Environmental Product Declaration

EPD of multiple products, based on representative product.
In accordance with ISO 14025:2006 and EN 15804:2012+A2:2019/AC:2021 for:

Formplywood Basic

2500x600/1200x12/15/18/21mm, from

Xuzhou M&D Int. Co., Ltd.

Programme:	The International EPD® System, www.environdec.com
Programme operator:	EPD International AB
EPD registration number:	EPD-IES-0018689
Publication date:	2025-01-20
Valid until:	2030-01-19

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
E-mail:	info@environdec.com

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): PCR 2019:14 Construction products Version 1.3.4 [valid until: 2025-06-20], C-PCR-006 (TO PCR 2019:14) Version 2024-04-30 [valid until: 2025-06-20]. The product group classification for the assessed products is UN CPC 314.
PCR review was conducted by: The Technical Committee of the International EPD System. See www.environdec.com for a list of members. 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: Sijia Yang from IVL Swedish Environmental Research Institute
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: Matthew Fishwick from Fishwick Environmental Ltd. 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 may not be comparable. For two EPDs to be comparable, they shall be based on the same PCR (including the same version number up to the first two digits) 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.

The results of the end-of-life stage (module C) should be considered when using the results of the production stage (modules A1-A3).

Company information

Owner of the EPD:
Xuzhou M&D Int. Co., Ltd. (M&D). The company address of M&D is Room 2307, Site A, Hengsheng Plaza, Xuzhou City, Jiangsu Province, China.

Contact:
Linda Sun (+86 13905203631)

Description of the organisation:
Xuzhou M&D Int. Co., Ltd. have more than twenty years' experience of Chinese plywood exporting. For the moment we have 4 stable cooperated mills in southern suburbs of Xuzhou city & Guanhu of Pizhou, they mostly produce film-faced plywood and commercial plywood with total 13 production lines and production capacity 6000 m^3 per month. M&D company has the certificates granted by Forest Stewardship Council.

Name and location of production site:
The products covered by this EPD are produced from Suzhou City Lingfeng Wood Co. Ltd. Yangzhuang Village, Yangzhuang Town, Suzhou City, Anhui Province, China.

Product information

Product name:
Formplywood Basic

Product description:
Form plywood products (namely Formplywood Basic) are mainly used as construction formwork, which is a mould shell used for concrete pouring and forming, and is widely used in construction projects such as bridges, high-rise buildings, industrial plants and water conservancy projects. It has good moulding effect, smooth surface, accurate size, strong versatility, easy to install and dismantle, turnover times, etc., which can ensure construction safety and structural stability.

The Formplywood Basic products covered by the EPD have the dimensions of 2500x600/1200x12/15/18/21mm. Among them, 2500x1200x12mm product has been selected as the representative product with the highest production rate in this group. The product performance of this group reaches formaldehyde release 0.023 mg/m^3 and TVOC release rate<0.020mg/(m^2.h) provided by M&D.

UN CPC code:
314

Geographical scope:
Modules A1-A3 represents the production of the products in China as well as A4 and A5 represents the transportation and construction in Europe. Module B, C, and D represent the use, construction, and end-of-life stages with benefits out of the system boundary of the products in Europe.

