SuMPO EPD JAPAN VERIFIED

SuMPO EPD Japan

Third party verified

Environmental Product Declaration

In conformance with

ISO14025 | ISO14040 | ISO14044

TAKENAKA

株式会社竹中工務店

TAKENAKA CORPORATION

Fire-resistant laminated timber Moen-Wood®

(Fire resistance specifications 2 hour : Column)

Registration number	Verification date	Publication date	Expiration date	EPD type
SuMPO-EPD-2512-41-1	2025/12/16	2026/1/20 * First publication date	2030/12/15	Single Product EPD

Additional standards in conformance

ISO21930:2017

EPD can be updated or withdrawn during the validity period. To confirm the validity of this EPD, check the following website: https://ecoleaf-label.jp/epd/search

●General Information

＞Programme

Programme name	SuMPO EPD Japan
Programme operator	Sustainable Management Promotion Organization (SuMPO)
Address	KANDA SQUARE GATE 4F, 14-8, Uchikanda 1-chome, Chiyoda-ku, Tokyo, 101-0047, Japan
Website	https://ecoleaf-label.jp

＞GPI and PCR

GPI	SuMPO EPD Japan General Program Instructions v.2.1.1
PCR name	Core-PCR for Construction products v.2.0.1
PCR registration number	SuMPO-PCR-01000-2-0-1
PCR publication date	2025/3/31
PCR review panel chair	Shunji Ikaga
PCR valid until	2030/03/30
PCR issuer	Sustainable Management Promotion Organization (SuMPO)

＞Verification

Verification Type	Third-party verification in conformance with ISO14025 and ISO21930:2017		
	☐ Internal	■ External	
	■ Third-party verification by individual verifier	☐ Third-party verification by verification body	☐ Third-party verification by system certification
Verifier	Takahiro Ato (Recycling System Center Specified Nonprofit Corporation)		

＞Standards

Standards in conformance with;	■ ISO14040:2006	■ ISO14044:2006	■ ISO14067:2018
	■ ISO14025:2006	■ ISO21930:2007	■ ISO21930:2017
	☐ EN15804+A2	☐ EN50693:2019	☐ ISO/IEC63366:2025

EPD owner is responsible for the information contained in the EPD and for environmental claims related to the information. For any inquiries or requests regarding the content of the EPD, please contact the EPD owner.

EPDs are comparable only if they comply with the same standards, use the same sub-PCR where applicable, include all relevant information modules and are based on equivalent scenarios with respect to the context of construction works. Comparability of EPDs is limited to those applying a functional unit.

The LCIA results are relative expressions and do not predict impacts on category endpoints, the exceedance of thresholds, safety margins or risks.

When using weighted averages for calculation, the life cycle impact assessment results, life cycle inventory analysis-related information, waste-related information, and environmental information on output flows do not correspond to information about a specific product.

●EPD Owner's Information

Name of company and dept.	TAKENAKA CORPORATIONWooden Architecture Promotion Department
Address	1-1-1 Shinsuna,Koto-ku,Tokyo 136-0075,Japan
Contact	tsumura.chikako@takenaka.co.jp
LCA practitioner	Chikako Tsumura (TAKENAKA CORPORATION)
Company description	General Construction (Architecture & Civil Engineering, Urban Development & Construction, Real Estate)

●Product Information

Product name		Fire-resistant laminated timber Moen-Wood® (Fire resistance specifications 2 hour : Column)		
Product /model number		Fire-resistant laminated timber (Fire resistance specifications 2 hour : Column)		
Product sepcification	Function	Fire resistance specifications 2 hour : Column		
	Mass	865.36 kg	Conversion factor	0.865g/cm3
	Applications	Structural components for buildings		
	TS*	Fire-resistant laminated timber (Fire resistance specifications 2 hour), Certification by the Minister of Land, Infrastructure, Transport and Tourism (Certification number: FP120CN-0699)		
Service life	Service life	50 years		
	In-use conditions	indoor		
	reference	Service life is equivalent to the service life of steel-framed reinforced concrete and reinforced concrete buildings, and does not refer to durability or warranty periods. Source: National Tax Agency, "Table of Service Lives of Major Depreciable Assets" <2022>		
Manufacturing site(s)		SAITO WOOD INDUSTRY CO,.LTD		
Product description		Fire-resistant laminated timber composed of three layers: a "Load-bearing Center" of solid wood, a "Burn-Stop/Self-Charring-Stop Layer" composed of mortar or gypsum-based materials and larch, and a "Surface/Burning Layer" of solid wood		
Website		https://www.takenaka.co.jp/takenaka_e/solution/environment/moenwood/		

