



ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025

Edux Aluminium-coated balcony doors

Edux Ovet Oy



EPD HUB, HUB-3950

Published on 11.09.2025, last updated on 11.09.2025, valid until 11.09.2030

Life Cycle Assessment study has been performed in accordance with the requirements of EN 15804, EPD Hub PCR version 1.1 (5 Dec 2023) and JRC characterization factors EF 3.1.



Created with One Click LCA



GENERAL INFORMATION

MANUFACTURER

Manufacturer	Edux Ovet Oy
Address	Välikyläntie 541, 85500 Nivala, Finland
Contact details	myynti@edux.fi
Website	https://www.edux.fi

EPD STANDARDS, SCOPE AND VERIFICATION

Program operator	EPD Hub, hub@epdhub.com
Reference standard	EN 15804+A2:2019 and ISO 14025
PCR	EPD Hub Core PCR Version 1.1, 5 Dec 2023
Sector	Construction product
Category of EPD	Third party verified EPD
Scope of the EPD	Cradle to gate with modules C1-C4, D
EPD author	Jori Jokela, Macon Oy
EPD verification	Independent verification of this EPD and data, according to ISO 14025: <input type="checkbox"/> Internal verification <input checked="" type="checkbox"/> External verification
EPD verifier	Imane Uald Lamkaddam as an authorized verifier for EPD Hub

This EPD is intended for business-to-business and/or business-to-consumer communication. The manufacturer has the sole ownership, liability, and responsibility for the EPD. EPDs within the same product category but from different programs may not be comparable. EPDs of construction products may not be comparable if they do not comply with EN 15804 and if they are not compared in a building context.

PRODUCT

Product name	Edux Aluminium-coated balcony doors
Place(s) of raw material origin	Finland
Place of production	Nivala, Finland
Period for data	Year 2023
Averaging in EPD	Multiple products
Variation in GWP-fossil for A1-A3 (%)	-7,12 %/+8,64 %

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 m2 of the aluminium coated balcony door
Declared unit mass	45 kg
GWP-fossil, A1-A3 (kgCO ₂ e)	77,4
GWP-total, A1-A3 (kgCO ₂ e)	43
Secondary material, inputs (%)	1,38
Secondary material, outputs (%)	65,5
Total energy use, A1-A3 (kWh)	583
Net freshwater use, A1-A3 (m ³)	1,09

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

We are a family-owned company founded in 1990 in Nivala, Finland. We manufacture interior and exterior doors for domestic and foreign markets. Our range is designed to cater for modern requirements, whether it is a case of a public building, a residential detached house, an apartment building or a holiday home. Our doors are also well-suited for renovations.

PRODUCT DESCRIPTION

This EPD represents a 10x21 (924X 2038mm) size and frame depth of 170mm balcony door (POA). The aluminium used in the door is made from recycled aluminium, which reduces the environmental impact of the materials and promotes sustainable development. The door is surface treated with substances that meet the M1 classification, ensuring low emissions and healthy indoor air. The design takes into account a long service life and recyclability, making the door an environmentally friendly choice.

All our production processes are designed in such a way that they follow strict environmental protection principles.

This is a representative EPD for multiple products, with glass heights ranging from 970 mm to 1893 mm. This declaration is based on the product with a glass height of 1385 mm. Range values are listed after the results tables.

Further information can be found at <https://www.edux.fi>.

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	15	Finland
Minerals	45	Finland
Fossil materials	6	Finland
Bio-based materials	34	EU, Finland

BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

Biogenic carbon content in product, kg C	6,98
Biogenic carbon content in packaging, kg C	1,9

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 m2 of the aluminium coated balcony door
Mass per declared unit	45 kg

SUBSTANCES, REACH - VERY HIGH CONCERN

The product does not contain any REACH SVHC substances in amounts greater than 0,1 % (1000 ppm).

PRODUCT LIFE-CYCLE

SYSTEM BOUNDARY

This EPD covers the life-cycle modules listed in the following table.

Product stage			Assembly stage		Use stage							End of life stage				Beyond the system boundaries		
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D		
x	x	x	MND	MND	MND	MND	MND	MND	MND	MND	MND	x	x	x	x	x		
Raw materials	Transport	Manufacturing	Transport	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction/ demolition	Transport	Waste processing	Disposal	Reuse	Recovery	Recycling

Modules not declared = MND. Modules not relevant = MNR

MANUFACTURING AND PACKAGING (A1-A3)

The environmental impacts considered for the product stage cover the manufacturing of raw materials used in the production as well as packaging materials and other ancillary materials. Also, fuels used by machines, and handling of waste formed in the production processes at the manufacturing facilities are included in this stage. The study also considers the material losses occurring during the manufacturing processes as well as losses during electricity transmission.