LCA information

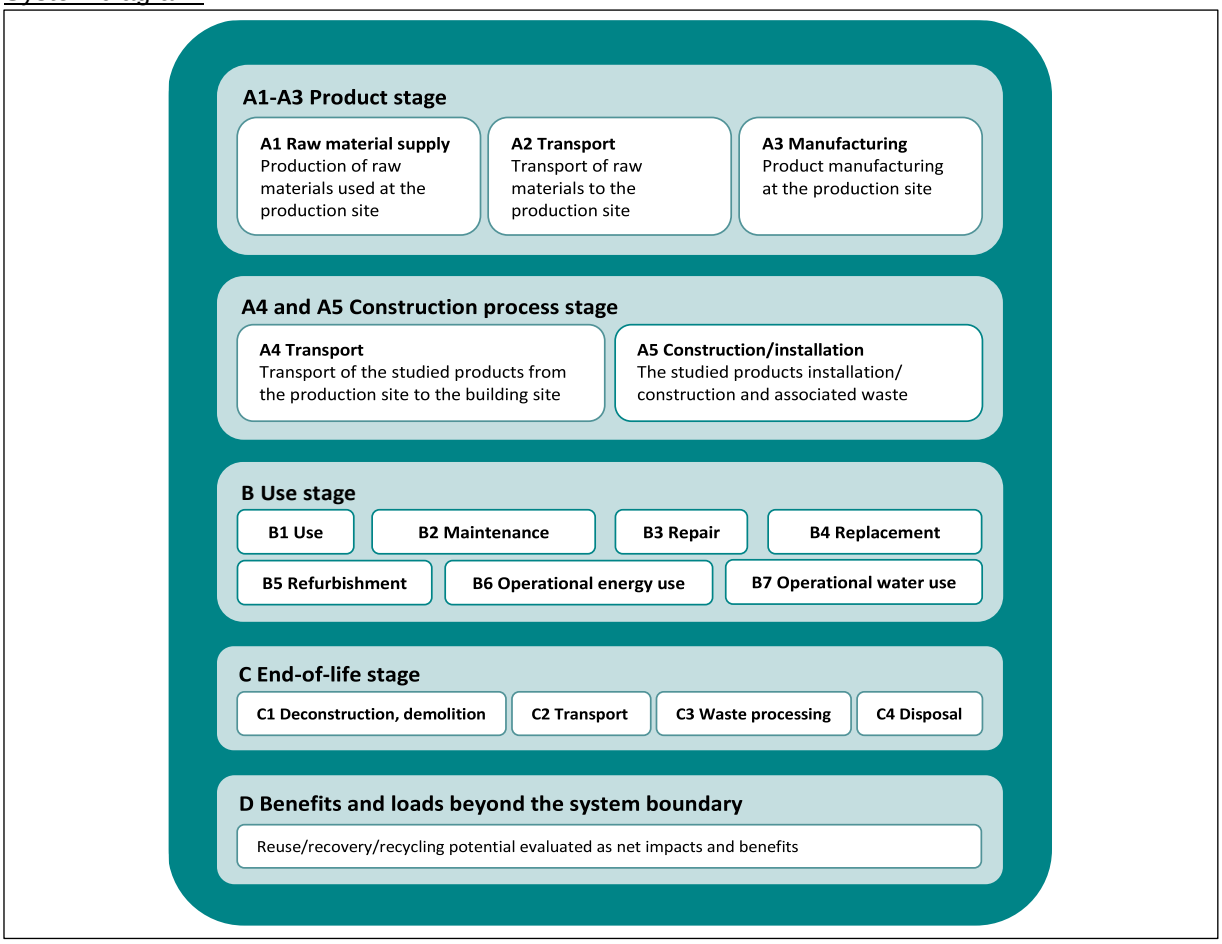
Declared unit:
1 m^3 of the Formplywood Basic product. The conversion factor to mass of the representative product is 553.20 kg (i.e. 1 m^3 = 553.20 kg).

Time representativeness:
2023 (January to December).

Database(s) and LCA software used:
Managed LCA Content 2023.2 Databases and ecoinvent 3.9.1 (cut-off version), LCA for Experts (Gabi).

Description of system boundaries:
The scope of the EPD generated corresponds to “cradle to gate with options” which serves type (b) EPD, assessing the potential environmental impacts associated with the studied product. The information module included in the study is A1-A3, A4, A5, B1-B7, C1-C4, and D.

System diagram:



Manufacturing processes:
As the manufacturing process is important to understand the whole studied system, the description of the main manufacturing processes for producing the studied product is explained as below. A flow chart of product manufacturing is shown below.

