Environmental Product Declaration

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

OPTIMERA FORMPLYWOOD

Series

12 FORMPLYWOOD ENKEL 2500X1200
12 FORMPLYWOOD ENKEL 2500X600
12 FORMPLYWOOD ENKEL 1200X1200
15 FORMPLYWOOD ENKEL 2500X1200
18 FORMPLYWOOD ENKEL 2500X1200
21 FORMPLYWOOD ENKEL 2500X1200

from

SAINT-GOBAIN

Programme:	The International EPD® System, www.environdec.com
Programme operator:	EPD International AB
EPD registration number:	EPD-IES-0024514
EPD type:	Multiple products EPD based on worst case
Version date:	2025-06-19
Validity date:	2030-06-19

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.

General information

Programme information

Programme:	The International EPD® System
Address:	EPD International AB Box 210 60 SE-100 31 Stockholm Sweden
Website:	www.environdec.com
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Accountabilities for PCR, LCA and independent, third-party verification
Product Category Rules (PCR)
CEN standard EN 15804 serves as the Core Product Category Rules (PCR)
Product Category Rules (PCR): Construction Products PCR 2019:14 version 1.3.4, Environmental Footprint (EF) 3.1 method. PCR 2019:14-c-PCR-006 for Wood and wood-based products for use in construction (EN 16485) (1.0.0)
PCR review was conducted by: *The Technical Committee of the International EPD® System. Review chair: Claudia A. Peña, University of Concepción, Chile. The review panel may be contacted via the Secretariat www.environdec.com/contact.*
Life Cycle Assessment (LCA)
LCA accountability: *Tabi.Farzad, SGDS, tabi.farzad@saint-gobain.se*
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: *Sigita Židonienė, Vesta, sigita@vestaconsulting.lt* 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 registered in different EPD programmes, or not compliant with EN 15804, may not be comparable. For two EPDs to be comparable, they must be based on the same PCR (including the same 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 equivalent system boundaries and descriptions of data; apply equivalent data quality requirements, methods of data collection, and allocation methods; apply identical cut-off rules and impact assessment methods (including the same version of characterisation factors); have equivalent content declarations; and be valid at the time of comparison. For further information about comparability, see EN 15804 and ISO 14025.

Company information

Owner of the EPD: Saint-Gobain Distribution Sweden

Contact: Optimera – Henrik Bjork (henrik.bjork@optimera.se)

Description of the organisation

Saint-Gobain Distribution Sweden AB - specialists in collaboration for more efficient business in construction and installation. Saint-Gobain Distribution Sweden AB is the head company of some of Sweden's leading trading companies in construction, sheet metal, tiles and installation. All the companies have long and solid industry experience and provide most of Sweden's craftsmen with materials for various projects. Customers in different companies can also buy support items from the sister companies in the group, and in selected cases, we take joint projects to facilitate the logistics of the supply of goods, which is then often critical for a smooth construction project.

- Optimera - construction trade for professional carpenters
- Dahl – heat, plumbing and sanitary specialist
- Bevego - building sheet metal, ventilation and technical insulation
- Kakelspecialisten and Konradsson's Tiles - tiles, tiling and bathroom fittings

The company's focus is on sales and services with direct contact to about 150,000 customers regularly.
Saint-Gobain Distribution Sweden AB is owned by Saint-Gobain with a presence in 64 countries and over 190 000 employees worldwide.

Location of production site(s)
Pizhou, China

Product information

Product name: Optimera Formplywood

Product identification: Formplywood

Product description

Several types of plywood panels are manufactured and distributed by Saint-Gobain Distribution Sweden. These plywood panels consist of multiple layers of wood veneer bonded together using adhesives under controlled heat and pressure. The composition and structure of the panels vary depending on the product series, with differences in thickness, dimensions, and specific material composition.
The simplest type of plywood consists only of untreated layers, while others incorporate additional treatments such as waterproof coatings, fire-retardant layers, or protective films. Some variants feature a combination of plywood with additional reinforcement elements like steel belts for added durability and stability.
Each plywood series includes different variants based on key factors such as thickness, panel dimensions, and material composition. The following product variants are considered in this study:

Table 1: Product variants

Name	Description
Formplywood	12 Formplywood enkeL 2500X1200
Formplywood	12 Formplywood enkel 2500X600
Formplywood	12 Formplywood enkel 1200X1200
Formplywood	15 Formplywood enkel 2500X1200
Formplywood	18 Formplywood enkel 2500X1200
Formplywood	21 Formplywood enkel 2500X1200

UN CPC code: CPC Code: 3143 – Plywood, veneered panels and similar laminated wood.
This category includes plywood and related engineered wood products that consist of multiple layers of wood veneer bonded together with adhesives.

