



✓ Third party verified
Environmental Product Declaration

In conformance with
ISO14025 | ISO14040 | ISO14044



Tajima Roofing INC.

ALTRO DOLCE



<u>Registration number</u>	<u>Verification date</u>	<u>Publication date</u>	<u>Expiration date</u>	<u>EPD type</u>
SuMPO-EPD-2601-20-1	2026/1/23	2026/3/2	2031/1/22	Multiple Products EPD
<u>Additional standards in conformance</u>	EPD can be updated or withdrawn during the validity period.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			
ISO21930:2007				

● 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	PVC Floor Covering
PCR registration number	PA-242200-CC-01
PCR publication date	2023/7/21
PCR review panel chair	Masayuki Kanzaki (Sustainable Management Promotion Organization)
PCR valid until	2028/7/20
PCR issuer	Sustainable Management Promotion Organization (SuMPO)

> Verification

Verification Type	Third-party verification in conformance with ISO14025:2006 and ISO21930:2007		
	<input type="checkbox"/> Internal	<input checked="" type="checkbox"/> External	
	<input type="checkbox"/> Third-party verification by individual verifier	<input checked="" type="checkbox"/> Third-party verification by verification body	<input type="checkbox"/> Third-party verification by system certification
Verification body	General Incorporated Foundation Kaken Test Center, Shohei Ui		

> Standards

Standards in conformance with;	<input checked="" type="checkbox"/> ISO14040:2006	<input checked="" type="checkbox"/> ISO14044:2006	<input type="checkbox"/> ISO14067:2018
	<input checked="" type="checkbox"/> ISO14025:2006	<input checked="" type="checkbox"/> ISO21930:2007	<input type="checkbox"/> ISO21930:2017
	<input type="checkbox"/> EN15804+A2	<input type="checkbox"/> EN50693:2019	<input type="checkbox"/> 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

● EPD Owner's Information

Name of company and dept.	Tajima Roofing Inc,
Address	3-11-13 Iwamoto-cho, Chiyoda-Ku, Tokyo 101-8575 Japan
Contact	+81-3-6632-477
LCA practitioner	Flooring Material Department International Division
Company description	Manufacturing and sales of flooring materials and auxiliary materials required for their installation.

● Product Information

Product name		ALTRO DOLCE	
Product /model number		AD501 / AD502 / AD503 / AD504 / AD505 / AD507 / AD508 / AD509 / AD511 / AD514 / AD515 / AD523 / AD524 / AD526 / AD527 / AD532 / AD605 / AD609 / AD611 / AD915 / AD933 / AD934 / AD939 / AD941 / AD950 / AD952 / AD1101 / AD1105 / AD1110 / AD1113	
Product specification	Function	High-performance flooring that combines sophisticated design with superior durability to suit any space.	
	Mass	6.54kg	Conversion factor 6.54kg/m ²
	Applications	Used as floor finishing material for commercial facilities etc.	
	TS*	Complies with the performance standards for vinyl composition floor tiles under JIS A 5705:2022.	
Service life	Service life	15years	
	In-use conditions	Floor finishing materials for commercial facilities, etc.	
	reference	The service life shall be equivalent to that of buildings made of synthetic resin; this does not refer to the actual service life or warranty period.	
Manufacturing site(s)		1438 Suneori, Tsurugashima-shi, Saitama, Japan 350-2213	
Product description		Product Weight: 6.54 kg Manufacturing Site: Saitama Second Factory Thickness: 3.0 mm Size: 457.2 mm × 457.2 mm Materials: PVC, Calcium Carbonate, Plasticizer, Binder, Stabilizer, UV-curable Resin, Pigment	
Website		https://www.altro.com/us/products/altro-dolce-tile	

* TS: technical specifications,

● Product Content

Product components	Proportion (%)	Mass (unit)
PVC	15.7	0.98 kg/m ²
Calcium Carbonate	73.7	4.58 kg/m ²
Plasticizer	5.2	0.32 kg/m ²
Stabilizer	0.7	0.04 kg/m ²
Binder	1.9	0.12 kg/m ²
UV-curable Resin	0.2	0.01 kg/m ²
Pigment	2.6	0.16 kg/m ²
Packaging materials	Proportion (%)	Mass (unit)
Carton Box	30.8	0.10 kg/m ²
Hard Board	69.2	0.23 kg/m ²