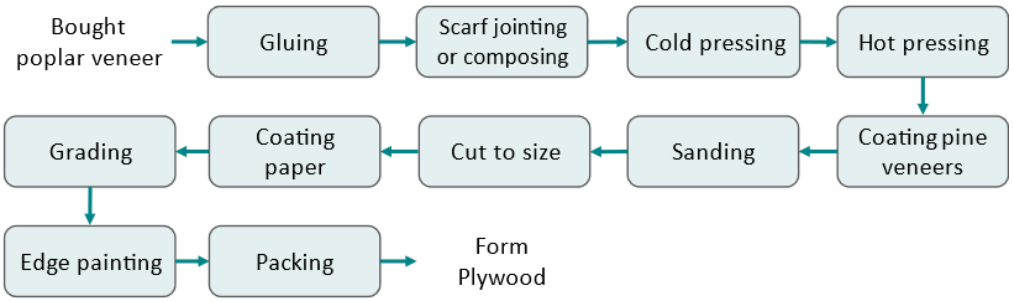


Figure 1 The main production process of studied product

The first step after the factory purchases poplar veneer is to apply glue, and the veneer coated with glue is then pressed to produce of different thicknesses. The substrate is sanded after cold and hot pressing, the pine veneer is pasted, the surface of the substrate becomes flat after sanding, and covered with film paper. Then the products are graded and the unqualified products are picked out. The graded products will be stacked into a volume of about 2.8 cubic meters for painting, packing and ready for selling.

The GWP-GHG of electricity mix for Anhui province in this study is 0.996 kg CO_2 eq./kWh. Note that the Guarantees of Origin market in China represents an extremely small proportion of production and consumption, and therefore the consumption mix is effectively the same as the residual mix.

Table 1. Electricity structure of the Anhui province and the dataset chosen for it

Electricity generation sources	Dataset used in the model	GWP-GHG (CO_2 eq./kWh)	Percentage
Electricity from fossil fuel(1)	CN: Electricity from hard coal Sphera	1.11	88.74%
Electricity from hydro power	CN: Electricity from hydro power Sphera	0.00745	2.66%
Electricity from nuclear power	CN: Electricity from nuclear power Sphera	0.00446	0.00%
Electricity from wind power	CN: Electricity from wind power Sphera	0.0171	3.51%
Electricity from photovoltaic	CN: Electricity from photovoltaic Sphera	0.0288	5.09%

(1) In the 2022 China Electricity Yearbook, the percentage of electricity from fossil fuel for each province is not specified. A brief description of electricity from fossil fuel for the whole country is given in the yearbook, i.e. it covers coal, gas, oil, biomass, and a small amount of unidentified sources for generating electricity. Based on the information in the yearbook, i.e., electricity from hard coal accounts for more than 80% of the thermal power generation types, and considering that China is a country where coal-fired power generation is the main source of thermal power generation, the LCA practitioner (IVL) decide to use electricity from hard coal as 100% of the dataset selection for electricity from fossil fuel in this study for modelling.

More information:

Scenarios and additional technical information:

- The products are manufactured in China, and the waste treatment of the waste generated during the manufacturing process was included in the system boundary. The product is mainly sold to the Europe market, and A4, A5, and B modules are based on the Europe condition in this study. Specifically, Sweden is chosen for the A4 destination since it has the longest transportation distance, and it is one of the main markets of M&D. In this case, scenarios of the following stages have been made under the Sweden conditions.
- Module C1 to C4 are hypothesis. For C1, it is assumed that the consumption of additional materials and energy used in the deconstruction stage is zero. After deconstruction, the 90% of the waste product is assumed to be sent to incineration with energy recovery, 10% to material recycle,

according to Sweden statistics data. For the C2 module, conservative assumptions have been made that all waste products would be transported for 100 km by truck. For C3, it is assumed the waste products would be processed in C3 with a 2.91% mass loss. For C4, the 2.91% processing loss from C3 are assumed to be to incineration without energy recovery.

- About module D calculation, since the products do not have post-consumer material and this study does not consider the co-product allocation in this project, so there are no such issues for the module D calculation. Besides, the mass loss during module D is assumed to be zero, and we used the datasets and the plan directly from the Sphera database to calculate module D.

Allocation:

Allocation rules for co-products are mentioned in the PCR. In this study, there are small amount co-product produced with the studied products. The allocation ratio to the studied products covered in this EPD is around 99.61% based on the economic allocation rule After communication with Xuzhou M&D, the co-product allocation has not been applied in this study i.e. all burdens are allocated to the final studied products. In this study a “cut-off” method was applied to all cases of end-of-life allocation, including in the case of generic data.