Hazardous substances

At the date of issue of this declaration (date: 2025-01-02), there is no “Substance of Very High Concern” (SVHC) in concentration above 0.1 % in the products or packaging according to the European REACH regulation.

Description of the main components and/or material

Each variant has a unique composition of materials, including wood, glue, flour, film, plywood, steel belts, and pallets, which contribute to the overall performance of the plywood panels. The material proportions vary slightly across the different types, reflecting differences in mass and structure where the EPD is based on a worst-case product with a certain size (18 x2500X1200 mm). The material specification for the products and their packaging is listed in table 2.

Table 2: material specification for the products and their packaging based on worse case plywood 18x2500x1200

Product Component	Mass kg per declared unit (m3)	Post-consumer recycled material, mass-% of product	Biogenic material, mass-% of product	Biogenic material, kg C/product or declared unit
Wood	450	0%	43%	193,5
Glue	41	0%	0%	0
Flour	20	0%	39%	7,8
Film	16	0%	43%	6,88
Total	**527**			
Packaging Component	**Mass (kg)**	**Mass-% (versus the product)**	**Biogenic material, mass-% of product**	**Biogenic material, kg C/ declared unit**
Plywood	2,5	0.46%	43%	1,07
Steel belt	4	0.73%	0	0
Pallet	11,5	2.11%	43%	4,94
Total	**18**			

LCA information

Declared unit

1 m^3 of formplywood, based on the worst-case results of the product group.

Reference service life: 50 years

Time representativeness:

The site-specific data used for the product manufacturing corresponds to 2024. The age of data from generic databases varies from 2020 – 2024.

Database(s) and LCA software used:

Calculation completed in LCA for Experts (GaBi) v10.8 with an integrated Ecoinvent database v.3.10 integrated CUP2023.2

Data

Generic database data was used for the production of raw materials, energy, transportation, packaging and end-of-life. Specific data was collected from the factory.

Data quality

All datasets used were sourced from reputable databases, specifically LCA for Experts (GaBi) v10.8 with an integrated Ecoinvent database v3.10, and CUP2023.2. These datasets offer strong technological representativeness and reflect either Sweden or the EU28 average, making them reliable.

Type of EPD

The type of EPD is a multiple products EPD, published based on the worst-case scenario. It covers a cradle-to-gate scope with the inclusion of modules C1–C4 and module D, while excluding modules A4–A5 and B1–B7.

Allocation

In the case of multifunctional situations, i.e., where systems generate several products, the allocation rules outlined in PCR 2019:14 apply. When multiple products share the same production process (e.g., wood veneers and fiber dust), the associated environmental loads—such as plant energy use, material inputs, and waste outputs—are allocated based on mass, rather than economic value.

This means that, for each cubic meter of finished plywood, the corresponding shares of energy consumption, fuel use, and waste generation are calculated proportionally to the mass of the product relative to the total mass output of the system.

Cut-off criteria

The general rules for the exclusion of inputs and outputs follow the requirements in EN 15804+A2. Flows related to human activities such as employee transport are excluded. The construction of plants, production of machines and transportation systems are excluded since the related flows are supposed to be negligible compared to potential environmental impacts through the life cycle of the product.

Geographical scope

Global

Description of system boundaries

According to EN 15804:2012+A2:2019/AC:2021, all construction products should declare modules A1-A3 but also C1-C4 and D. The system boundary of this LCA study is set from cradle to gate, with options. The life cycle stages included are the product stage (modules A1-A3), transport to the installation site (module A4), construction and installation and also packaging waste management (module A5), and the end-of-life stage (module C). Module D captures the benefits from the end-of-life treatment of materials, whether directed toward material or energy recovery. Module B is excluded as it is not associated with any activities or emissions that cause environmental impacts.