* TS: technical specifications,

●Product Content

Product components	Propotion (%)	Mass (unit)	
Wood	38.7	335.27	kg
Gypsum	60.0	518.78	kg
Adhesive, Paint	1.3	11.30	kg
Packaging materials	Propotion (%)	Mass (unit)	
PP	13.8	0.02	kg
PE	51.7	0.06	kg
Cardboard	34.5	0.04	kg

●Biogenic Carbon Content

Item	Content (kg-C)	Content (kg-CO_2 eq)
Biogenic carbon content per product	149.36	547.65
Biogenic carbon content in packaging	0.02	0.06

●LCA-related Information

＞EPD Type Information

EPD type	Product type	■ Single product EPD	☐ Multiple products EPD	☐ Industry-wide EPD	
	Site type	■ Single site	☐ Multiple sites		
	Value	■ Specific	☐ Average	☐ Representative	☐ Worst case
Geographical coverage		Japan			
Description of representativeness for multiple-products/sites EPD		–			
Description of variation for multiple-products/sites EPD		–			
Description of products covered in the multiple products EPD		–			

＞LCA Information

Declared unit		1m3	
Mass per declared unit (Conversion factor to mass)		865kg	
Reference flow (number of products required to fulfil the function)		–	
System boundary		■ Cradle-to-Gate	☐ Cradle-to-Gate with options ☐ Cradle-to-Grave
LCA software		MiLCA	
LCI database		IDEA v3.5.1	
Characterization model		GWP IPCC2021 100a、 LIME2	
Use of other background data		–	
Secondary data quality		Calculations were performed using data that meets the secondary data quality requirements specified in the GPI. The data quality assessment was conducted in accordance with Section4.2.3.6 of ISO 14044:2006 (Environmental management – Life cycle assessment – Requirements and guidelines).	
Primary data collection sites		SAITO WOOD INDUSTRY CO,.LTD	
Primary data collection period		2024/1/1～2024/12/31	
Biogenic carbon		☐ 0/0 approach	■ -1/+1 approach
Information about electricity	Use	■ Average consumption mix	☐ Others
	Type	System Power (Japan Average)	
	Purchase date	–	
	Issuing body	–	

＞Modules

Production stage			Construction stage		Use stage							End-of-life stage				Suppl. info
					Use					Operation						
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Extraction and upstream production	Transport to factory	Manufacturing	Transport to site	Installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction / Demolition	Transport to waste processing or disposal	Waste processing	Disposal of waste	Potential net benefits
■	■	■	–	–	–	–	–	–	–	–	–	–	–	–	–	–

■ : declared module　　– : module not declared

＞Allocation

All inputs and input energy contributing to gypsum product manufacturing were proportionally allocated by production weight and converted per calculation unit of $1m^3$.
Input energy contributing to laminated timber manufacturing and product manufacturing was proportionally allocated by production volume.

＞Cut-off rules

A cut-off was performed on cutting tools, which are consumable items. It was confirmed that the cut-off criteria established by PCR were met.

＞System Boundary

The evaluation scope covered the material manufacturing stages (A1-A3) corresponding to the Cradle-to-Gate defined by PCR: "raw material procurement," "transportation to factory," and "manufacturing."
The temporal system boundary is 100 years.

