

# ENVIRONMENTAL PRODUCT DECLARATION

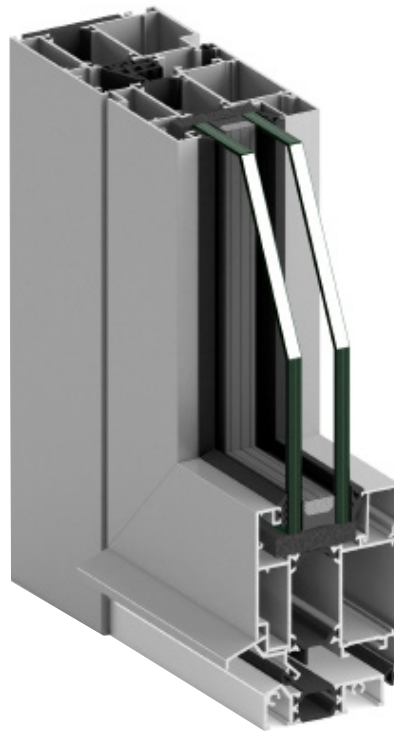


In accordance with ISO 14025 :2006 y  
EN 15804:2012+A2:2019/AC:2021 for:

ALUMINIUM HINGED DOORS

# AEA

Asociación Española del Aluminio  
y Tratamientos de Superficie



EPD Program  
Programme operator  
CPC Code  
Based on  
Declaration number  
Publication date  
Valid until  
Market coverage  
Dataset representativeness  
Geographical scope

The International EPD® System. [www.environdec.com](http://www.environdec.com)

EPD International AB

42120 Doors, doors and their frames and thresholds for doors, of iron, steel or aluminium

PCR 2019:14 version 1.3.2. Construction Products 2023-12-08 and C-PCR-007 Windows and Doors (EN 17213:2020)

S-P-13514

2024-05-24

2029-05-24

Worldwide

Average dataset (sector EPD) as the arithmetic mean of the results of hinged door systems (glazed and paneled/anodized and powder coated)

Spain

# SUMMARY

AEA

Product

LCA  
Information

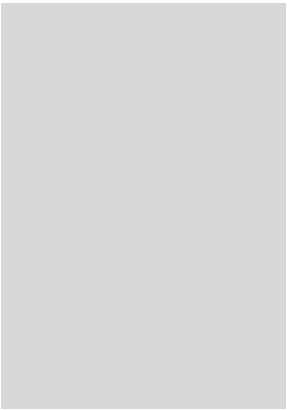
Results

Supplement  
Information

Verification

References

Contacts



## ABOUT AEA

The Aluminium Spanish Association (Asociación Española de Aluminio – AEA) is a non-profit association that represents the Spanish aluminium industry and watches over the defense of its global interests.

The AEA is composed of 89 members, including extruders, lacquers and anodizers, as well as suppliers of quality services and raw materials such as primary and secondary aluminium, powder coating, thermal break profiles (TB) and chemical products for surface treatments.

The information in this document is based on data supplied by 11 AEA member who have produced a comprehensive industry-wide environmental product declaration (EPD) for aluminium doors. The data comes from 18 separate production facilities, with a total of 38 extrusion presses, 13 anodizing lines, 20 coating lines and 1 cast house that produces secondary extrusion billet starting from post-industrial and consumer aluminium scrap. 3 of these 11 companies have own cast house to recycle the post-industrial aluminium scrap produced in their installations. Two manufacturers of polyamide profiles (TB) and a manufacturer of chemical products (used in anodizing and coating) have also participated in the generation of the inventories. Four companies that design systems for facade cladding have also provided data. In aggregate, the data-contributing installations have a production capacity of more than 290.000 ton of aluminium profiles, about 66% of total AEA production.

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# PRODUCT

## Product description

The product covered by this EPD is a two-leaf aluminium hinged door assembled from extruded aluminium profiles manufactured by AEA members. The environmental impacts and input and output parameters stated in this EPD correspond to an arithmetic mean from the results calculated for different hinged door systems assembled with powder coated and anodised aluminium profiles, with or without thermal break (TB). Therefore this EPD covers average values for an partial product category (with a 66% of representativeness) and, hence, the declared product is an average that is not available for purchase on the market and that the results are not representative for any specific manufacturer or its product.

## Applications

Doors are used in building and construction applications as cladding for facade hollows.

## Technical data

This EPD states average data of different door systems. The technical characteristics of the door systems used in the average are shown in the table below.

