Environmental Product Declaration

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

Sectional, Side Hinged and Industrial Side Sliding Garage Doors

from

UAB Ryterna Group

Programme:	The International EPD System, www.environdec.com
Programme operator:	EPD International AB
Type of EPD:	EPD of multiple products, based on worst-case results
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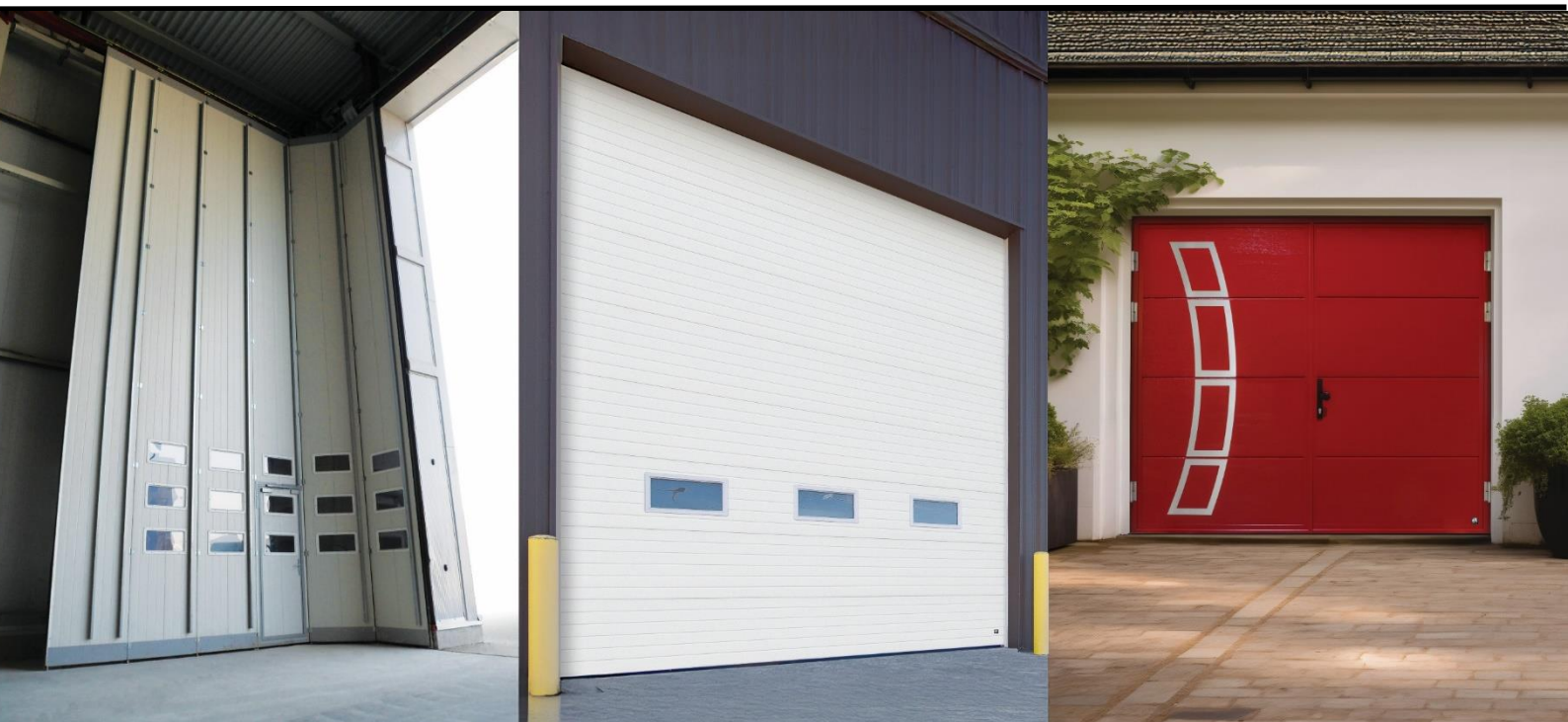
An EPD may be updated or depublished if conditions change. To find the latest version of the EPD and to confirm its validity, see www.environdec.com



GENERAL INFORMATION

Programme Information	
Programme:	The International EPD System
Address:	EPD International AB Box 210 60 SE-100 31 Stockholm Sweden
Website:	www.environdec.com
E-mail:	support@environdec.com