System diagram:

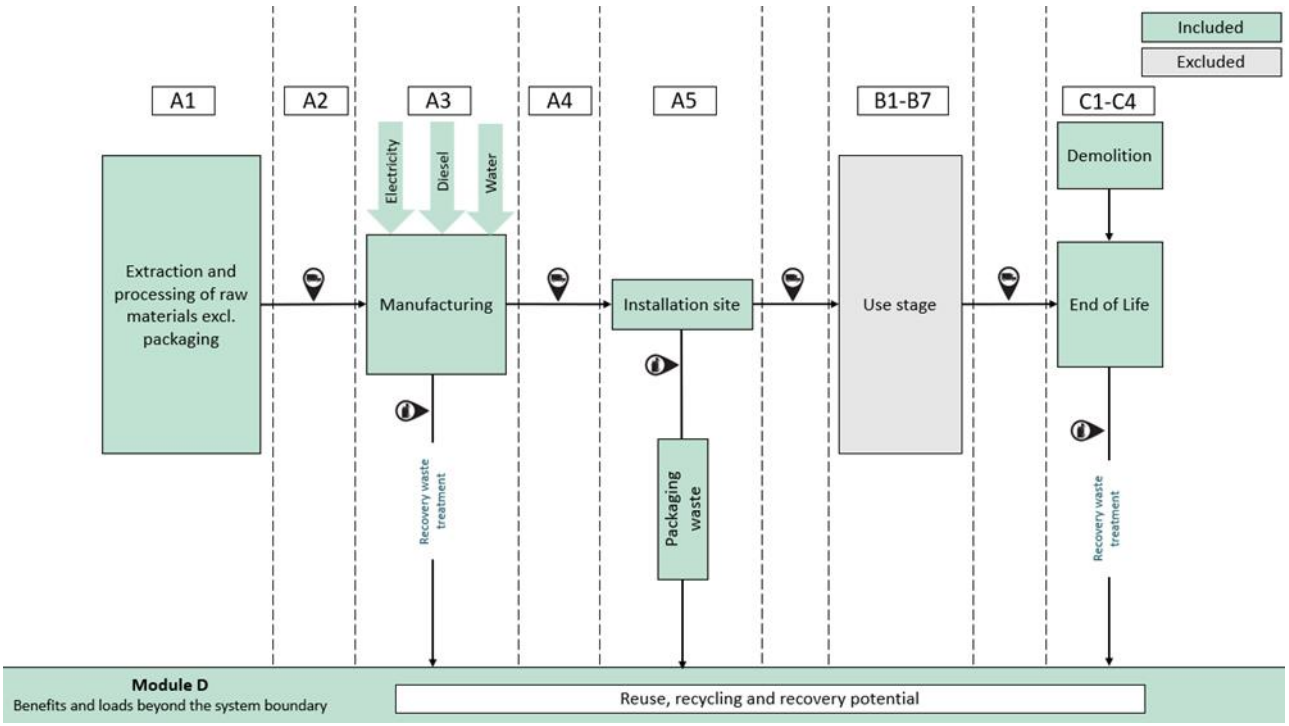


Table 3: Modules declared

	Product stage			Assembly stage		Use stage							End-of-life stage				Benefits & loads beyond system boundary
	Raw materials	Transport	Manufacturing	Transport	Assembly	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	CN	GLO	CN	SE	SE	-	-	-	-	-	-	-	SE	SE	SE	SE	SE
Specific data used	43.2 %			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – products*	<3%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – sites	0%			-	-	-	-	-	-	-	-	-	-	-	-	-	-

X=Modules included ND = Not declared

*In an EPD of multiple products, the difference (in %) between the declared GWP-GHG result, and the product with GWP-GHG results furthest away from the declared results, for modules A1-A3 shall be reported in the EPD. Variations above 10% are allowed, if justified in the LCA report and the EPD declares the variation of each impact indicator results for which the variation is above 10%

Life cycle inventory data

A1-A3 Raw materials and manufacturing stage

A1: This module includes the extraction and initial production of raw materials used to manufacture plywood. The main components are wood, glue, flour, and film. Wood is harvested from forests and prepared into logs for further use. Glue components, such as resins, are derived from fossil-based raw materials through chemical processes. Flour, used as an additive in the glue mix, is produced from agricultural crops. Film materials are typically based on polymers derived from petroleum. All resource extraction and raw material preparation are included in this stage.

A2: This module includes the transportation of raw materials to the manufacturing site and the transportation from the supplier in China to Saint-Gobain's distribution center in Sweden. Specific information from the manufacturer was obtained regarding the transportation distance between the suppliers to the manufacturing factory.

