SuMPO EPD Japan

Third party verified

Environmental Product Declaration

In conformance with

ISO14025 | ISO14040 | ISO14044

Yamasa Mokuai Co.,Ltd.

Structural Glued Laminated Timber (Larch)

Registration number	Verification date	Publication date	Expiration date	EPD type
SuMPO-EPD-2607-181-1	2026/7/1	2026/7/10 * First publication date	2031/6/30	Multiple Products 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EPD can be updated or withdrawn during the validity period.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

Environmental Product Declaration for Structural Glued Laminated Timber (Larch)

●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	Engineered wood products for construction
PCR registration number	SuMPO-PCR-01002-2-0-0
PCR publication date	2026/04/17
PCR review panel chair	Nobuharu Hattori（Tokyo University of Agriculture and Technoligy）
PCR valid until	2031/04/16
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
Verification body	Ui Shohei (KAKEN TEST CENTER General Incorporated Foundation)		

＞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.	Production Department, Yamasa Mokuzai Co.,Ltd.
Address	2090 Maeda, Kimotsuki-cho, Kimotsuki-gun, Kagoshima, Japan
Contact	+81-994-31-4141
LCA practitioner	Woonerf Inc.
Company description	Manufacturing and processing of sawn timber, glulam, and CLT, as well as the design and construction of large-scale timber structures.

Environmental Product Declaration for **Structural Glued Laminated Timber (Larch)**

●Product Information

Product name		Structural Glued Laminated Timber (Larch)		
Product /model number		Structural Glued Laminated Timber Small / Medium / Large Cross-Section		
Product sepcification	Function	Engineered wood products for construction		
	Mass	489.26kg *Calculated value based on production during the reporting period	Conversion factor	489.26kg/m3(Larch)
	Applications	Structural members of buildings and other structures, such as columns, beams, and foundation sills		
	TS*	Wood-based building materials compliant with the JAS standard for laminated timber		
Service life	Service life	Based on the service life of the building		
	In-use conditions	Based on the in-use conditions of the building		
	reference	-		
Manufacturing site(s)		Shimoju Factory (Kimotsuki-cho, Kagoshima)		
Product description		Under rigorous quality control, we perform sawing, drying, manufacturing, and finishing processes, and our products are used as structural timber for wood-frame construction, ranging from small-section to large-section laminated timber.		
Website		http:/www.woodist.co.jp		

* TS: technical specifications,

●Product Content

Product components	Propotion (%)	Mass (unit)	
Wood	98.1	480.00	kg
Adhesives (melamine resin-based, isocyanate-based, resorcinol resin-based)	1.9	9.16	kg
Packaging materials	**Propotion (%)**	**Mass (unit)**	
Polyethylene protective sheeting	91.0	0.09	kg
Polypropylene strapping	9.0	0.01	kg

●Biogenic Carbon Content

Item	Content (kg-C)	Content (kg-CO_2 eq)
Biogenic carbon content per product	208.80	765.60
Biogenic carbon content in packaging	0.00	0.00

●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		Global			
Description of representativeness for multiple-products/sites EPD		It is considered that representativeness is ensured, as the raw materials used per cubic meter are identical for each product and manufacturing takes place at the same site in Japan. Furthermore, the assessment is calculated using primary data collected for all raw material inputs and energy consumption.			
Description of variation for multiple-products/sites EPD		All products are manufactured at the same site. The inputs for energy and other materials (excluding adhesives) per declared unit of 1 m³ are identical. Any variation in the calculated results attributable to differences in adhesive input per 1 m³ remains within ±10% for the applicable disclosure items.			
Description of products covered in the multiple products EPD		This EPD discloses data converted to a per 1m³ basis for products with different number of layers that are manufactured using the same materials and processes at the same site.			