## Composition

The doors consist of an aluminium profile frame and an aluminium profile sash with an insulating glass unit (IGU). Aluminium profiles are powder coated to produce coloured and smooth surfaces, and thermally broken with a reinforced polyamide strip. Fittings are used to reinforce the frame and sash (corner connections) and to allow door opening (tilt & turn). To ensure the air and water tightness of the door, components made of EPDM and other plastics are installed (gaskets).

This EPD declares average data from different gate systems. The following tables show the composition of this average door. The door does not contain any substances included in the list of Substances of Very High Concern (SVHC) with a concentration of more than 0.1% by weight.

	Glazed door with TB	Glazed door without TB	Panel door with TB	Panel door without TB
IGU	44.1/16Arg/33.1 BE	44.1/16/6	-	-
Thermal insulation (W/m <sup>2</sup> K) UNE-EN 10077-2	1.8	3.9	1.2	2.7
Air tightness UNE-EN 12207	4	NPD	4	NPD
Water tightness UNE-EN 12208	-	NPD	6A	NPD
Acoustic insulation Rw UNE-EN ISO 12354	36dB	NPD	-	NPD
Wind load resistance UNE -EN 12210	C3	NPD	C4	NPD

## Packaging

The doors are generally transported directly to the building site from carpentry in trucks or vans. These vehicles usually have an inverted “V” pallet, so that the doors are placed vertically during the journey. Doors are separated from each other by cardboard sheets or corners. The doors can be protected with plastic film and secured with straps or other elements. These packaging materials are included in the scope of this EPD.

The biogenic carbon contained in the products used in the packaging has been compensated for in the total of the A1-3 modules.

## Reference service life and use phase

According to the approved standard EN 17213 a reference service life of 30 years is assumed without IGU replacement.

## Recycling and disposal

Aluminium products are highly recyclable. During aluminium profile production, all post-industrial scrap (extrusion drop-offs from cutting, unfit material and discards, etc.) is fed back into the billet production process. Proceed in the same way with the aluminum cutouts generated during the assembly of the door. Some AEA members operate their own scrap smelting facilities in addition to purchasing billet from external secondary smelters or from primary aluminium manufacturer.

When an aluminium building product reaches the end of its life, it is systematically and selectively collected and sent to recycling facilities for secondary billet production. A collection rate for aluminium products next to 95% is well documented in construction sector and included as default value in EN 17213. Finally, recycling rate depends on smelting yield that includes metal losses during scrap preparation and melting.

Hence, aluminium supply at the beginning of the product system has a content of recycled material from post-industrial and post-consumer scrap with the consequent reduction of environmental burdens. In module D are reported only the net benefits of recycling, i.e. the burden savings at the end of life minus the benefits already considered in the module A1 due to secondary aluminium content. In this EPD, the scrap not collected at the end of life (5%) is sent to landfill.

For the rest of the components of the doors, i.e. IGU, fittings and gaskets, EoL scenarios have been setup according to default values specified in EN 17213.