The environmental impacts of raw material supply (A1) include emissions generated when raw materials are taken from nature, transported to

industrial units for processing and processed, along with waste handling from the various production processes. All major upstream processes are taken into consideration, including infrastructure. Loss of raw material and energy transmission losses are also taken into account. This stage includes all the aforementioned for the raw materials which end up in the final product (i.e. wood, steel, aluminum, adhesives, surface treatment and packaging) as well as the electricity and heat production which are consumed during manufacturing at the plant.

The use of CO2 free energy in manufacturing is demonstrated through contractual instruments (GOs, RECs, etc.), and its use is ensured throughout the validity period of this EPD.

TRANSPORT AND INSTALLATION (A4-A5)

This EPD does not cover the transportation impacts occurred from final products delivery to construction site (A4). In installation only packaging waste impacts are shown in Environmental Impact Data tables (A5). Installation materials and energy consumption were not taken into account because installation situations vary case by case and are not managed by Edux-ovet Oy. Wooden and plastic packing materials will be recycled as materials or used for energy recovery.

PRODUCT USE AND MAINTENANCE (B1-B7)

This EPD does not cover the use phase. Air, soil, and water impacts during the use phase have not been studied.

PRODUCT END OF LIFE (C1-C4, D)

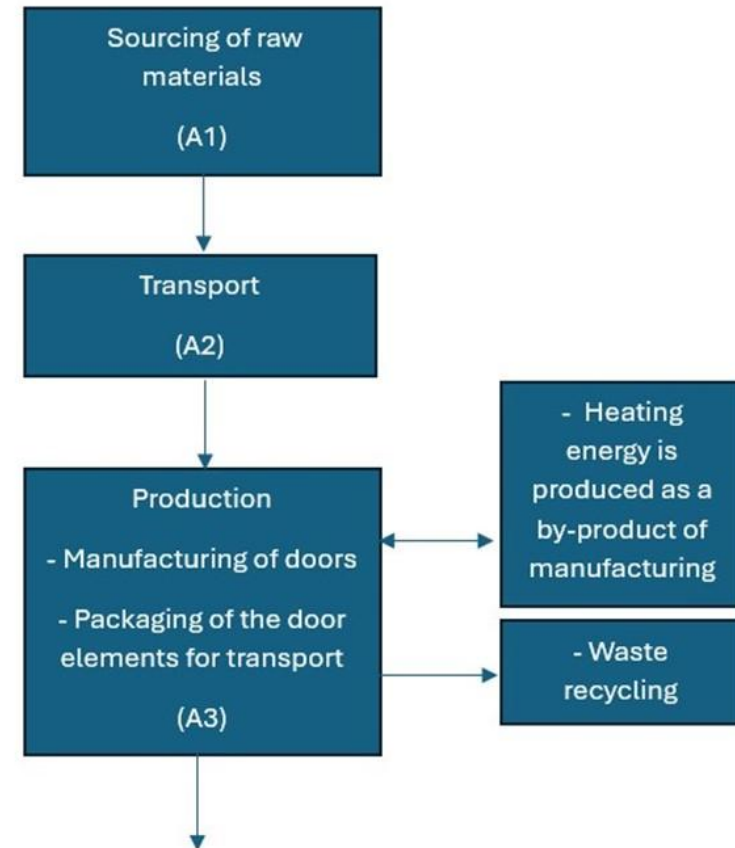
Demolition is assumed to have only small effects due to easy dismantling. It is conservatively assumed that energy consumption could be 0,01 kWh/kg. It is assumed that 100 % of the door products are collected (C1). Distance for

transportation to treatment is assumed as 50 to 250 km and the transportation method is assumed to be lorry (C2) (Eurostat & BuildLCA 2020). 76 % of wooden parts are assumed to be recycled or chipped (C3). There is a 24 % conservative rate of rejects that is assumed to be sent to landfill (C4) (Eurostat & BuildLCA 2020). 30 % of glass is assumed to be recycled and 70 % is to be sent to landfill (EN 17213). Approximately 94 % of aluminium components are recycled, while 6 % are directed to landfill (C3). In comparison, 60 % of copper-based alloys are recycled, whereas 40 % are landfilled (Copper Alliance 2021). Later on, wooden materials are reused or chipped wood is incinerated with energy recovery by utilization of the recycled wood or chips (D). Metals and glass are used to manufacture new materials containing recycled content (D).