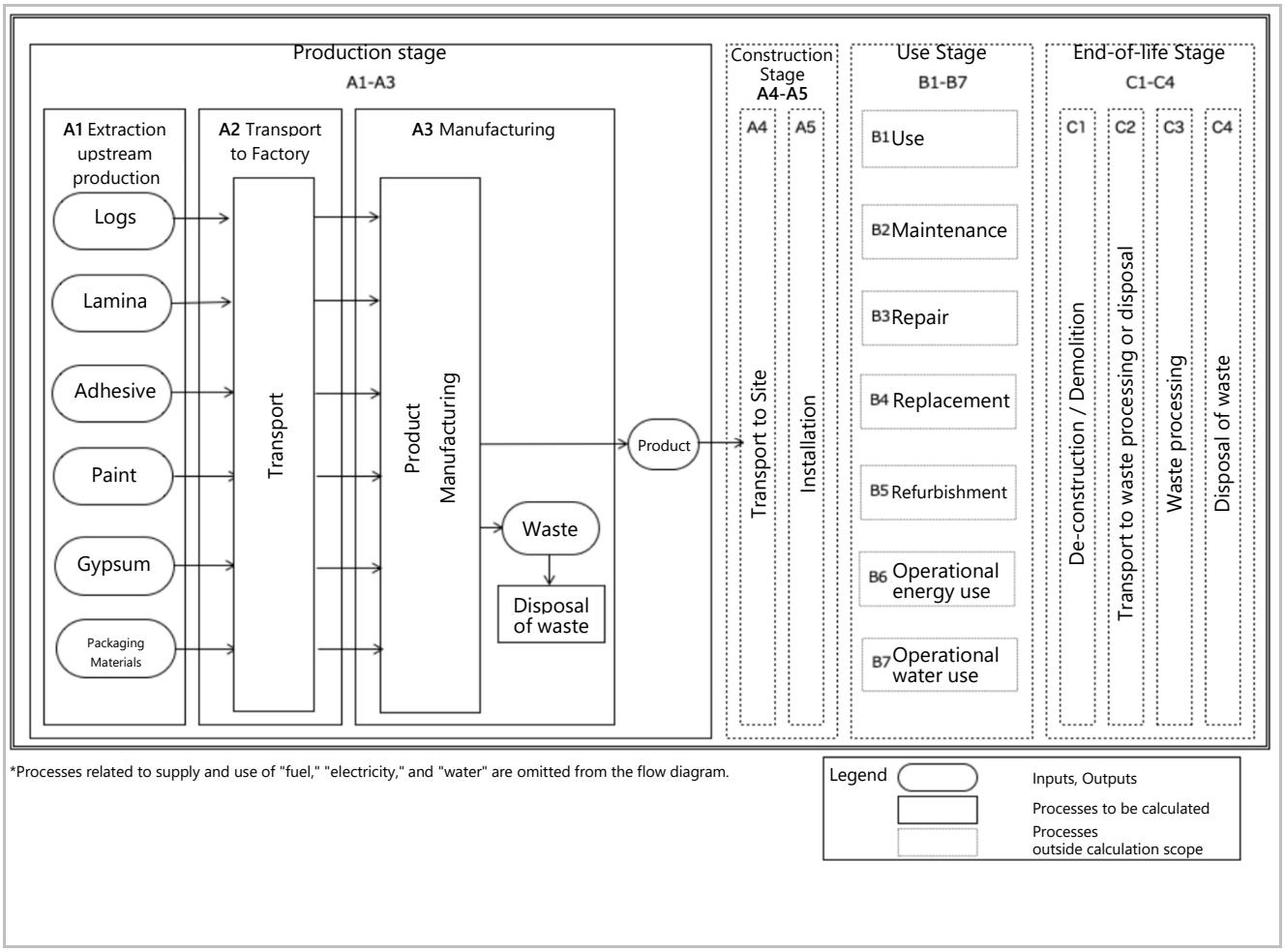
＞Scenario

Modules	Description
A2	For the procurement and transportation distances of some raw materials, PCR Annex B was referenced.
A3	For the transportation distances of waste, PCR Annex B was referenced.

＞Electricity Modelling

For electricity, the average value for Japan in 2021 was used.