Cut-off rules:

The cut-off criteria established by the PCR is that data for elementary flows to and from the product system contributing to a minimum of 95% of the declared environmental impacts shall be included (not including processes that are explicitly outside the system boundary). This study strictly follows the cut-off rule. Raw materials with high environmental impacts were reserved in calculation even though their mass is smaller than 5% of the whole product. The cut-off rule is only applied on auxiliary materials of the studied product. The total amount of cut-off materials in the product system is far below 1% and no high emission material is used for those materials. A sensitive analysis is applied for the environmental impact of cut-off materials, which shows the environmental impacts from them are below 1%.

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

	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	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Geography	CN	CN	CN	CN to EU	EU	EU	EU	EU	EU	EU	EU	EU	EU	EU	EU	EU	EU
Specific data used	15.13%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – products	<10%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – sites	0%			-	-	-	-	-	-	-	-	-	-	-	-	-	-

(1) Modules included in the EPD (X) and the modules not declared (ND).

Content information

The representative product of this EPD is 2500x600x12mm Formplywood Basic product and the content of the product with its packaging is shown below:

Representative product (corresponding to one declared unit):

Product components	**Mass, kg**	**Post-consumer material, mass-% of total product**	**Biogenic material, kg C/product**
Poplar board	318.00	0.00%	136.03
Glue	57.00	0.00%	0.00
Wheat powder/flour	0.20	0.00%	0.09
Pine board	128.00	0.00%	57.31
Paint	24.00	0.00%	0.00
Paper	26.00	0.00%	7.59
TOTAL	553.20	0.00%	201.01
Packaging materials	**Mass, kg**	**Mass-% (versus the product)**	**Mass biogenic carbon, kg C/product**
Wood package	10.25	1.81%	4.38
Steel package	2.34	0.42%	0.00
TOTAL	12.59	2.28%	4.38

The content declaration of the product family is shown below.

The raw material composition range of the product family (corresponding to one declared unit):

Product composition	**Percentage range of the product family**
Poplar board	57.48%~65.98%
Glue	10.30%~11.57%
Wheat powder/flour	0.04%
Pine board	14.46%~23.14%
Paint	4.34%~4.88%
Paper	3.07%~4.70%
TOTAL	100.00%
Packaging Material composition	**Packaging weight of the product family (kg)**
Wood package	10.25
Steel package	2.34
TOTAL	12.59

At the time of data collection, no substance included in the Candidate List of Substances of Very High Concern (SVHC) for authorization under the REACH Regulations is present in the products covered by this LCA and EPD either above the threshold for registration with the European Chemicals Agency or above 0.1% (wt/wt).

Depending on the PCR, in general, the production and end-of-life processes of infrastructure or capital goods used in the product system should be excluded, unless there is evidence that they are relevant in terms of their environmental impact, or when a generic LCI dataset includes infrastructure/capital goods, and it is not possible, within reasonable effort, to subtract the data on infrastructure/capital goods from this dataset (directly citation from section 4.3.2 of PCR 1.3.4). In this study, the infrastructure and capital goods are not included in the LCA analysis since they are used many times for several years for the product manufacturing. According to the PCR, it should be excluded.

All results in this LCA analysis are calculated by the EN 15804+A2. The “EN 15804 reference package” is calculated based on EF 3.1.

Results of the environmental performance indicators

The declared unit in the study is 1 m^3 of the Formplywood Basic product.

The estimated impact results are only relative statements which do not indicate the end points of the impact categories, exceeding threshold values, safety margins or risks.