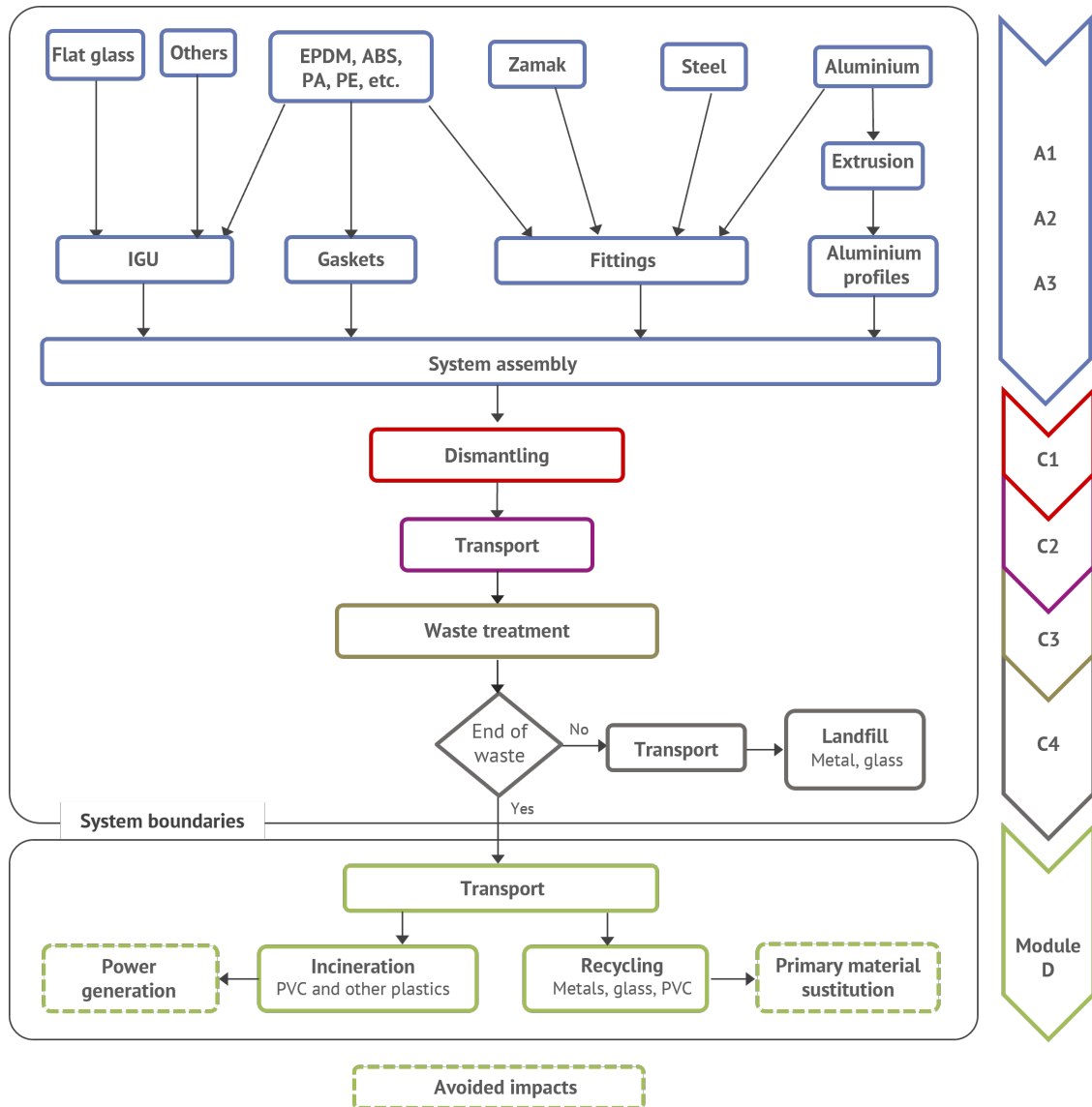


Average product (per declared unit)

<b>Aluminium profile</b>	<b>9.54 kg</b>
Aluminium	8.72
Polyamide + fiber glass	0.39
Coating powder	0.43
<b>IGU</b>	<b>17.64 kg</b>
Flat glass	6.97
Flat glass (low-e)	5.23
Aluminium	4.86
PB	0.003
Zeolite	0.18
Argon	0.01
Polysulfide	0.10
PVB	0.29
<b>Gasket and fittings</b>	<b>2.44 kg</b>
EPDM	0.55
Zamak	0.32
Aluminium	0.34
Stainless steel	0.56
Steel	0.57
PA	0.01
TPV	0.01
POM	0.003
PVC	0.003
PP	0.04
TPE	0
PIR	0
ABS	0
PE	0.03
<b>Secondary material</b>	<b>1.33 kg</b>
<b>Renewable material</b>	<b>-</b>
<b>Packaging</b>	<b>0.15 kg</b>
Cardboard	0.04
Plastic film	0.11
Biogenic carbon	0.02 kg

## System boundaries

The scope of the study is set to be “Cradle-to-gate with options”. Processes included in the assessment are presented on the diagram below.



# LCA INFORMATION

## Declared unit

The declared unit is 1 m<sup>2</sup> of enclosure for façade openings (hinged double-leaf doors). In accordance with EN 17213, the indicators stated in this EPD have been calculated on the basis of a standard door size of 2.00 m x 2.18 m. To obtain the environmental impacts and other parameters referring to 1 m<sup>2</sup> of product, these indicators were divided by the area of the door (4.36 m<sup>2</sup>).

## Goal and scope

This EPD evaluates the environmental impacts and parameters of 1 m<sup>2</sup> of window from cradle to gate with options (end of life and recycling). Hence, this is a cradle to gate EPD with C1-C2-C3-C4-D modules.

This EPD is the basis for B2B communication for customers and relevant stakeholders within the building sector.