Product Category Rules (PCR)
CEN standard EN 15804 serves as the Core Product Category Rules (PCR)
Product Category Rules (PCR): *PCR 2019:14 Construction products (EN 15804+A2) (version 2.0.1) (2.0.1), UN CPC code 4212 Doors, windows and their frames and thresholds for doors, of iron, steel or aluminium*
PCR review was conducted by: *The Technical Committee of the International EPD System. See www.environdec.com for a list of members. Review chair: C Rob Rouwette (chair), Noa Meron (co-chair). The review panel may be contacted via the Secretariat www.environdec.com/contact.*
c-PCR: *PCR 2019:14-c-PCR-007 Being updated - Windows and doors (EN 17213) (c-PCR to PCR 2019:14) (1.0.0)*

Third-party Verification
Independent third-party verification of the declaration and data, according to ISO 14025:2006, via: ☒ **Individual EPD verification without a pre-verified LCA/EPD tool** Third-party verifier: Mari Kirss, Meetripuu OÜ Approved by: International EPD System
Procedure for follow-up of data during EPD validity involves third party verifier: ☐ Yes ☒ No

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

EPDs within the same product category but published in different EPD programmes, may not be comparable. For two EPDs to be comparable, they shall be based on the same PCR (including the same first-digit 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 identical scope in terms of included life-cycle stages (unless the excluded life-cycle stage is demonstrated to be insignificant); apply identical impact assessment methods (including the same version of characterisation factors); and be valid at the time of comparison. For further information about comparability, see EN 15804 and ISO 14025.

INFORMATION ABOUT EPD OWNER

Owner of the EPD: UAB Ryterna Group

Address: Ryternos str. 2, Biruliskes, Kaunas LT-54469, Lithuania

Contact: Paulius Bražiulis, paulius.br@ryterna.lt

Address and contact information of the LCA practitioner commissioned by the EPD owner: Urtė Valdavičė, UAB Vesta Consulting

Description of the organisation: RYTERNA is known as a manufacturer specializing in overhead sectional doors, hinged and side sliding doors for residential garages and industry, also house entrance doors and other products. Our distribution network provides sales, service, and logistics Europe-wide. RYTERNA fulfils the needs of customers by offering a large range of high quality, flexible, and customizable products for a great cost. The goal is to be a European leading supplier for all kinds of made-to-order doors – is viable with the support of a skilled and enthusiastic RYTERNA team in combination with modern production facilities and a culture of quality.

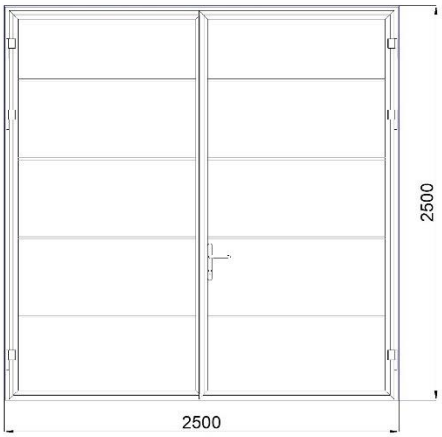
Since the start of RYTERNA in 1993, we were respecting our main values – continuous development, creative approach and goodwill.

Product-related or management system-related certifications: The company has established a Quality Management System in accordance with the requirements of LST EN ISO 9001:2015, and an Environmental Management System in compliance with LST EN ISO 14001:2015, and an Occupational Health and Safety Management System in accordance with LST ISO 45001:2018.

PRODUCT INFORMATION

Product name: Sectional, Side Hinged and Industrial Side Sliding Garage Doors

Visual representation (e.g., an image):



Note. The visual representation is of the product with dimensions 2500x2500. For calculations, the standard size of 2000x2180 was used, as required in EN 17213:2020.

UN CPC code: 4212 Doors, windows and their frames and thresholds for doors, of iron, steel or aluminium

Product group description: RYTERNA offers a comprehensive range of garage door systems, including sectional, side-hinged, and side-sliding models, all tailored to project-specific dimensions and architectural requirements. Constructed using high-quality materials such as double steel skin sandwich

panels, aluminium frames, stainless steel elements, these doors ensure durability, thermal insulation, and long-term performance. All doors are CE-marked and manufactured in compliance with applicable EN standards, ensuring optimal functionality, safety, and visual integration with residential or commercial facades.