＞LCA Information

Declared unit		per 1m³ of product	
Mass per declared unit (Conversion factor to mass)		489.26kg/m3 *Calculated value based on production during the reporting period	
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 ver1.2.2.0	
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 Section 4.2.3.6 of ISO 14044:2006 (Environmental management – Life cycle assessment – Requirements and guidelines).	
Primary data collection sites		Shimoju Factory (Kimotsuki-cho, Kagoshima)	
Primary data collection period		May.2024～April.2025	
Biogenic carbon		☐ 0/0 approach	■ -1/+1 approach
Information about electricity	Use	■ Average consumption mix	☐ Others
	Type	–	
	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

In this assessment, process subdivision and allocation were examined in accordance with the procedures specified in the GPI. In particular, for the allocation of fuel, electricity, steam for drying, adhesives, bands, and packaging materials in the manufacturing stage, allocation to the target products was performed based on the production output (physical quantity) ratio, as there are no differences in processes or processing time between the target and non-target products due to the nature of the products.
By-products such as planer shavings and offcuts (used as boiler fuel or collected by third-party purchasers) are generated during the lamina cutting process. As these by-products are not the primary objective of manufacturing, no allocation of energy, water, or other resources was applied to them, and the target products bear the entire environmental load within the system boundary.

＞Cut-off rules

Since the environmental impact of consumables is subject to the cutoff, we applied the cutoff. And processes with negligible environmental impacts for which data collection was challenging were excluded by applying the 5% cut-off criteria specified in the PCR. Regarding the application of JAS certification stickers, requirements vary by manufacturer, making it difficult to establish representative or specific data. Since these stickers account for less than 1% of the total weight and pose no hazardous concerns, they were excluded from the assessment as a cut-off item.

＞System Boundary

The system boundaries were established in accordance with the PCR. Modules A4 through C, as well as Module D—defined as outside-boundary processes in the GPI and PCR—are excluded from the assessment. The temporal system boundary is set at 100 years.
The assessment scope is 'Cradle-to-Gate,' covering Modules A1, A2, and A3.
Based on PCR Section 4.4.5, the following items were excluded from the scope of calculation as being outside the system boundaries:
- Processes related to employee work activities and commuting.
- Processes related to research and development (R&D) and administrative office operations.
- Processes related to the manufacturing and construction of capital goods, such as manufacturing facilities and equipment (excluding power plants and power generation equipment).
- Processes related to the manufacturing of transport vehicles, such as trucks and ships.
- Processes related to general-purpose materials (e.g., work clothes, gloves) that are used for purposes other than the manufacturing of the target product.