● Biogenic Carbon Content

Item	Content (kg-C)	Content (kg-CO ₂ eq)
Biogenic carbon content per product	-	-
Biogenic carbon content in packaging	0.13	0.49

● LCA-related Information

> EPD Type Information

EPD type	Product type	<input type="checkbox"/> Single product EPD	<input checked="" type="checkbox"/> Multiple products EPD	<input type="checkbox"/> Industry-wide EPD
	Site type	<input checked="" type="checkbox"/> Single site		<input type="checkbox"/> Multiple sites
	Value	<input type="checkbox"/> Specific	<input checked="" type="checkbox"/> Average	<input type="checkbox"/> Representative <input type="checkbox"/> Worst case
Geographical coverage		Global		
Description of representativeness for multiple-products/sites EPD		There are 30 product codes for this range; while the types of pigments used are identical, their blending amounts vary. The calculation was conducted using a weighted average based on the production volume of each product code.		
Description of variation for multiple-products/sites EPD		This product range consists of 30 product codes that utilize identical pigment types with varying blending amounts. An assessment of the environmental impact was conducted on items with the minimum and maximum pigment concentrations, confirming that the variance falls within $\pm 10\%$.		
Description of products covered in the multiple products EPD		The products share identical specifications, with the exception of the pigment blending amounts.		

> LCA Information

Declared unit	Per 1 m ²		
Mass per declared unit (Conversion factor to mass)	6.54 kg/m ²		
Reference flow (number of products required to fulfil the function)	-		
System boundary	<input type="checkbox"/> Cradle-to-Gate	<input checked="" type="checkbox"/> Cradle-to-Gate with options	<input type="checkbox"/> Cradle-to-Grave
LCA software	MiLCA version 1.2.1.9		
LCI database	AIST-IDEA ver.3.4		
Characterization model	Climate Change: IPCC Sixth Assessment Report (IPCC, 2021); Other impact categories: LIME2		
Use of other background data	-		
Secondary data quality	The calculation was conducted using data that satisfies the secondary data quality requirements specified in the GPI. Furthermore, data quality assessment was performed in accordance with Section 4.2.3.6 of ISO 14044:2006 (Environmental management — Life cycle assessment — Requirements and guidelines).		
Primary data collection sites	Saitama Second Factory		
Primary data collection period	2023/12/21~2024/12/20		
Biogenic carbon	<input type="checkbox"/> 0/0 approach	<input checked="" type="checkbox"/> -1/+1 approach	
Information about electricity	Use	<input checked="" type="checkbox"/> Average consumption mix	<input type="checkbox"/> Others
	Type	-	
	Purchase date	-	
	Issuing body	-	

> Modules

Production stage			Construction stage		Use stage							End-of-life stage				Suppl. info
A1	A2	A3	A4	A5	Use			Operation				End-of-life stage				
					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

Water is utilized within the product manufacturing process. Since water is consumed across multiple stages at the Saitama Second Factory, and tracking specific consumption for the relevant process and product is difficult, physical allocation was applied.

> Cut-off rules

Water used in the process is treated in on-site facilities before being discharged into rivers. Oils and pollutants resulting from the treatment process have been cut off from the assessment, as their impact on both mass and environmental load is negligible.

> System Boundary

In accordance with the PCR, the assessment covers modules A1–A4 and C2–C4. All items defined as out-of-boundary processes by the GPI and PCR have been excluded from the system boundary. The time-dependent system boundary is set at 100 years.