＞Life Cycle Sytem Diagram



●LCA Result

＞LCIA Indicators

		Production stage				Construction stage		Use stage							End-of-life stage				Supple. info
								Use					Operation						
		A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP - total	kg-CO_2eq	-4.15E+02	2.68E+01	8.18E+02	4.30E+02	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GWP - fossil	kg-CO_2eq	5.59E+02	2.67E+01	3.87E+02	9.73E+02	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GWP - biogenic	kg-CO_2eq	-9.75E+02	6.27E-03	4.31E+02	-5.44E+02	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GWP - land use and land use change	kg-CO_2eq	5.02E-01	2.65E-02	4.32E-01	9.61E-01	–	–	–	–	–	–	–	–	–	–	–	–	–	–
ODP: Ozone depletion potential	kg-CFC-11eq	1.09E-05	3.62E-10	9.49E-07	1.19E-05	–	–	–	–	–	–	–	–	–	–	–	–	–	–
EP: Eutrophication potential	kg-PO_4^{3-}eq	1.77E-01	1.29E-07	1.87E-01	3.64E-01	–	–	–	–	–	–	–	–	–	–	–	–	–	–
AP: Acidification potential	kg-SO_2eq	5.03E-01	3.66E-02	7.29E-01	1.27E+00	–	–	–	–	–	–	–	–	–	–	–	–	–	–
POCP: Photochemical oxidant creation potential	kg-C_2H_4eq	7.69E-03	2.45E-04	3.22E-01	3.30E-01	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Optional indicators																			
ADP - elements	kg-Sbeq	1.17E-02	1.28E-07	1.47E-03	1.31E-02	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GWP - aircraft	kg-CO_2eq	0.00E+00	0.00E+00	0.00E+00	0.00E+00	–	–	–	–	–	–	–	–	–	–	–	–	–	–

＞LCI - Primary Resource Use

		Production stage				Construction stage		Use stage							End-of-life stage				Supple. info
								Use					Operation						
		A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
RPR_E*	MJ	6.56E+02	2.00E-01	2.56E+03	3.21E+03	–	–	–	–	–	–	–	–	–	–	–	–	–	–
RPR_M*	MJ	1.10E+04	2.56E-04	2.76E-01	1.10E+04	–	–	–	–	–	–	–	–	–	–	–	–	–	–
$NRPR_E$*	MJ	6.71E+03	2.95E+02	8.55E+03	1.55E+04	–	–	–	–	–	–	–	–	–	–	–	–	–	–
$NRPR_M$*	MJ	5.15E+02	1.25E-03	5.65E+01	5.71E+02	–	–	–	–	–	–	–	–	–	–	–	–	–	–

*RPRE: Renewable primary resources used as an energy carrier, RPRM: Renewable primary resources with energy content used as material, NRPRE: Non-renewable primary resources used as an energy carrier, NRPRM: Non-renewable primary resources with energy content used as material.

＞LCI- Secondary Resources Use

		Production stage				Construction stage		Use stage							End-of-life stage				Supple. info
								Use					Operation						
		A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
SM： Use of secondary material	kg	1.39E+00	1.14E-04	4.02E-01	1.80E+00	–	–	–	–	–	–	–	–	–	–	–	–	–	–
RSF： Renewable secondary fuels	MJ	3.66E+00	8.20E-05	3.72E-01	4.03E+00	–	–	–	–	–	–	–	–	–	–	–	–	–	–
NRSF： Non-renewable secondary fuels	MJ	1.95E+01	5.28E-04	2.82E+00	2.24E+01	–	–	–	–	–	–	–	–	–	–	–	–	–	–
RE： Use of recovered energy	MJ	1.13E+01	3.32E-03	4.76E+01	5.89E+01	–	–	–	–	–	–	–	–	–	–	–	–	–	–

＞LCI - ADP-fossil and Consumption of freshwater

		Production stage				Construction stage		Use stage							End-of-life stage				Supple. info
								Use					Operation						
		A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
ADP - fossil	MJ	7.54E+03	3.64E+02	4.23E+03	1.21E+04	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Consumption of freshwater resources	m^3	9.07E+02	1.39E-02	4.11E+01	9.49E+02	–	–	–	–	–	–	–	–	–	–	–	–	–	–