A3: This module includes the assembly of plywood manufactured in China. During the assembly process electricity, diesel and water are used. It is assumed that the inputs and outputs from this module are distributed equally across the products per declared unit as the processes are similar across all products. This module also includes the production of packaging materials which are used to transport the finished products out to the distribution center. The packaging material consists of pallet, steel belt and plywood. Data has been collected by the manufacturer from the production year of 2024, the full 12 months from January 2024 to December 2024.

Detailed data sets for these transportation routes are provided in following table.

Table 4: Detailed data sets for these transportation

Type	Type of vehicle	Capacity utilisation (incl. return) %	Fuel/Energy consumption	Distance /km
Truck	Average truck trailer with a 27 t payload	61%	EU 28: Diesel mix (9.40 wt.% bio components)	960
Ship	Container ship, 5,000 to 200,000 dwt payload capacity, deep sea	70%	Heavy fuel oil at refinery (1.0wt.% S)	25000

A4 Transport to construction process stage

It assumes an extra 350 km as generic data for transportation by truck to the installation site in Sweden. Detailed data sets for these transportation routes are provided in following table.

Table 5: Transport to the building site - A4

Scenario information	Unit per DU
Fuel type and consumption of vehicle or vehicle type	Truck-trailer, Euro 0 - 6 mix, 34 - 40t gross weight
Distance [km]	350
Fuel/Energy consumption value [l/tkm]	EU 28: Diesel mix (9.40 wt.% bio components)
Capacity Utilisation (including empty returns) [%]	61
Volume capacity	1

A5 Installation

This stage includes both the installation of the plywood and the management of packaging waste originating from module A3. Installation is carried out using an electric forklift for mechanical handling and manual positioning, with an estimated energy use of 20 MJ per m³ of installed product. No significant material loss or emissions occur during this phase, and fastening is done using standard tools without adhesives. Packaging waste is managed using Swedish average data (SCB, 2020), as detailed in Table 31, with the dataset used shown in Table 6. Wooden pallets are assumed to be reused.

Table 6 Packaging disposal waste rates

Material	Recycling rate	Incineration rate	Landfill rate
plywood	11%	84%	5%
Steel belt	100%	0%	0%
Pallet	11%	84%	5%

***B1-B7* Use stage**

This stage includes no activities or emissions related to the product.

C1 Deconstruction

The deconstruction phase (Module C1) accounts for the energy required to dismantle or remove the product at the end of its life. In the case of plywood, this typically involves manual handling and limited use of electrically powered tools such as saws, drills, or forklifts.
In this assessment, the energy demand associated with deconstruction is considered negligible. This is due to the minimal impact of such activities relative to the total life cycle energy of the product and the absence of significant material or energy inputs during this stage.

C2 Transport

The following tables show the transportation type and fuel of the transport to a waste management facility. Transport distance to waste processing is assumed to be 50 km.

Table 7 Transport type - C2

Transportation type	Capacity utilisation (incl. return) %	Dataset
Truck	61	Truck-trailer, Euro 0 - 6 mix, 34 - 40t gross weight / 27t payload capacity

C3 Waste processing

The waste rate of the pduct in this scenario is shown in table 8.

Table 8 Waste treatment rates – C3-C4

Material	Recycling rate	Incineration rate	Landfill rate
Plywood	11%	84%	5%

The assumption is based on Swedish statistics (SCB, 2020) as waste management occurs in Sweden. Note that the incineration includes energy recovery. It is believed that this scenario is currently in use and representative of the assumptions used in this study.

C4 waste disposal

The impacts of landfilling and final disposal of the product at its end of life are calculated by using the datasets and quantities listed in table 8. Due to consideration of collection and recycling efficiencies, the materials that are not processed are assumed to be landfilled as municipal solid waste.

D Reuse/recovery/recycling potential

Where material disposal produces energy in A5, C3, and C4, benefits and loads are given in module D. Benefits and loads are also given for recycling. Due to lack of recycling datasets, a 10% loss of material and/or quality is assumed. For the credit for recovered electricity and heat (Module D), EU datasets were utilized.