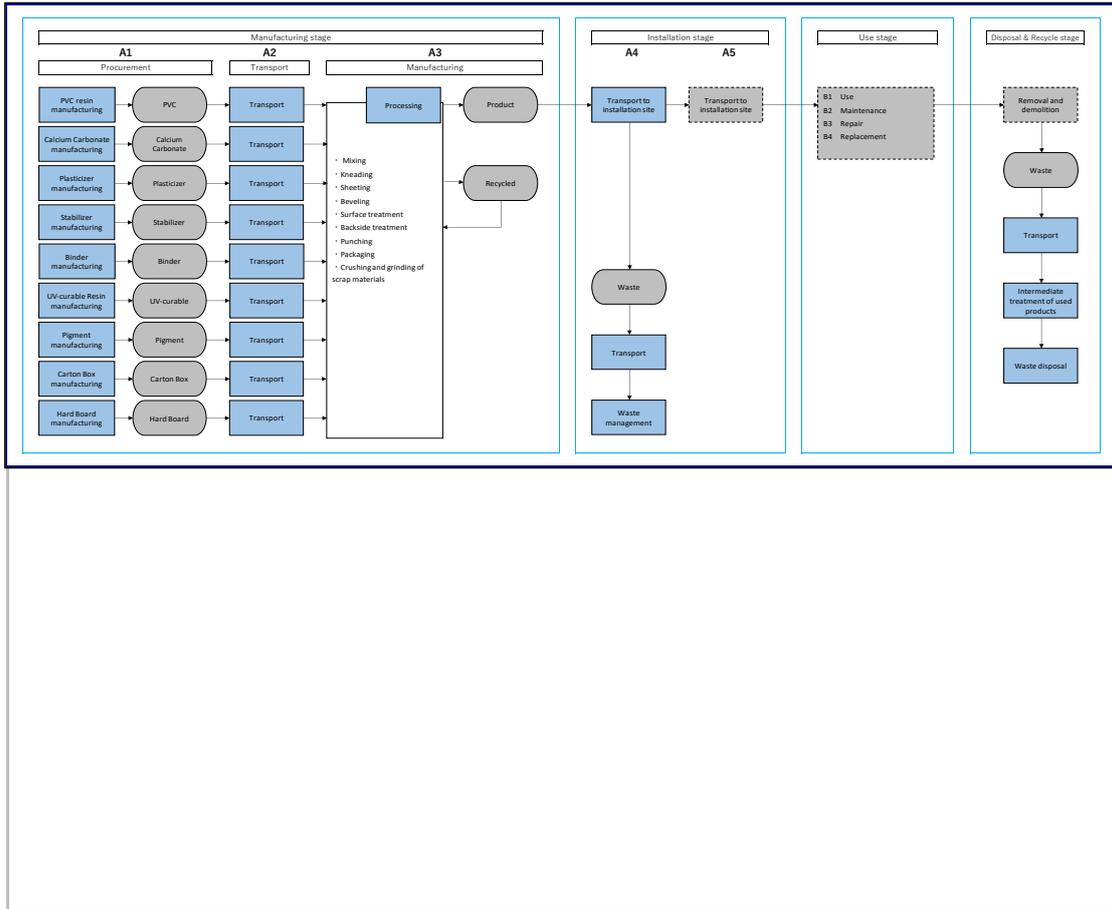
> Scenario

Modules	Description
A2	For the processes related to transport to the factory, the "transportation mode" and "load factor" were determined based on the PCR scenarios.
A4	For the processes related to transport to the construction site, the "transport distance," "transportation mode," and "load factor" were determined based on the PCR scenarios. However, for certain segments where the "transport distance" could be collected as primary data, the PCR scenarios were applied only to the "transportation mode" and "load factor." Regarding the processes for waste transport, the PCR scenarios were utilized throughout.
C2	For the processes related to transport in the end-of-life and recycling stages, the "transport distance," "transportation mode," and "load factor" were determined based on the PCR scenarios.
C3,C4	In accordance with the PCR, the end-of-life and recycling stage was modeled on the scenario that 100% of the product undergoes crushing followed by landfill disposal.

> Electricity Modelling

The calculation was conducted using the 2021 average grid power data for Japan across all targeted life cycle stages.