Packaging components can be recycled as materials or utilized in energy production (plastic 77%, wood 62%) (Eurostat: <https://ec.europa.eu/eurostat/web/main/home>). Later on, reusable metals and packaging materials are utilized to manufacture new products or are utilized as energy (D).

MANUFACTURING PROCESS

The production process starts with the cutting of parts, after that the parts go to glue and press. The blank is transferred to a CNC machine, which is used to make the necessary machining of the door (lock and hinge). After processing, the door is surface treated. During the assembly phase, the ordered equipment is installed on the door, and a final inspection is carried out. The door is packed on a pallet and protected with plastic. The packaging materials can be recycled.



LIFE-CYCLE ASSESSMENT

CUT-OFF CRITERIA

The study does not exclude any modules or processes which are stated mandatory in the reference standard and the applied PCR. The study does not exclude any hazardous materials or substances. The study includes all major raw material and energy consumption. All inputs and outputs of the unit processes, for which data is available for, are included in the calculation. There is no neglected unit process more than 1% of total mass or energy flows. The module specific total neglected input and output flows also do not exceed 5% of energy usage or mass.

The production of capital equipment, construction activities, and infrastructure, maintenance and operation of capital equipment, personnel-related activities, energy and water use related to company management and sales activities are excluded.

VALIDATION OF DATA

Data collection for production, transport, and packaging was conducted using time and site-specific information, as defined in the general information section on page 1 and 2. Upstream process calculations rely on generic data as defined in the Bibliography section. Manufacturer-provided specific and generic data were used for the product's manufacturing stage. The analysis was performed in One Click LCA EPD Generator, with the 'Cut-Off, EN 15804+A2' allocation method, and characterization factors according to EN 15804:2012+A2:2019/AC2021 and JRC EF 3.1.

ALLOCATION, ESTIMATES AND ASSUMPTIONS

Allocation is required if some material, energy, and waste data cannot be measured separately for the product under investigation. All allocations are done as per the reference standards and the applied PCR. In this study, allocation has been done in the following ways:

Data type	Allocation
Raw materials	No allocation
Packaging material	Allocated by mass or volume
Ancillary materials	Allocated by mass or volume
Manufacturing energy and waste	Allocated by mass or volume

PRODUCT & MANUFACTURING SITES GROUPING

Type of grouping	Multiple products
Grouping method	Based on a representative product
Variation in GWP-fossil for A1 A3 (%)	-7,12 %/+8,64 %

This EPD contains average calculations due to multiple product window sizes. Coefficient variation (CV) in GWP-fossil for A1-A3 is 7,86 %. Smaller window area and bigger aluminium area of the door exhibits the highest GWP-fossil values and vice versa.

LCA SOFTWARE AND BIBLIOGRAPHY

This EPD has been created using One Click LCA EPD Generator. The LCA and EPD have been prepared according to the reference standards and ISO 14040/14044. The EPD Generator uses Ecoinvent v3.10.1 and One Click LCA databases as sources of environmental data. Allocation used in Ecoinvent 3.10.1 environmental data sources follow the methodology 'allocation, Cut-off, EN 15804+A2'.