Table 9: Credits

	Electrical Energy recovered MJ/m³	Thermal Energy recovered MJ/m³
Product wastes	1,16E+03	2,08E+03
Packaging wastes	2,26+01	4,8E+01

Information describing the biogenic carbon content at the factory gate

Biogenic carbon content*	Unit	Value
Biogenic carbon content in product	kg C	2,08E+02
Biogenic carbon content in the accompanying packaging	kg C	6,01E+00

*44/12 is the ratio between the molecular mass of CO_2 and C molecules

Results of the environmental performance indicators according to EN 15804+A2, EF 3,1

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. As module C is included in the EPD, it is discouraging the use of the results of modules A1-A3 without considering the results of module C

Environmental impacts per declared unit (1m³ of plywood 18 X1200X2500MM)

Indicator	Unit	A1- A3	A4	A5	C1	C2	C3	C4	D
Climate Change - total	kg CO2 eq.	5,00E+02	1,40E+01	4,25E+02	0	4,04E+00	8,36E+02	3,99E+01	-4,86E+02
Climate Change, fossil	kg CO2 eq.	1,22E+03	1,37E+01	3,88E+02	0	3,97E+00	1,25E+02	5,17E-01	-4,85E+02
Climate Change, biogenic	kg CO2 eq.	-7,39E+02	3,84E-02	3,74E+01	0	1,13E-02	7,12E+02	3,94E+01	-5,47E-02
Climate Change, land use and land use change	kg CO2 eq.	1,59E+01	2,30E-01	1,17E-01	0	6,59E-02	7,30E-03	3,12E-04	-2,87E-01
Ozone depletion	kg CFC-11 eq.	1,46E-05	2,00E-16	1,58E-07	0	6,04E-17	1,65E-08	7,89E-08	-6,92E-06
Acidification	Mole of H+ eq.	1,15E+01	1,63E-02	9,70E-01	0	5,33E-03	1,27E-01	2,66E-03	-1,52E+00
Eutrophication, freshwater	kg P eq.	1,36E-01	5,85E-05	4,76E-03	0	1,67E-05	2,13E-04	6,55E-05	-2,50E-02
Eutrophication, marine	kg N eq.	3,26E+00	5,56E-03	4,31E-01	0	1,99E-03	3,75E-02	1,23E-02	-2,97E-01
Eutrophication, terrestrial	Mole of N eq.	3,45E+01	6,55E-02	2,96E+00	0	2,31E-02	5,39E-01	9,21E-03	-3,17E+00
Photochemical ozone formation, human health	kg NMVOC eq.	1,04E+01	1,54E-02	8,26E-01	0	5,39E-03	1,04E-01	3,42E-03	-1,12E+00
Resource use, mineral and metals	kg Sb eq.	2,96E-03	1,17E-06	1,39E-04	0	3,42E-07	6,95E-06	9,81E-07	-8,73E-05
Resource use, fossils	MJ	1,73E+04	1,79E+02	1,64E+04	0	5,17E+01	1,90E+02	7,00E+00	-6,11E+03
Water use	m³ world equiv.	8,34E+02	2,04E-01	-1,28E+01	0	6,07E-02	8,34E+01	-5,85E-02	-9,34E+01

Supplementary indicator for climate impact per declared unit (1m³ of plywood 18 X1200X2500MM)

Indicator	Unit	A1- A3	A4	A5	C1	C2	C3	C4	D
GWP-GHG	kg CO2 eq.	1,24E+03	1,40E+01	3,88E+02	0	4,03E+00	1,25E+02	5,17E-01	-4,86E+02
Particulate matter (PM)	Disease incidences	2,12E-04	1,56E-07	1,14E-05	0	5,23E-08	8,33E-07	4,71E-08	-1,84E-0
Ionising radiation, human health (IRP)	kBq U235 eq.	3,01E+01	3,23E-02	5,08E+02	0	1,36E-02	1,56E+00	3,15E-02	-9,53E+00
Ecotoxicity, freshwater (ETP-fw)	CTUe	8,06E+03	1,32E+02	1,49E+03	0	3,83E+01	8,06E+01	1,10E+01	-5,77E+02
Human toxicity, cancer (HTP-c)	CTUh	7,71E-07	2,64E-09	2,11E-07	0	7,74E-10	8,28E-09	2,29E-10	-8,80E-08
Human toxicity, non-cancer (HTP-nc)	CTUh	8,21E-06	1,18E-07	3,58E-06	0	3,48E-08	3,62E-07	8,73E-09	-1,66E-06
Land Use (SQP)	Pt	3,28E+05	1,33E-01	5,58E+03	0	5,65E-02	1,92E+01	1,56E+01	-2,33E+02