> Life Cycle System Diagram



Environmental Product Declaration for **ALTRO DOLCE**● **LCA Result**> **LCIA Indicators**

		Production stage						Construction stage		Use stage							End-of-life stage				Supple. info D
		A1	A2	A3	A1-A3	A4	A5	Use					Operation		C1	C2	C3	C4			
								B1	B2	B3	B4	B5	B6	B7							
GWP - total	kg-CO ₂ eq	8.04E+00	4.15E-01	7.65E+00	1.61E+01	3.00E+00	-	-	-	-	-	-	-	-	-	-	2.32E+00	1.27E+00	4.20E-02	-	
GWP - fossil	kg-CO ₂ eq	8.52E+00	4.14E-01	7.64E+00	1.66E+01	2.50E+00	-	-	-	-	-	-	-	-	-	-	2.31E+00	1.26E+00	4.19E-02	-	
GWP - biogenic	kg-CO ₂ eq	-4.84E-01	7.62E-05	2.71E-04	-4.83E-01	4.98E-01	-	-	-	-	-	-	-	-	-	-	1.30E-04	7.31E-04	2.45E-05	-	
GWP - land use and land use change	kg-CO ₂ eq	6.05E-03	4.10E-04	7.95E-03	1.44E-02	1.12E-03	-	-	-	-	-	-	-	-	-	-	4.64E-03	3.37E-03	9.26E-05	-	
ODP: Ozone depletion potential	kg-CFC-11eq	1.44E-06	1.73E-11	3.27E-07	1.77E-06	3.67E-10	-	-	-	-	-	-	-	-	-	-	1.74E-11	2.08E-09	3.78E-10	-	
EP: Eutrophication potential	kg-PO ₄ ³⁻ eq	8.08E-04	1.95E-09	6.68E-07	8.08E-04	4.55E-08	-	-	-	-	-	-	-	-	-	-	9.92E-09	1.21E-07	2.40E-08	-	
AP: Acidification potential	kg-SO ₂ eq	9.53E-03	5.67E-04	7.49E-03	1.76E-02	2.37E-03	-	-	-	-	-	-	-	-	-	-	3.27E-03	9.20E-03	2.72E-04	-	
POCP: Photochemical oxidant creation potential	kg-C ₂ H ₄ eq	2.03E-04	3.79E-06	2.46E-04	4.53E-04	1.17E-05	-	-	-	-	-	-	-	-	-	-	6.01E-05	6.29E-07	3.44E-08	-	

Optional indicators

ADP - elements	kg-Sbeq	1.00E-03	1.67E-09	2.85E-05	1.03E-03	1.65E-07	-	-	-	-	-	-	-	-	-	-	5.15E-09	5.12E-06	1.23E-07	-
GWP - aircraft	kg-CO ₂ eq	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

> **LCI - Primary Resource Use**

		Production stage						Construction stage		Use stage							End-of-life stage				Supple. info D
		A1	A2	A3	A1-A3	A4	A5	Use					Operation		C1	C2	C3	C4			
								B1	B2	B3	B4	B5	B6	B7							
RPR _E *	MJ	1.23E+01	2.30E-03	5.45E+01	6.68E+01	3.51E-01	-	-	-	-	-	-	-	-	-	-	5.46E-03	1.17E+01	2.80E-01	-	
RPR _M *	MJ	1.80E+00	3.89E-06	9.83E-04	1.80E+00	1.07E-04	-	-	-	-	-	-	-	-	-	-	2.13E-05	2.01E-04	4.91E-05	-	
NRPR _E *	MJ	9.51E+01	4.55E+00	1.96E+02	2.96E+02	2.87E+01	-	-	-	-	-	-	-	-	-	-	2.55E+01	4.64E+01	1.23E+00	-	
NRPR _M *	MJ	3.72E+01	1.49E-05	6.69E-02	3.73E+01	2.70E-03	-	-	-	-	-	-	-	-	-	-	5.67E-05	1.49E-02	7.09E-04	-	