## System boundaries

This EPD provides information on the production stage of the aluminium profiles (raw material supply, transport to plants and manufacturing), IGU, fittings and gaskets and their end-of-life. Recycling potential of aluminium and others materials with burdens saving due to use in a second product systems is also reported. The information is presented in a modular way separated in the following stages.

### A1-3 - Cradle to gate

The aggregation of the modules A1, A2 and A3 is allowed by EN 15804. This rule is applied in this EPD and denoted by A1-3. This module represents the manufacture and packaging of aluminium profiles (including extraction and processing of raw materials and the transport to production sites), the production of the rest of the components of the doors (IGU, fittings and gaskets), the transport of these components and the doors assembly. Packaging of doors is also included in this module.

### C1 - De-construction

Given that deconstruction often consists exclusively of manual operations, there are no environmental impacts attributed to the non-destructive removal of doors.

Stage	Production			Construction		Use							End-of-life				Resource recovery
	Raw materials supply	Transport	Manufacturing	Transport	Installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction	Transport	Waste processing	Disposal	Reuse, recovery or recycling potentials
Module	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Declared module	X	X	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	X	X	X	X	X
Geography	EU	EU	ES	-	-	-	-	-	-	-	-	-	ES	ES	ES	ES	EU
Specific data	>90%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation - products <sup>(1)</sup>	22%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation - plants <sup>(2)</sup>	2%			-	-	-	-	-	-	-	-	-	-	-	-	-	-

(1) Maximum variation for all declared products - (2) Maximum variation for all manufacturers  
ND - Not declared



## C2 - Transport to waste processing

A distance of 200 km has been assumed for the transport to scrap dealers. Transport is calculated on the basis of a scenario with the parameters described in the attached table.

## C3 - Waste processing for reuse, recovery and/or recycling

It has been assumed that during the scrapping operations the same electricity is consumed as during the assembly of doors.

## C4 - Final disposal

End of life scenarios, routes for final disposal, recovery rates and efficiencies in recycling for all components are modelled based on default figures provided by EN 17213 (see attached table).

## D - Allocation by reuse, recovery or recycling

For aluminium profiles, module D report the environmental burden of recycled scrap generated at the end of life minus that used at the production stage. Scrap inputs to the production stage are subtracted from scrap to be recycled at end of life in order to obtain the net scrap output from the product system. This remaining net scrap is then sent to recycling. Loads and benefits are assessed at the point of functional equivalence, i.e. where the substitution of primary aluminium takes place.

This criteria is also applied in the case of other metals and glass that are sent to recycling.

## Time representativeness

All primary data used in this EPD are based on the 2020 production data for aluminium profiles manufactured by AEA members in their facilities in Spain. Data for IGU, fittings, gasket and other environmental aspects during doors assembly are based on information updated to 2023.

## Database(s) and LCA software used

The data for primary aluminium billet and for scrap remelting (secondary aluminium billet) are based on LCI dataset published by European Aluminium in february 2018 and are the best available. Other LCI datasets were sourced from Ecoinvent v3.8.

The LCA study was performed using an excel-based model. The impact assessment results were calculated using characterization factors of EN 15804+A2 standard (based on EF 3.0).

## Data Quality

The data quality can be considered as good. The LCA models have been checked and most relevant flows are considered. In order to achieve precision, consistency and representativeness and to ensure reliable results, first-hand industry data were used. All foreground data were collected from AEA participating companies for their facilities using customized data collection templates. It was created representative production-weighted inventories. These inventories are intended to represent average of aluminium profile production for building by AEA members. The age of these data is three years. Exhaustive data for fittings and gaskets were provided by two manufacturers with a complete inventory of all components present in the doors.