GWP-GHG indicator accounts for all greenhouse gases except biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. As such, the indicator is identical to GWP-total except that the CF for biogenic CO2 is set to zero. This means that the uptake and emissions of biogenic CO2 are "balanced out" already in modules A1-A3, instead of in modules A1-A5 (for packaging) or modules A-C (for product)

Resource use per declared unit (1m³ of plywood 18 X1200X2500MM)

Indicator	Unit	A1- A3	A4	A5	C1	C2	C3	C4	D
Use of renewable primary energy (PERE)	MJ	3,98E+04	1,51E+01	1,85E+04	0	4,45E+00	5,05E+01	1,46E-01	-8,82E+02
Primary energy resources used as raw materials (PERM)	MJ	1,05E+04	0	-1,02E+02	0	0	-4,05E+03	0	0
Total use of renewable primary energy resources (PERT)	MJ	5,03E+04	1,51E+01	1,84E+04	0	4,45E+00	-4,00E+03	1,46E-01	-8,82E+02
Use of non-renewable primary energy (PENRE)	MJ	1,71E+04	1,79E+02	1,64E+04	0	5,17E+01	1,90E+02	7,00E+00	-6,11E+03
Non-renewable primary energy resources used as raw materials (PENRM)	MJ	2,38E+02	0	0	0	0	-2,023E+02	0	0
Total use of non-renewable primary energy resources (PENRT)	MJ	1,73E+04	1,79E+02	1,64E+04	0	5,17E+01	-1,23E+01	7,00E+00	-6,11E+03
Input of secondary material (SM)	kg	9,94E-01	0	0	0	0	0	0	0
Use of renewable secondary fuels (RSF)	MJ	0	0	0	0	0	0	0	0
Use of non-renewable secondary fuels (NRSF)	MJ	0	0	0	0	0	0	0	0
Use of net fresh water (FW)	m³	1,95E+01	1,70E-02	7,89E+00	0	4,96E-03	1,96E+00	-1,36E-03	-2,22E+00

**Primary energy contained in the packaging material is not accounted for and is considered lost*

Waste indicators per declared unit (1m^3 of plywood 18 X1200X2500MM)

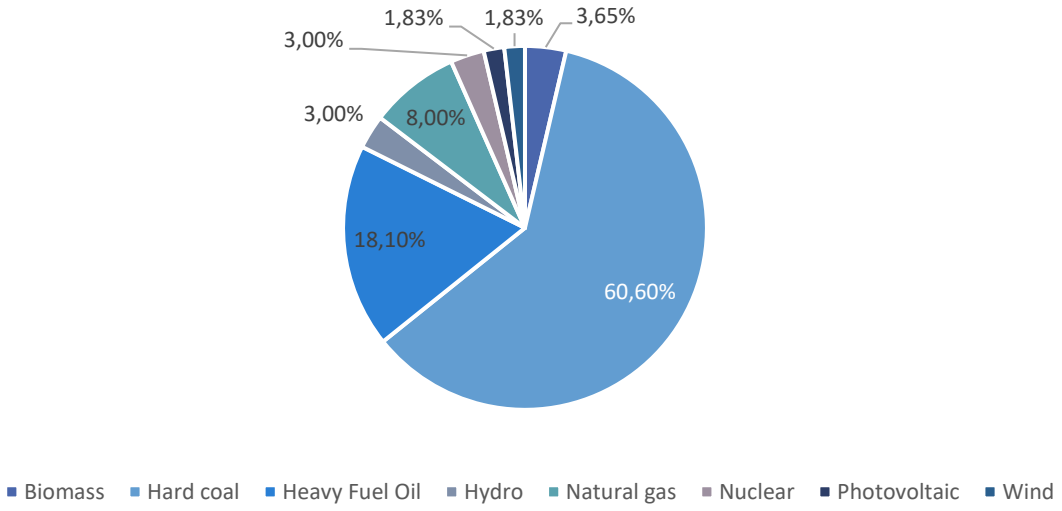
Indicator	Unit	A1- A3	A4	A5	C1	C2	C3	C4	D
Hazardous waste disposed (HWD)	kg	2,00E+01	5,80E-09	1,66E-01	0	1,98E-09	8,35E-02	6,69E-04	-1,98E+00
Non-hazardous waste disposed (NHWD)	kg	3,94E+02	2,79E-02	6,04E+02	0	8,43E-03	1,51E+01	2,98E+01	-3,08E+01
Radioactive waste disposed (RWD)	kg	8,81E-02	2,32E-04	4,38E+00	0	9,41E-05	9,48E-03	3,67E-05	-6,71E-02