ENVIRONMENTAL IMPACT DATA

CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, EF 3.1

Impact category	Unit	A1	A2	A3	A1-A3	C1	C2	C3	C4	D
GWP – total ¹⁾	kg CO ₂ e	4,05E+01	2,81E+00	-3,09E-01	4,30E+01	0,00E+00	4,97E-01	3,55E+01	9,92E+00	-2,38E+01
GWP – fossil	kg CO ₂ e	7,05E+01	2,81E+00	4,17E+00	7,74E+01	0,00E+00	4,97E-01	9,93E+00	4,95E-01	-1,53E+01
GWP – biogenic	kg CO ₂ e	-3,02E+01	5,82E-04	-4,51E+00	-3,47E+01	0,00E+00	4,62E-05	2,56E+01	9,43E+00	-8,50E+00
GWP – LULUC	kg CO ₂ e	2,32E-01	1,16E-03	3,28E-02	2,66E-01	0,00E+00	2,18E-04	8,94E-04	1,47E-04	-2,32E-02
Ozone depletion pot.	kg CFC-11e	5,49E-06	5,59E-08	9,23E-08	5,64E-06	0,00E+00	7,56E-09	4,52E-08	5,78E-09	-2,77E-07
Acidification potential	mol H ⁺ e	6,35E-01	1,78E-02	2,46E-02	6,77E-01	0,00E+00	1,68E-03	9,81E-03	1,58E-03	-5,82E-01
EP-freshwater ²⁾	kg Pe	2,74E+00	1,80E-04	1,38E-03	2,74E+00	0,00E+00	3,81E-05	2,96E-04	6,28E-05	-4,26E-02
EP-marine	kg Ne	9,29E-02	4,50E-03	8,36E-03	1,06E-01	0,00E+00	5,52E-04	2,46E-03	2,64E-03	-3,90E-02
EP-terrestrial	mol Ne	7,98E-01	4,96E-02	7,77E-02	9,25E-01	0,00E+00	6,01E-03	2,58E-02	6,54E-03	-5,13E-01
POCP (“smog”) ³⁾	kg NMVOCe	2,81E-01	1,89E-02	2,94E-02	3,29E-01	0,00E+00	2,48E-03	1,05E-02	2,36E-03	-1,47E-01
ADP-minerals & metals ⁴⁾	kg Sbe	3,28E-03	7,26E-06	3,15E-05	3,32E-03	0,00E+00	1,42E-06	1,30E-05	5,16E-07	-7,08E-03
ADP-fossil resources	MJ	1,01E+03	4,10E+01	4,08E+02	1,46E+03	0,00E+00	7,17E+00	4,03E+01	4,93E+00	-2,23E+02
Water use ⁵⁾	m ³ e depr.	6,88E+03	1,98E-01	5,41E+00	6,89E+03	0,00E+00	3,53E-02	5,43E-01	3,77E-02	-8,60E+00

1) GWP = Global Warming Potential; 2) EP = Eutrophication potential. Required characterisation method and data are in kg P-eq. Multiply by 3,07 to get PO₄e; 3) POCP = Photochemical ozone formation; 4) ADP = Abiotic depletion potential; 5) EN 15804+A2 disclaimer for Abiotic depletion and Water use and optional indicators except Particulate matter and Ionizing radiation, human health. The results of these environmental impact indicators shall be used with care as the uncertainties on these results are high or as there is limited experience with the indicator.

ADDITIONAL (OPTIONAL) ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, EF 3.1

Impact category	Unit	A1	A2	A3	A1-A3	C1	C2	C3	C4	D
Particulate matter	Incidence	6,02E-06	2,45E-07	9,98E-07	7,27E-06	0,00E+00	4,81E-08	1,16E-07	3,56E-08	-1,98E-06
Ionizing radiation ⁶⁾	kBq 11235a	4,44E+00	4,56E-02	1,85E+01	2,30E+01	0,00E+00	6,50E-03	4,99E-02	4,71E-03	-2,33E+00
Ecotoxicity (freshwater)	CTUe	2,12E+03	4,61E+00	2,24E+01	2,15E+03	0,00E+00	1,01E+00	1,69E+01	5,15E+01	-7,57E+02
Human toxicity, cancer	CTUh	5,47E-07	4,87E-10	5,44E-09	5,53E-07	0,00E+00	8,24E-11	1,50E-08	6,62E-11	-5,44E-08
Human tox. non-cancer	CTUh	4,63E-06	2,44E-08	6,08E-08	4,72E-06	0,00E+00	4,62E-09	5,31E-08	3,93E-09	-5,31E-06
SQP ⁷⁾	-	3,64E+03	3,64E+01	8,17E+02	4,49E+03	0,00E+00	6,79E+00	8,45E+00	1,14E+01	-2,31E+02

6) EN 15804+A2 disclaimer for ionizing radiation, human health. 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; 7) SQP = Land use related impacts/soil quality.