＞Waste Indicators

		Production stage				Construction stage		Use stage							End-of-life stage				Supple. info
								Use					Operation						
		A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
hazardous waste disposed	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	–	–	–	–	–	–	–	–	–	–	–	–	–	–
non-hazardous waste disposed	kg	3.33E+00	2.78E-02	2.89E+00	6.25E+00	–	–	–	–	–	–	–	–	–	–	–	–	–	–
high-level radioactive waste	㎥	1.57E-09	4.88E-13	1.39E-08	1.54E-08	–	–	–	–	–	–	–	–	–	–	–	–	–	–
intmd. and low-level radioactive waste	㎥	1.60E-06	5.08E-10	6.49E-06	8.09E-06	–	–	–	–	–	–	–	–	–	–	–	–	–	–

＞Output Flow Indicators

			Production stage				Construction stage		Use stage							End-of-life stage				Supple. info
									Use					Operation						
			A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Components for reuse		kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Materials for recycling		kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Material for energy recovery		kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Exported energy from waste (energy recovery efficiency≧60%)		MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Incineration of waste (energy recovery efficiency＜60%)	Waste disposed	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	Recovered energy	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Waste disposed in landfill and energy recoved from landfill gas	Waste disposed	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	Recovered energy	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	–	–	–	–	–	–	–	–	–	–	–	–	–	–

●LCA Result

＞LCIA Indicators

		Disclaimer	Product stage			Construction process stage		Use stage							End of life stage				Supple. info
								Use					Operation						
			A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP (Global warming potential) - total	kg-CO_2eq	-	-4.15E+02	2.68E+01	8.18E+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	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
GWP - fossil	kg-CO_2eq	-	5.59E+02	2.67E+01	3.87E+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	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
GWP - biogenic	kg-CO_2eq	-	-9.75E+02	6.27E-03	4.31E+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	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
GWP - luluc	kg-CO_2eq	-	5.02E-01	2.65E-02	4.32E-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	0.00E+00	0.00E+00	0.00E+00
ODP: Ozone depletion potential	kg-CFC-11eq	-	1.09E-05	3.62E-10	9.49E-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	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Acidification	mol-H^+eq	-	1.77E-01	1.29E-07	1.87E-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	0.00E+00	0.00E+00	0.00E+00
Eutrophication aquatic freshwater	kg-Peq	-	5.03E-01	3.66E-02	7.29E-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	0.00E+00	0.00E+00	0.00E+00
Eutrophication aquatic marine	kg-Neq	-	7.69E-03	2.45E-04	3.22E-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	0.00E+00	0.00E+00	0.00E+00
Eutrophication terrestrial	mol-Neq	-	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	0.00E+00	0.00E+00
Photochemical ozone formation	kg-NMVOCeq	-	1.17E-02	1.28E-07	1.47E-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	0.00E+00	0.00E+00	0.00E+00
ADP - minerals and metals	kg-Sbeq	2																	
ADP - fossil fuels	MJ, net calorific value	2																	
Water use	m^3 world eq deprived	2																	
Optional indicators																			
Particulate Matter emissions	Disease incidence	-																	
Ionizing radiation, humanhealth	kBq-U235eq	1																	
Ecotoxicity (freshwater)	CTUe	2																	
Human toxicity - cancer effects	CTUh	2																	
Human toxicity - non-cancereffects	CTUh	2																	
Land use related impacts/Soil quality	dimensionless	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 experienced with the indicator.

