND	ND	ND	ND	ND	ND	ND	5.55E-13	1.92E-11	2.83E-11	0.00E+0	0.00E+0
NHWD	kg	2.80E-1	1.85E-4	0.00E+0	ND	ND	ND	ND	ND	ND	ND	2.42E-6	8.71E-5	1.01E-2	0.00E+0	0.00E+0
RWD	kg	2.68E-3	1.30E-6	0.00E+0	ND	ND	ND	ND	ND	ND	ND	1.38E-8	6.11E-7	1.18E-5	0.00E+0	0.00E+0
Acronyms	HWD = Hazardous waste disposed; NHWD = Non-hazardous waste disposed; RWD = Radioactive waste disposed.															
General disclaimer	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/A1-A5 for services).															

Output flow indicators according to EN 15804

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
CRU	kg	0.00E+0	0.00E+0	0.00E+0	ND	ND	ND	ND	ND	ND	ND	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
MFR	kg	1.03E-4	0.00E+0	0.00E+0	ND	ND	ND	ND	ND	ND	ND	0.00E+0	0.00E+0	1.99E+0	0.00E+0	0.00E+0
MER	kg	6.89E-5	0.00E+0	0.00E+0	ND	ND	ND	ND	ND	ND	ND	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
EEE	MJ, net calorific value	4.57E-2	0.00E+0	0.00E+0	ND	ND	ND	ND	ND	ND	ND	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
EET	MJ, net calorific value	8.26E-2	0.00E+0	0.00E+0	ND	ND	ND	ND	ND	ND	ND	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Acronyms	CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy.															
General disclaimer	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/A1-A5 for services).															

ABBREVIATIONS

EAF = Electric Arc Furnace

EF = Environmental Footprint

EPD = Environmental Product Declaration

GPI = General Programme Instructions

HBEFA = Handbook Emission Factors for Road Transport

HDPE = High-Density Polyethylene

HVO = Hydrotreated Vegetable Oil

IBU = Institut Bauen und Umwelt

ISO = International Organization for Standardization

LCA = Life Cycle Assessment

LDPE = Low-Density Polyethylene

LLDPE = Linear Low-Density Polyethylene

ND = Not Declared

PCR = Product Category Rules

PE = Polyethylene

PP = Polypropylene

PU = Polyurethane

PUR = Polyurethane

RME = Rapeseed Methyl Ester

SVHC = Substances of Very High Concern

UN CPC = United Nations Central Product Classification

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World Steel Association (worldsteel) is an industry association, with members in every major steel-producing country, representing steel producers, national and regional steel industry associations, and steel research institutes.

VERSION HISTORY

Original version of the EPD, 2026-10-02

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