*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 D
		A1	A2	A3	A1-A3	A4	A5	Use					Operation		C1	C2	C3	C4			
								B1	B2	B3	B4	B5	B6	B7							
SM : Use of secondary material	kg	1.57E-01	1.68E-06	7.07E-03	1.64E-01	6.76E-05	-	-	-	-	-	-	-	-	-	-	8.49E-06	1.70E-03	4.49E-05	-	
RSF : Renewable secondary fuels	MJ	7.25E-02	1.20E-06	6.77E-04	7.32E-02	1.18E-03	-	-	-	-	-	-	-	-	-	-	1.25E-05	2.00E-03	1.16E-04	-	
NRSF : Non-renewable secondary fuels	MJ	1.57E-01	6.36E-06	1.57E-03	1.58E-01	5.40E-06	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00	-	
RE : Use of recovered energy	MJ	6.07E-02	1.07E-05	2.84E-01	3.45E-01	8.30E-06	-	-	-	-	-	-	-	-	-	-	1.30E-10	2.22E-10	1.89E-11	-	

> **LCI - ADP-fossil and Consumption of freshwater**

		Production stage						Construction stage		Use stage							End-of-life stage				Supple. info D
		A1	A2	A3	A1-A3	A4	A5	Use					Operation		C1	C2	C3	C4			
								B1	B2	B3	B4	B5	B6	B7							
ADP - fossil	MJ	1.34E+02	5.63E+00	1.18E+02	2.57E+02	3.43E+01	-	-	-	-	-	-	-	-	-	-	3.16E+01	1.60E+01	5.42E-01	-	
Consumption of freshwater resources	m ³	3.53E-01	1.16E-05	2.31E-03	3.56E-01	1.28E-04	-	-	-	-	-	-	-	-	-	-	6.53E-05	8.96E-04	2.70E-04	-	

Environmental Product Declaration for **ALTRO DOLCE**

> Waste Indicators

		Production stage				Construction stage		Use stage							End-of-life stage				Supple. info D	
		A1	A2	A3	A1-A3	A4	A5	Use					Operation		C1	C2	C3	C4		
								B1	B2	B3	B4	B5	B6	B7						
hazardous waste disposed	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	-
non-hazardous waste disposed	kg	1.82E-01	3.61E-04	1.79E-02	2.00E-01	2.07E-03	-	-	-	-	-	-	-	-	-	-	1.05E-03	1.21E+00	6.21E+00	-
high-level radioactive waste	m ³	7.16E-11	1.48E-14	3.34E-10	4.05E-10	3.10E-12	-	-	-	-	-	-	-	-	-	-	4.82E-14	1.04E-10	2.47E-12	-
intmd. and low-level radioactive waste	m ³	2.99E-08	6.18E-12	1.40E-07	1.69E-07	1.30E-09	-	-	-	-	-	-	-	-	-	-	2.02E-11	4.34E-08	1.03E-09	-

> Output Flow Indicators

		Production stage				Construction stage		Use stage							End-of-life stage				Supple. info D	
		A1	A2	A3	A1-A3	A4	A5	Use					Operation		C1	C2	C3	C4		
								B1	B2	B3	B4	B5	B6	B7						
Components for reuse	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	-
Materials for recycling	kg	0.00E+00	0.00E+00	1.10E+01	1.10E+01	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	0.00E+00	-	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00	-
Exported energy from waste (energy recovery efficiency \geq 60%)	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	-
Incineration of waste (energy recovery efficiency < 60%)	Waste disposed	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.30E-01	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	0.00E+00	-
	Recovered energy	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	-
Waste disposed in landfill and energy recovered from landfill gas	Waste disposed	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-	-	-	-	-	-	-	-	-	0.00E+00	0.00E+00	6.21E+00	-
	Recovered energy	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	-

> Description of LCA Results

- The transport scenarios were calculated in accordance with the PCR.
- The use stage is not included in the calculation.
- The disposal of packaging materials used for transport to the construction site is accounted for in Module A4.

● Additional Environmental Information

> Additional Environmental Information not related to LCA

--

> Information on Hazardous Substances

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

Release of dangerous substances from construction products

-

● Definitions of Terms

-

● 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
- ISO21930:2007 Sustainability in building construction — Environmental declaration of building products

● Version History

--