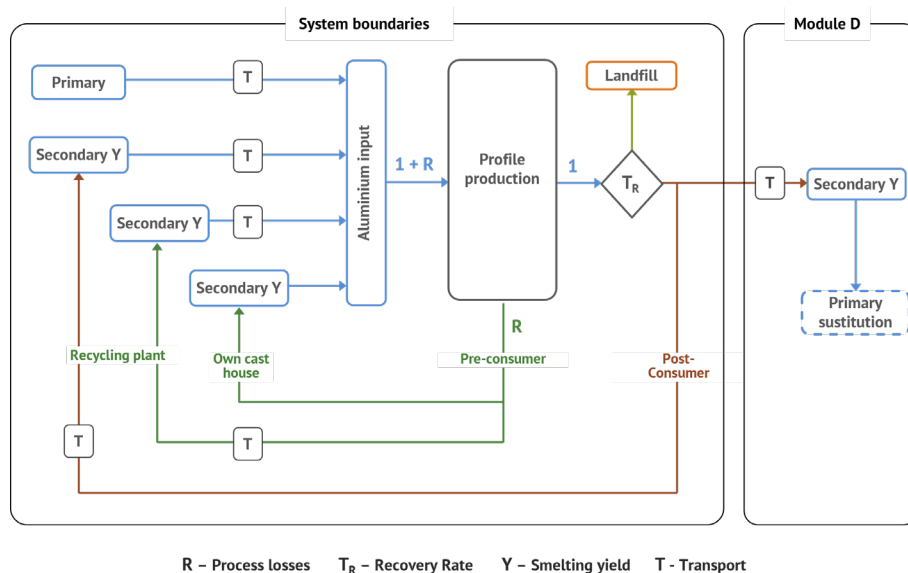
Parameters, C2 module	
Transport by road <sup>(1)</sup>	Lorry, 17.3 t max payload
Diesel consumption (l/km)	0.221
Distance (km)	200
Volume capacity utilization	100%
Mass capacity utilisation	67%

(1) Technology mix, Euro 0, 1, 2, 3, 4

Parameters, C3 module	
Energy carrier	Electricity, low voltage {ES}
Consumption (kWh) <sup>(1)</sup>	1.27

(1) For declared unit

Parameters, C4 and D modules	
Recovery rate for metals (recycling)	95%
Recovery rate for glass (recycling)	30%
Recovery rate for plastics (energy valorization)	95%
Metals and plastics to landfill	5%
Glass to landfill	70%
Efficiency for materials recycling	90%
Efficiency for energy valorization	60%



Regionally specific datasets were used to model the energy consumption (electricity, natural gas or diesel). For transport, production of raw materials or end-of-life processes datasets were chosen according to their technological and geographical representation of the actual process.

According to Annex E of EN 15804 + A2, an assessment of the data quality was carried out. In terms of technical representativeness, processes with a “very good” quality level account for about 75% of the GWP-GHG indicator. In terms of geographical representativeness, processes with a “very good” quality level account for about 90% of the GWP-GHG value.

## Estimates and Assumptions

For aluminium profiles, activity data was obtained from inventories that were completed by all the participating companies based on their data on production, consumption of raw materials and energy, and the generation of waste, effluents and emissions. From these inventories, a unitary process was generated for each manufacturer and for each of the phases of the profile manufacturing process. Finally, the unit processes that support this EPD were obtained from the weighted average of the unit processes of all manufacturers for the same phase of the manufacturing process.

In those cases in which the manufacturers could not complete all the environmental aspects that have been included in the calculation, the weighted average value of these environmental aspects has been used. In this way, the integrity of all inventories is guaranteed, making the comparison between them more consistent with the ultimate aim of obtaining maximum and minimum values. At this point it is noteworthy that in most cases, the inventories provided by manufacturers present the most relevant environmental aspects (consumption of energy or main raw materials), being necessary to complete them with those with a lower incidence on the final result.

It was not possible to distinguish the consumption of electricity and natural gas between the production stages of profiles. Based on the total energy consumption in the plants, electricity and natural gas used in the different stages was estimated under the criteria of the technical staff of plants. Total energy consumption was attributed entirely to extrusion, coating and cast house.

Once the energy consumption was attributed to extrusion, coating, anodizing and cast house, it was apportioned among the total production of semi-finished products for each stage. It has proceeded in the same way for raw materials and waste generation.

Because tens of different chemicals are used for surface treatments before coating, their consumption were modeled based on the surface of an average profile. The surface treatments chosen are the most complete and those that

require the use of the greatest amount of chemicals per square meter of treated surface, thus attending to a conservative assumption.