USE OF NATURAL RESOURCES

Impact category	Unit	A1	A2	A3	A1-A3	C1	C2	C3	C4	D
Renew. PER as energy ⁸⁾	MJ	5,65E+02	6,24E-01	1,05E+02	6,72E+02	0,00E+00	1,01E-01	-1,63E+02	-8,89E+01	-3,61E+00
Renew. PER as material	MJ	2,77E+02	0,00E+00	4,05E+01	3,18E+02	0,00E+00	0,00E+00	-2,33E+02	-8,50E+01	6,60E+01
Total use of renew. PER	MJ	8,43E+02	6,24E-01	1,46E+02	9,89E+02	0,00E+00	1,01E-01	-3,96E+02	-1,74E+02	6,24E+01
Non-re. PER as energy	MJ	1,00E+03	4,10E+01	3,84E+02	1,43E+03	0,00E+00	7,17E+00	-3,06E+01	-1,00E+01	-2,23E+02
Non-re. PER as material	MJ	3,01E+01	0,00E+00	2,14E+01	5,14E+01	0,00E+00	0,00E+00	-4,10E+01	-1,05E+01	1,88E+01
Total use of non-re. PER	MJ	1,03E+03	4,10E+01	4,05E+02	1,48E+03	0,00E+00	7,17E+00	-7,16E+01	-2,05E+01	-2,04E+02
Secondary materials	kg	6,19E-01	1,80E-02	1,73E+00	2,37E+00	0,00E+00	3,08E-03	2,09E-02	1,81E-03	1,12E+00
Renew. secondary fuels	MJ	8,58E-02	2,01E-04	1,22E+00	1,31E+00	0,00E+00	3,92E-05	1,45E-04	3,42E-05	-5,47E-03
Non-ren. secondary fuels	MJ	1,17E-01	0,00E+00	4,16E-03	1,21E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of net fresh water	m ³	9,64E-01	5,64E-03	1,23E-01	1,09E+00	0,00E+00	1,05E-03	4,87E-03	-7,04E-02	-3,20E-01

8) PER = Primary energy resources.

END OF LIFE – WASTE

Impact category	Unit	A1	A2	A3	A1-A3	C1	C2	C3	C4	D
Hazardous waste	kg	8,30E+00	5,87E-02	3,70E-01	8,73E+00	0,00E+00	1,20E-02	1,91E-01	1,44E-02	-2,22E+00
Non-hazardous waste	kg	1,25E+02	1,13E+00	1,82E+01	1,44E+02	0,00E+00	2,25E-01	1,51E+01	9,53E+01	-1,51E+02
Radioactive waste	kg	3,15E-03	1,13E-05	4,40E-03	7,56E-03	0,00E+00	1,59E-06	1,25E-05	1,15E-06	-6,00E-04

END OF LIFE – OUTPUT FLOWS

Impact category	Unit	A1	A2	A3	A1-A3	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
Materials for recycling	kg	1,33E-02	0,00E+00	3,30E-01	3,43E-01	0,00E+00	0,00E+00	1,79E+01	0,00E+00	0,00E+00
Materials for energy rec	kg	4,79E-02	0,00E+00	4,00E-02	8,79E-02	0,00E+00	0,00E+00	1,16E+01	0,00E+00	0,00E+00
Exported energy	MJ	2,71E-01	0,00E+00	0,00E+00	2,71E-01	0,00E+00	0,00E+00	5,02E+01	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	2,11E+01	0,00E+00	0,00E+00
Exported energy – Heat	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,90E+01	0,00E+00	0,00E+00

VERIFICATION STATEMENT

VERIFICATION PROCESS FOR THIS EPD

This EPD has been verified in accordance with ISO 14025 by an independent, third-party verifier by reviewing results, documents and compliancy with reference standard, ISO 14025 and ISO 14040/14044, following the process and checklists of the program operator for:

- This Environmental Product Declaration
- The Life-Cycle Assessment used in this EPD
- The digital background data for this EPD

Why does verification transparency matter? Read more online

This EPD has been generated by One Click LCA EPD generator, which has been verified and approved by the EPD Hub.

THIRD-PARTY VERIFICATION STATEMENT

I hereby confirm that, following detailed examination, I have not established any relevant deviations by the studied Environmental Product Declaration (EPD), its LCA and project report, in terms of the data collected and used in the LCA calculations, the way the LCA-based calculations have been carried out, the presentation of environmental data in the EPD, and other additional environmental information, as present with respect to the procedural and methodological requirements in ISO 14025:2010 and reference standard.

I confirm that the company-specific data has been examined as regards plausibility and consistency; the declaration owner is responsible for its factual integrity and legal compliance.

I confirm that I have sufficient knowledge and experience of construction products, this specific product category, the construction industry, relevant standards, and the geographical area of the EPD to carry out this verification.

I confirm my independence in my role as verifier; I have not been involved in the execution of the LCA or in the development of the declaration and have no conflicts of interest regarding this verification.

Imane Uald Lamkaddam as an authorized verifier for EPD Hub Limited
11.09.2025



ANNEX 1. ARTICLES COVERED BY THIS EPD.

Article	Glass size mm*mm	Net weight kg/m ²	GWP-fossil, A1-A3 (kg CO ₂ e/item)
Edux Aluminium-coated balcony doors	779 *970	41,8	71,9
Edux Aluminium-coated balcony doors	779 * 1385	45	77,4
Edux Aluminium-coated balcony doors	779 *1893	48,9	84,1

The table presents the values for the minimum and maximum glass sizes, and the other values can be calculated using linear interpolation.