Mandatory impact category indicators according to EN 15804

Results per cubic meter of Formplywood Basic product																
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-fossil	kg CO_2 eq.	6.64E+02	9.58E+01	3.03E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.33E+00	1.88E+02	6.28E+00	-4.05E+01
GWP-biogenic	kg CO_2 eq.	-7.84E+02	1.53E-01	1.43E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.43E-01	7.49E+02	2.25E+01	1.38E-02
GWP-luluc	kg CO_2 eq.	1.07E+00	4.22E-01	3.17E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.40E-04	1.60E-03	5.33E-05	-1.35E-01
GWP-total	kg CO_2 eq.	-1.19E+02	9.63E+01	4.46E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.57E+00	9.37E+02	2.87E+01	-4.06E+01
ODP	kg CFC 11 eq.	8.42E-06	7.95E-12	2.47E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.38E-13	3.39E-11	1.13E-12	-2.07E-10
AP	mol H^+ eq.	4.58E+00	8.84E-01	1.59E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.88E-03	4.28E-01	1.43E-02	-1.02E+00
EP-freshwater	kg P eq.	1.59E-01	1.72E-04	4.66E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.31E-06	1.87E-05	6.22E-07	-1.05E-02
EP-marine	kg N eq.	1.00E+00	3.83E-01	4.05E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.53E-03	1.95E-01	6.49E-03	-4.06E-01
EP-terrestrial	mol N eq.	1.15E+01	4.22E+00	4.70E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.86E-02	2.34E+00	7.81E-02	-3.13E+00
POCP	kg NMVOC eq.	3.14E+00	9.60E-01	1.20E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.52E-03	4.98E-01	1.66E-02	-8.20E-01
ADP-minerals&metals*	kg Sb eq.	3.12E-03	3.31E-06	9.17E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.69E-08	4.99E-07	1.66E-08	-5.47E-05
ADP-fossil*	MJ	1.03E+04	1.29E+03	3.21E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.76E+01	2.34E+02	7.79E+00	-1.18E+03
WDP*	m^3	7.42E+02	7.04E-01	2.67E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E-02	8.80E+01	2.93E+00	-6.75E+01
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															

** 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.*

Additional mandatory and voluntary impact category indicators

Results per cubic meter of Formplywood Basic product

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-GHG[1]	kg CO_2 eq.	6.65E+02	9.59E+01	3.03E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.33E+00	1.88E+02	6.28E+00	-4.09E+01

Resource use indicators

Results per cubic meter of Formplywood Basic product

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PERE	MJ	1.14E+04	4.72E+01	5.13E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.01E-01	5.18E+01	1.72E+00	-8.34E+03
PERM	MJ	5.87E+03	0.00E+00	-1.24E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-5.58E+03	-1.68E+02	0.00E+00
PERT	MJ	1.72E+04	4.72E+01	3.90E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.01E-01	-5.53E+03	-1.66E+02	-8.34E+03
PENRE	MJ	9.08E+03	1.29E+03	3.21E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.79E+01	2.34E+02	7.79E+00	-1.19E+03
PENRM	MJ	1.24E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-1.20E+03	-3.60E+01	0.00E+00
PENRT	MJ	1.03E+04	1.29E+03	3.21E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.79E+01	-9.66E+02	-2.82E+01	-1.19E+03
SM	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m^3	1.71E+01	5.36E-02	6.20E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.82E-04	2.10E+00	7.01E-02	-2.97E+00
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															

Note – Option A of Appendix 3 of the PCR was used to balance energy indicators across the lifecycle.

[1] This indicator accounts for all greenhouse gases except biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. As such, the indicator is identical to GWP-total except that the CF for biogenic CO_2 is set to zero.

Waste indicators

Results per cubic meter of Formplywood Basic product															
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
Hazardous waste disposed	kg	7.76E-08	2.16E-09	2.82E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.43E-10	9.54E-09	3.18E-10	1.34E-07
Non-hazardous waste disposed	kg	6.34E+01	1.19E-01	4.52E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.76E-03	5.81E+00	1.94E-01	-7.71E+00
Radioactive waste disposed	kg	2.12E-02	1.36E-03	1.52E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E-04	1.59E-02	5.28E-04	-2.91E-01

Output flow indicators

Results per cubic meter of Formplywood Basic product															
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Material for recycling	kg	1.66E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.37E+01	0.00E+00	0.00E+00
Materials for energy recovery	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.83E+02	0.00E+00	0.00E+00
Exported energy, electricity	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.48E+02	0.00E+00	0.00E+00
Exported energy, thermal	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.32E+03	0.00E+00	0.00E+00

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