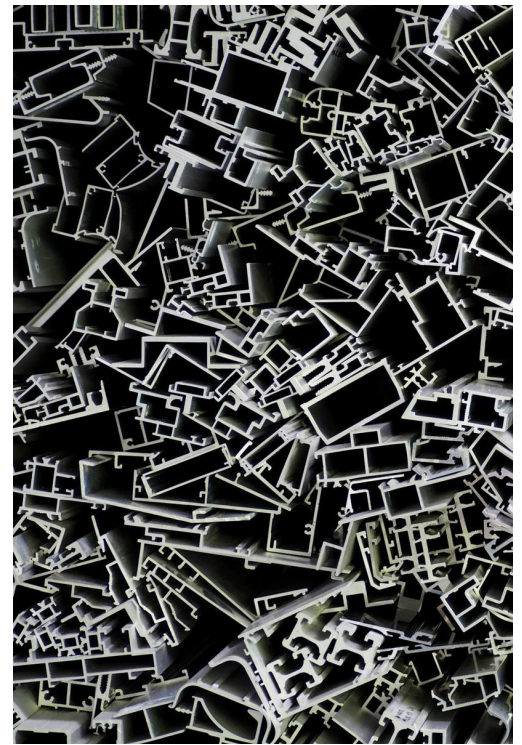
Aluminium billets are made from primary aluminium and secondary aluminium from pre- and post-consumer scrap. The billet manufacturers have provided actual production data for both to calculate the recycled content of the aluminium input to the system: 61% primary aluminium consumed in Europe (production + import, 8.67 kg CO<sub>2</sub>/kg for GWP-GHG indicator), 23.8% of pre-consumer scrap (6.69 kg CO<sub>2</sub>/kg for GWP-GHG indicator) and 15.2% of post-consumer scrap (0 kg CO<sub>2</sub>/kg for GWP-GHG indicator).

The electricity mix used in the assembly of door systems is based in the year 2023. Average spanish electricity mix has been taken into consideration in the LCA model with a GWP-GHG value of 0.325 Kg CO<sub>2</sub>-eqkWh.

Materials and weights for fittings and gaskets were obtained from two manufacturers. The average of these inventories has been used as input data to model these components. In the case of IGU, the weight of some components such as glass, aluminum, zeolite, argon, and sealants have been calculated using geometric assumptions based on their specifications and using density values from material databases.

Environmental aspects as water and electricity consumed during IGU manufacturing and glass cutouts generated were obtained from ecoinvent database.

The window assembly is not performed by AEA members but by other companies as carpentry. Aluminium profiles, fittings and gaskets are transported first to distribution centers and then to the carpentry on demand. Power consumed in milling and profile cutting is included in the model. These operations are performed in dry conditions and no lubricants are used while shavings and cutouts are sent to recycling. For this phase have been included the EoL of aluminium profiles packaging and the manufacturing of packaging materials of doors. Path for IGU is different because it is transported to building site directly from the place where was manufactured by glaziers.



# RESULTS

IMPACTS CATEGORY		A1-3	C1	C2	C3	C4	D
CC-fossil	kg CO <sub>2</sub> eq	1,27E+02	0	1,29E+00	1,60E-01	1,70E-01	-6,20E+01
CC-biogenic	kg CO <sub>2</sub> eq	9,24E-01	0	5,34E-04	3,86E-04	9,25E-05	-2,12E-01
CC-luluc	kg CO <sub>2</sub> eq	4,04E-01	0	4,59E-04	1,30E-03	6,48E-05	-3,45E-02
CC-total	kg CO <sub>2</sub> eq	1,28E+02	0	1,29E+00	1,62E-01	1,70E-01	-6,22E+01
OD	kg CFC-11 eq	8,90E-06	0	2,94E-07	1,78E-08	4,84E-08	-1,04E-06
A	mol H <sup>+</sup> eq	8,90E-01	0	3,71E-03	1,39E-03	8,79E-04	-3,99E-01
EAF	kg P eq	6,70E+01	0	1,03E-05	4,07E-05	1,72E-06	-1,93E-02
EAM	kg N eq	1,27E-01	0	7,34E-04	2,09E-04	2,50E-04	-5,85E-02
ET	mol N eq	1,39E+00	0	8,21E-03	2,33E-03	2,88E-03	-6,45E-01
POF	kg NMVOC eq	4,12E-01	0	3,14E-03	6,26E-04	8,96E-04	-1,77E-01
AD-non fossil <sup>(1)</sup>	kg Sb eq	1,54E-02	0	3,56E-05	4,43E-07	3,92E-06	-1,78E-04
AD-fossil <sup>(1)</sup>	MJ	1,57E+03	0	1,95E+01	3,61E+00	3,20E+00	-7,08E+02
WU <sup>(1)</sup>	m <sup>3</sup> eq	1,05E+03	0	5,52E-02	2,21E-01	6,40E-02	-9,60E+00
GWP-GHG <sup>(*)</sup>	kg CO <sub>2</sub> eq	1,28E+02	0	1,29E+00	1,62E-01	1,70E-01	-6,22E+01
PM <sup>(1)</sup>	Disease incidence	8,89E-06	0	8,20E-08	3,67E-09	1,75E-08	-5,15E-06
IR <sup>(2)</sup>	kBq U235 eq	9,52E+00	0	8,53E-02	4,35E-02	1,37E-02	-8,75E+00
EF <sup>(1)</sup>	CTUe	2,62E+03	0	1,57E+01	2,63E+00	2,39E+00	-5,73E+02
HT-c <sup>(1)</sup>	CTUh	6,42E-06	0	4,38E-10	1,14E-09	2,96E-11	-1,02E-07
HT-nc <sup>(1)</sup>	CTUh	7,39E-06	0	1,66E-08	6,18E-09	2,33E-09	-2,54E-06
LU <sup>(1)</sup>	Dimensionless	4,05E+02	0	1,36E+01	9,88E-01	4,16E+00	-4,74E+01