＞LCI - Resource Use

		Product stage			Construction process stage		Use stage							End of life stage				Supple. info
							Use					Operation						
		A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
RPR_E*	MJ	6.56E+02	2.00E-01	2.56E+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	0.00E+00	0.00E+00	0.00E+00
RPR_M*	MJ	1.10E+04	2.56E-04	2.76E-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	0.00E+00	0.00E+00	0.00E+00
Total use of renewable primary energy resources	MJ	1.17E+04	2.00E-01	2.56E+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	0.00E+00	0.00E+00	0.00E+00
$NRPR_E$*	MJ	6.71E+03	2.95E+02	8.55E+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	0.00E+00	0.00E+00	0.00E+00
$NRPR_M$*	MJ	5.15E+02	1.25E-03	5.65E+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	0.00E+00	0.00E+00	0.00E+00
Total use of non-renewable primary energy resources	MJ	7.22E+03	2.95E+02	8.60E+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	0.00E+00	0.00E+00	0.00E+00
SM: Use of secondary material	kg	1.39E+00	1.14E-04	4.02E-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	0.00E+00	0.00E+00	0.00E+00
RSF: Use of renewable secondary fuels	MJ	3.66E+00	8.20E-05	3.72E-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	0.00E+00	0.00E+00	0.00E+00
NRSF: Use of non-renewable secondary fuels	MJ	1.95E+01	5.28E-04	2.82E+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
RE: Recovered energy	MJ	1.13E+01	3.32E-03	4.76E+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	0.00E+00	0.00E+00	0.00E+00
Net use of fresh water	m^3	9.07E+02	1.39E-02	4.11E+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	0.00E+00	0.00E+00	0.00E+00

*RPRE or PERE: Use of renewable primary energy excluding renewable primary energy resources used as raw materials, RPRM or PERM: Use of renewable primary energy resources used as raw materials, NRPRE or PENRE: Use of non-renewable primary energy excluding nonrenewable primary energy resources used as raw materials, NRPRM or PENRM: Use of non-renewable primary energy resources used as raw materials

＞Waste Indicators

		Product stage			Construction process stage		Use stage							End of life stage				Supple. info
							Use					Operation						
		A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste disposed	kg																	
Non-hazardous waste disposed	kg	3.33E+00	2.78E-02	2.89E+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
Radioactive waste disposed	kg																	

＞Output Flow Indicators

		Product stage			Construction process stage		Use stage							End of life stage				Supple. info
							Use					Operation						
		A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Components for re-use	kg																	
Materials for recycling	kg																	
Materials for energy recovery	kg																	
Exported energy from waste (energy recovery efficiency ≥ 60%)	MJ																	
Exported energy from waste incineration (energy recovery efficiency <60%)	MJ																	
Exported energy from landfill	MJ																	

＞Description of LCA Results

In the LCA calculation for this EPD, primary data was collected for the activity levels at manufacturing sites, but general secondary data was used for the LCI data multiplied by these activity levels. Additionally, scenarios were applied for some transportation distances. Therefore, the results are approximate values.
In the LCA calculation for this EPD, the -1/+1 approach was adopted for handling biogenic carbon in climate change, but please note that the numerical values of the biogenic lifecycle impact assessment results are calculation results based on the LCI data used (IDEA) and differ from the actual carbon content of timber.
Furthermore, LCA calculation results do not directly indicate the magnitude of environmental impacts, safety, or risk assessments.

The EPD holder bears all responsibility for the information stated in the EPD and environmental claims related to the information stated in the EPD. For any unclear points or confirmation matters regarding the EPD content, please contact the registered business operator.
EPDs may be updated or discontinued when circumstances change. To confirm the latest version and validity of EPDs, please check the following: https://ecoleaf-label.jp/epd/
EPD comparisons must be conducted with sufficient consideration of the functions of construction products, therefore it is necessary to consider the entire lifecycle of building materials in construction products and apply scenarios assuming equivalent applications in construction products. Please refer to the PCR used by this declaration for conditions to be considered when comparing EPDs.
This EPD is based on the declared unit, and comparisons must be made per functional unit.

●Additional Environmental Information

＞Additional Environmental Information not related to LCA

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＞Information on Hazardous Substances

Hazardous materials name	CAS No.	Standards or regulations
–	–	–

Release of dangerous substances from construction products
–

●Definitions of Terms

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●References

・ISO14025:2006 Environmental labels and declarations - Type III environmental declarations - Principles and procedures
・ISO14040:2006 Environmental management - Life Cycle Assessment - Principles and framework
・ISO14044:2006 Environmental management - Life Cycle Assessment - Requirements and guidelines
・ISO21930:2017 Sustainability in buildings and civil engineering works - Core rules for environmental product declarations of construction products and services

●Version History