This EPD covers Sectional, Side Hinged and Industrial Side Sliding garage door models.

Product application areas: The garage doors are primarily intended for residential and industrial applications.

- The Sectional garage doors model is among the most popular garage door type on the market. They became an increasingly popular option for customers, they provide a combination of economy, durability and a good look. Perfect acoustic and thermal insulation are guaranteed by 40-mm-thick, PU-foamed sandwich panels.
- The Side Hinged (SH) garage doors model features vertical operation, allowing fast and unobstructed access to the garage while contributing to stable indoor temperatures throughout the year.
- The Side Sliding (SSD) garage doors model operates laterally along wall-mounted rails, offering an optimal solution for garages with limited headroom or non-standard opening dimensions.

Models are designed to be user-friendly, space-efficient, and visually compatible with contemporary residential and industrial architecture, making them a practical and aesthetically integrated choice for modern homes.

Technical data: All garage door components are engineered and validated under rigorous industrial conditions. Product design has been progressively optimized through a continuous process of “intelligent quality control,” ensuring consistent performance and long-term reliability throughout all stages of production. The core structural component utilized in the manufacturing of the garage doors is the double steel skin sandwich panel. This panel comprises a thermally insulating core material adhesively bonded between two steel facings, forming a composite system that delivers high load-bearing capacity and thermal efficiency. The panels are available in multiple configurations to accommodate varying structural and design specifications.

More detail feature specifications for each Garage Door model are presented below.

Sectional garage doors	
Feature	Specification
Custom Dimensions	Available in widths up to 8 m. Each door is individually tailored to project-specific dimensions.
Material Quality	Manufactured using high-strength steel, aluminium alloy and rubber. Stainless steel elements ensure durability and corrosion resistance.
Panel Composition	Panels consist of 0,4-0,7 mm steel sheets, coated in any RAL, inside PU foam.
Water Resistance	Resistance to water penetration according to EN 12425:2000 Class 0-5
Visual Integration	Matching door and frame finishes ensure cohesive architectural appearance.
Pass Door Option	Optional integrated pedestrian access door with standard or low threshold and opening width up to 1,2 m.
Track Systems	Zinc-coated or powder-coated customized track systems adapted to roof pitch and space constraints.
Automation Compatibility	Compatible with most third-party door operators, enabling safe and efficient motorized or manual operation.
Glazing Options	Optional acrylic double-glazed windows available in clear, matte (frosted), or tinted finishes.
Sealing	Around perimeter and between panels
Counterbalance	Torsion or extend springs system with suspension wires.
Design Variability	Over 100 panel design, texture, and colour combinations available.

Side hinged garage doors	
Feature	Specification
Design Options	Panel layout configurable (horizontal, vertical, chevron). Over 100 panel types and various window options. Available with applications.
Facade Integration	Can be visually matched with main entrance doors for architectural consistency.
Glazing & Finish	Full-view panels with double acrylic glazing in clear, frosted, or tinted. Panels/coatings available in any RAL or oak finish.
Custom Sizing	Configurable as symmetric or asymmetric leaf division (e.g., 1/3–2/3). All doors are made to order.
Thermal Performance	U-value of 1,2 W/m²K; 40 mm insulation core provides thermal efficiency and energy savings.
Hinges	SH2 model: adjustable hinges for precise fit; SH1: spring hinges for soft closing.
Frame Construction	A welded or modular steel frame ensures a robust structure and fast installation.
Security	Equipped with hinge bolts and compatible with multi-point locking systems (3-point locking available).
Design Glazing	Double-glazed panoramic windows available.

Side Sliding garage doors	
Feature	Specification
Design Elements	Stainless steel inlays and windows for high-end, contemporary appearance.
Hardware	Aluminium components available with powder coating. Optional low-profile threshold adaptable to existing floors.
Facade Integration	Can be visually aligned with main entrance doors.
Wall Adaptability	Door system adaptable to various wall types and opening configurations.
Operation	Available in manual or electric versions. Compatible with most automation systems for safe and efficient operation.
Glazing Options	Double acrylic glazing (clear, matte, frosted, or tinted). Frames available in RAL colours or golden oak finish.
Design Variability	Over 100 panel designs, surface textures, and colours available.