Output flow indicators per declared unit (1m^3 of plywood 18 X1200X2500MM)

Indicator	Unit	A1- A3	A4	A5	C1	C2	C3	C4	D
Components for re-use (CRU)	kg	0	0	1,01E+01	0	0	0	0	0
Materials for Recycling (MFR)	kg	0	0	5,54E+00	0	0	5,04E+01	0	0
Material for Energy Recovery (MER)	kg	0	0	0	0	0	0	0	0
Exported electrical energy (EEE)	MJ	0	0	2,66E+01	0	0	1,16E+03	0	0
Exported thermal energy (EET)	MJ	0	0	4,80E+01	0	0	2,08E+03	0	0

Additional information

The electricity mix used in this study for A1-A3 can be seen in figure below. The power-mix is based on the grid mix of China as the manufacturing processes occurs here. The data for the residual mix was retrieved from the International Energy Agency (2024).



National electricity grid	Data source	GWP excl biogenic [kg CO2 -eq/kWh]
Chinese electricity mix	IEA (2024)	78E-02

Electricity consumption during stage A5 as well as electricity recovery at the end-of-life stage, was modeled using the Swedish electricity grid mix, based on the 2024 dataset from the Association of Issuing Bodies (AIB).

National electricity grid	Data source	GWP excl biogenic [kg CO2 -eq/kWh]
Swedish grid mix	AIB (2024)	11E-02

Disclaimers

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 (EPmarine)	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 and metals)	2
	Abiotic depletion potential for fossil resources (ADP-fossil)	2
	Water (user) deprivation potential, deprivation-weighted	2
	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 experience with the indicator.		
Disclaimer 3: 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.		

References

- **EN 15804:2012+A2**

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Abbreviations

General

- **EPD** – Environmental Product Declaration
- **LCA** – Life Cycle Assessment
- **PCR** – Product Category Rules
- **ISO** – International Organization for Standardization
- **EN** – European Norm
- **UN CPC** – United Nations Central Product Classification

Environmental Impact and LCA Metrics

- **GWP** – Global Warming Potential
- **GWP-GHG** – Global Warming Potential (Greenhouse Gas-specific)
- **PM** – Particulate Matter
- **ODP** – Ozone Depletion Potential
- **AP** – Acidification Potential
- **EP** – Eutrophication Potential
- **POCP** – Photochemical Ozone Creation Potential
- **IRP** – Ionizing Radiation Potential
- **ETP-fw** – Ecotoxicity Potential (Freshwater)
- **HTP-c** – Human Toxicity Potential (Cancer)
- **HTP-nc** – Human Toxicity Potential (Non-Cancer)
- **SQP** – Soil Quality Potential

Energy and Waste Metrics

- **PERE** – Primary Energy, Renewable
- **PERM** – Primary Energy, Renewable (Material Use)
- **PERT** – Total Use of Renewable Primary Energy
- **PENRE** – Primary Energy, Non-Renewable
- **PENRM** – Primary Energy, Non-Renewable (Material Use)
- **PENRT** – Total Use of Non-Renewable Primary Energy
- **SM** – Secondary Material
- **RSF** – Renewable Secondary Fuels
- **NRSF** – Non-Renewable Secondary Fuels
- **FW** – Fresh Water Use
- **HWD** – Hazardous Waste Disposed

- **NHWD** – Non-Hazardous Waste Disposed
- **RWD** – Radioactive Waste Disposed
- **CRU** – Components for Reuse
- **MFR** – Materials for Recycling
- **MER** – Materials for Energy Recovery
- **EEE** – Exported Electrical Energy
- **EET** – Exported Thermal Energy

Software and Databases

- **GaBi** – LCA Software (GaBi by Sphera)
- **Ecoinvent** – Life Cycle Inventory Database
- **CUP2023.2** – Version of the Ecoinvent Database

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