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

<sup>(1)</sup> 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.

<sup>(2)</sup> 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.

<sup>(\*)</sup> 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<sub>2</sub> is set to zero.

**ENVIRONMENTAL IMPACTS.** **CC-total:** Climatic Change - total; **CC-fossil:** Climatic Change - fossil; **CC-biogenic:** Climate change - biogenic; **CC-luluc:** Climate change - land use and land use change; **OD:** Ozone depletion; **A:** Acidification ; **EAF:** Eutrophication aquatic freshwater; **EAM:** Eutrophication aquatic marine; **ET:** Eutrophication terrestrial; **POF:** Photochemical ozone formation; **AD- non fossil:** Abiotic resource depletion - minerals and metals; **AD-fossil:** Abiotic resource depletion - fossils; **WU:** Water use; **PM:** Particulate matter emissions; **IR:** Ionising radiation; **EF:** Ecotoxicity - freshwater; **HT-c:** Human toxicity, cancer effects; **HT-nc:** Human toxicity, non-cancer effects; **LU:** Land use.

INPUTS/OUTPUTS		A1-3	C1	C2	C3	C4	D
PERE	MJ	4,51E+02	0	2,79E-01	8,15E-01	3,89E-02	-3,34E+02
PERM	MJ	5,68E+00	0	0	0	0	0
PERT	MJ	4,57E+02	0	2,80E-01	8,15E-01	3,90E-02	-3,34E+02
PENRE	MJ	1,73E+03	0	2,07E+01	3,73E+00	3,39E+00	-8,22E+02
PENRM	MJ	2,93E+00	0	0	0	0	0
PENRT	MJ	1,73E+03	0	2,07E+01	3,73E+00	3,39E+00	-8,22E+02
SM	kg	1,33E+00	0	0	0	0	0
RSF	MJ	0	0	0	0	0	0
NRSF	MJ	0	0	0	0	0	0
FW	m <sup>3</sup> eq	4,10E+02	0	1,11E+00	2,67E+00	9,82E-02	-6,22E+01
NWD	kg	2,90E+00	0	5,11E-05	1,09E-06	7,10E-06	-3,67E+00
NHWD	kg	3,06E+01	0	9,49E-01	1,20E-02	8,89E+00	-1,83E+01
RWD	kg	3,85E-02	0	1,33E-04	2,44E-05	2,18E-05	-4,23E-02
CRU	kg	0	0	0	0	0	0
MFR	kg	5,38E+00	0	0	1,42E+01	0	0
MER	kg	0	0	0	8,85E-01	0	0
EE	MJ	0	0	0	2,66E+01	0	0

**RESOURCE USE.** PERE: Renewable primary energy as energy carrier; PERM: Renewable primary energy resource as material utilization; PERT: Total use of renewable primary energy resources; PENRE: Non-renewable primary energy as energy carrier; PENRM: Non-renewable primary energy as material utilization; PENRT: Total use of non-renewable primary energy resources; SM: Use of secondary materials; RSF: Use of renewable secondary fuels; NRSF: Use of non-renewable secondary fuels; FW: Use of net fresh water.

**WASTE CATEGORIES.** HWD: Hazardous waste disposed; NHWD: Non-hazardous waste disposed; RWD: Radioactive waste disposed.

**OUTPUT FLOWS.** CRU: Components for re-use; MFR: Materials for recycling; MER: Materials for energy recovery; EE: Exported energy per energy carrier.

# VERIFICATION

This declaration is an environmental product declaration (EPD) in accordance with ISO 14025 and the requirements given in the product category rules document for Construction Products and Construction Services (EN 15804) and the general program guidelines by The International EPD® System. The specifications of the standard EN 17213 of environmental product declarations for doors and pedestrian doorsets have also been met. The results shown in this EPD are based on the LCA report for sector EPD of the Spanish Association of Aluminium of May 15 2024 according to standard 14044.