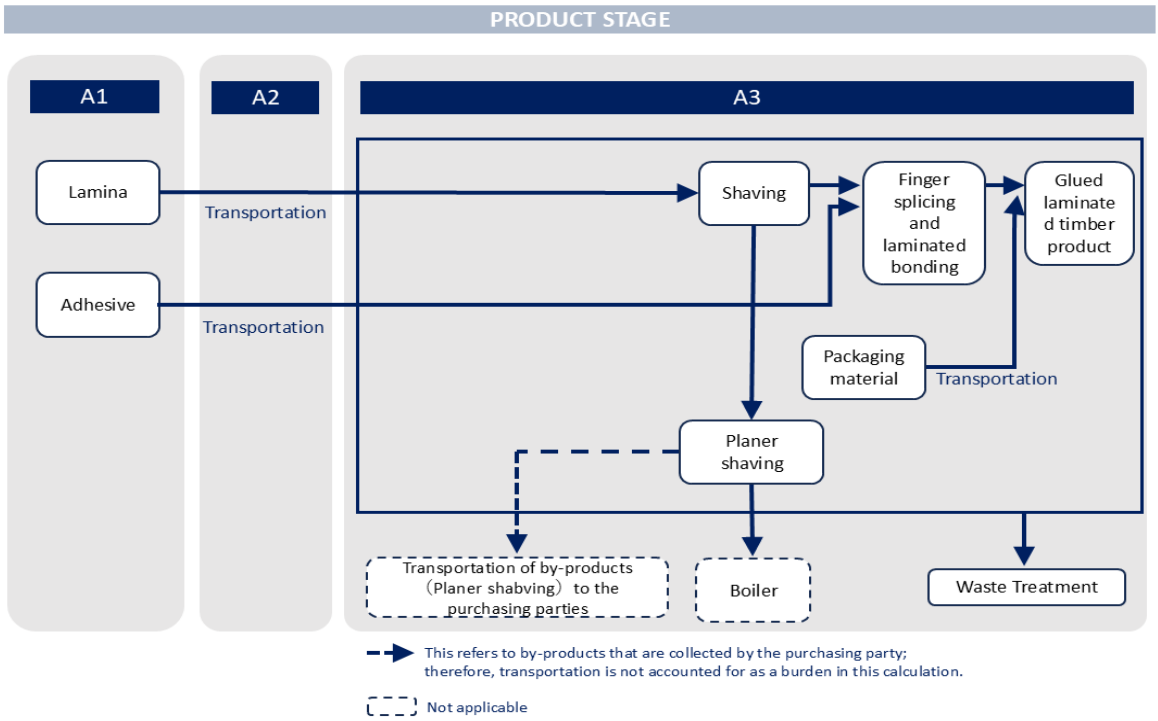
＞Scenario

Modules	Description
A2	The scenarios specified in the PCR were applied for transport vehicles and loading rates.
A3	The scenarios specified in the PCR were applied for transport vehicles and loading rates.

＞Electricity Modelling

For all life cycle stages within the scope, the calculation was conducted using the Japanese national average grid electricity data for the year 2022.

＞Life Cycle Sytem Diagram



＞Description of LCA Results

- This declaration presents the assessment results for the production stage (Modules A1: Raw material supply, A2: Transport to the manufacturer, and A3: Manufacturing).
- For the A2 and A3 transport scenarios, the PCR scenarios were applied to the vehicles used for transport and their load factors. The transport distances for larch lamina (KD), adhesives, and packaging materials are based on primary data.
- The assessment results for the target products may vary depending on the data collection year, as the volume and mix of products ordered are subject to annual fluctuations.
- This product does not include the pre-cutting process or the installation process in this assessment.

●Additional Environmental Information

＞Additional Environmental Information not related to LCA

- All logs utilized in the production of this product are compliant with the Japan's Clean Wood Act. We are registered as both a "Type 1" Wood-related Business Entity for log handling and a "Type 2" Wood-related Business Entity for processed wood products.
- This product has obtained forest-certification, and Chain of Custody (CoC) certification, which ensures that the timber is properly managed throughout the processing and distribution stages, can be provided upon request at the time of order.

＞Information on Hazardous Substances

Hazardous materials name	CAS No.	Standards or regulations
4,4'-Diphenylmethane diisocyanate	101-68-8	Industrial Safety and Health Act, Chemical Substances Control Act, PRTR Act
Phenol	108-95-2	Industrial Safety and Health Act, Chemical Substances Control Act, PRTR Act
Ethylene glycol	107-21-1	Industrial Safety and Health Act, Chemical Substances Control Act
Resorcinol	108-46-3	Industrial Safety and Health Act
Methanol	67-56-1	Industrial Safety and Health Act, Chemical Substances Control Act
Formaldehyde	50-00-0	PRTR Act, Industrial Safety and Health Act
Silica	Not apply	Industrial Safety and Health Act
Formic acid	64-18-6	Industrial Safety and Health Act, Chemical Substances Control Act
Crystalline silica	14808-60-7	Industrial Safety and Health Act
Attapulgite	12174-11-7	Industrial Safety and Health Act

Release of dangerous substances from construction products
This product is certified as F☆☆☆☆ (F-Four Star), which represents the lowest level of formaldehyde emission among the four categories defined by the Japanese Agricultural Standards (JAS) (*). (*) Certification Date and Category: December 26, 2008　Low-formaldehyde glued laminated timber (large cross-section) December 26, 2008　Low-formaldehyde glued laminated timber (medium cross-section) December 26, 2008　Low-formaldehyde glued laminated timber (small cross-section) Certifying Body: Japan Plywood Inspection Corporation

●Definitions of Terms

N/A

●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
・Forestry Agency “Guidelines on the Disclosure of Carbon Storage Quantities for Wood Used in Buildings”

●Version History

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