EPDs within the same product category but registered in different EPD programmes, or not compliant with EN 15804, may not be comparable. For two EPDs to be comparable, they must be based on the same PCR (including the same version number) 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. For further information about comparability, see EN 15804 and ISO 14025.

The EPD owner has the sole ownership, liability, and responsibility for the EPD

<b>EPD Programme</b>	The International EPD® System - EPD International AB - Box 210 60 - SE-100 31 Stockholm - Sweden - <a href="http://www.environdec.com">www.environdec.com</a> <a href="mailto:info@environdec.com">info@environdec.com</a>
<b>EPD registration number</b>	S-P-13514
<b>EPD owner</b>	Asociación Española del Aluminio y Tratamientos de Superficie
<b>Declared unit</b>	1 m <sup>2</sup> of door
<b>System boundaries</b>	Cradle to gate with options
<b>Published</b>	2024 - 05 - 24
<b>Valid until</b>	2029 - 05 - 24
<b>Reference year for data</b>	2020-2023
<b>Geographical scope</b>	Worldwide
<b>Product group classification</b>	UN CPC Code: 42120 Doors, doors and their frames and thresholds for doors, of iron, steel or aluminium
<b>Product Category Rules</b>	CEN standard EN 15804 serve as the core Product Category Rules (PCR). PCR 2019:14 version 1.3.2. Construction Products 2023-12-08 and C-PCR-007 Doors and Doors (EN 17213:2020)
<b>PCR review was conducted by</b>	The Technical Committee of the International EPD® System. A full list of members available on <a href="http://www.environdec.com">www.environdec.com</a> . Review chair: Claudia A. Peña, University of Concepción, Chile. The review panel may be contacted via <a href="mailto:info@environdec.com">info@environdec.com</a> .
<b>Independent verification of the declaration and data, according to ISO 14025:2006</b>	<input checked="" type="checkbox"/> External <input type="checkbox"/> Internal <input type="checkbox"/> EPD®
<b>Third-party verifier</b>	Eva Martínez Herrero Centro Tecnológico de Miranda de Ebro <a href="http://www.ctme.es">www.ctme.es</a>
<b>LCA prepared by</b>	Diego Ruiz Amador - IDNÓVAM Innovación y desarrollo para el ambiente <a href="mailto:info@idnovam.com">info@idnovam.com</a>
<b>Procedure for follow-up of data during EPD validity involves third-party verifier:</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

# REFERENCES

- General Programme Instructions of The International EPD® System. Version 4.0, 2021-03-28.
- PCR 2019:14 version 1.3.2. Construction Products 2023-12-08.
- EN 15804:2012+A2:2019, Sustainability of construction works - Environmental Product Declarations - Core rules for the product category of construction products
- EN 17213:2019 - Windows and doors - Environmental Product Declarations - Product category rules for doors and pedestrian doorsets
- Environmental Product Declaration for HYDRO Recycled aluminium profiles produced by HYDRO EXTRUSION IBERIA - SP-10762. International EPD System.
- Environmental Product Declaration for HYDRO Standard aluminium profiles produced by HYDRO EXTRUSION IBERIA - SP-10761. International EPD System.
- ISO 14025/ DIN EN ISO 14025:2009-11: Environmental labels and declarations - Type III environmental
- ISO 14040-44/ DIN EN ISO 14040:2006-10, Environmental management - Life cycle assessment-Principles
- European Life Cycle Database. ELCD 3.3. <http://eplca.jrc.ec.europa.eu/ELCD3/index.xhtml?stock=default>
- Ecoinvent Database. <http://www.ecoinvent.org/database/>.
- Life-Cycle inventory data for aluminium production and transformation processes in Europe. Environmental Profile Report. February 2018.
- K. Peeters, C. Spirinckx, LOT 32 / Ecodesign of Window Products Task 2-Market Analysis, 2015.
- Tackling recycling aspects in EN15804 - Christian Leroy, Jean-Sebastien Thomas, Nick Avery, Jan Bollen, and Ladji Tikana. International Symposium on Life Cycle Assessment and Construction, 2012
- Aluminium Recycling in LCA – European Aluminium Association, 2013.

# CONTACTS

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The logo consists of the letters 'AEA' in a bold, blue, sans-serif font. The letters are closely spaced and have a slight shadow effect, giving them a three-dimensional appearance.

**Asociación Española del Aluminio  
y Tratamientos de Superficie**

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