Technical specifications and product standards: All products bear the CE marking, demonstrating compliance with applicable European Union directives. The garage doors meet the requirements of EN 13241:2003 + A2:2016, which specifies performance and safety characteristics for industrial, commercial, and garage doors.

Production is carried out in accordance with the following harmonized European standards:

- EN 12426 – Air permeability
- EN 12425 – Water tightness
- EN 12424 / EN 12444 – Resistance to wind load / Mechanical aspects of wind resistance
- EN 12667 – Thermal transmittance (U-value) determination

Name and location of production site(s): Ryternos str. 2, Biruliskes, Kaunas LT-54469, Lithuania

References to relevant website for more information: https://ryterna.lt/garazo-vartai/

CONTENT DECLARATION

The content declaration shows the weight of product per declared unit and the weight of product average packaging per declared unit.

The declared unit is 1 m^2 of Side Hinged Garage Door.

Product content	Mass, kg	Post-consumer recycled material, mass-% of product	Biogenic material, mass-% of product	Biogenic material, kg C / declared unit
Metal coated steel sheets and coils	13,61	-	-	-
PVC (Polyvinylchloride)	<0,01	-	-	-
Aluminium profile	2,11	-	-	-
EPDM (ethylene propylene diene monomer rubber)	0,08	-	-	-
Polyols	0,69	-	-	-
Isocyanate	1,18	-	-	-
Pentane	0,05	-	-	-
Paint	0.06			
TOTAL	**17,78**	-	-	-

Note. The share of total recycled material in the product is 20,48%, however the share of post- and pre-consumer recycled material content is unknown.

Packaging materials	Mass, kg	Mass-% (versus the product)	Biogenic material, kg C / declared unit
[1]Hardwood fibreboard	5,01	28,26	2,13
Expandable polystyrene (EPS)	0,29	1,63	-
TOTAL	**5,30**	**29,89**	**2,13**

[1]Global Warming Potential biogenic: -1,56 kg CO_2e / kg

Note. 1 kg biogenic carbon in the product/packaging is equivalent to the uptake of 44/12 kg of CO_2.

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

LCA INFORMATION

Declared unit: 1 m^2 of Side Hinged (SH) Garage door with standard size dimensions of 2000x2180, as required in EN 17213:2020. Density is based on the worst-case product and is equal to 17,78 kg/m^2.

Reference service life: Not declared according to the EN 17213:2020

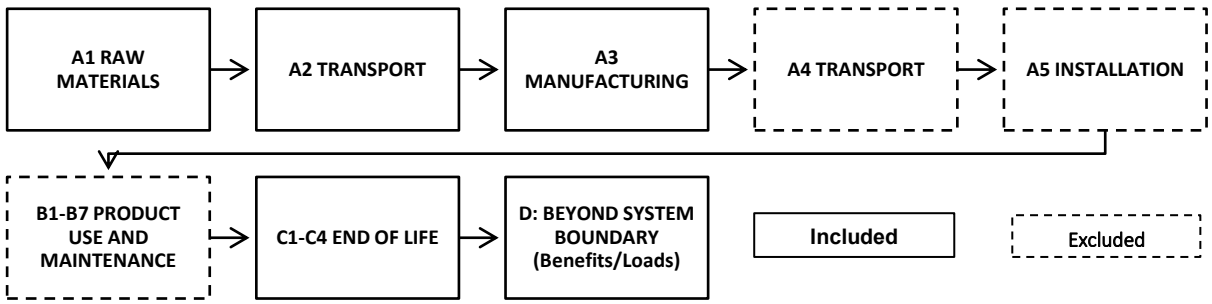
Time representativeness: Primary data was collected internally. The production data refers to the average of the year 2024 (January 2024 – December 2024).

Geographical scope: The geographical scope for module A1-A2 is Global, for A3, C1-C4 and module D is Europe.

Database(s) and LCA software used: The Ecoinvent database provides the life cycle inventory data for the raw and process materials obtained from the background system. The used database is Ecoinvent 3.10.1, IDEMAT and Plastics Europe. The LCA software used is One Click LCA version 0.43.0.

Description of system boundaries: cradle-to-gate with modules C1-C4 and module D.

Process flow diagram:



Note. This EPD does not cover the construction process stage (A4, A5) and the use stage (B1-B7).

Modules declared, geographical scope, share of specific data (in GWP-GHG results) and data variation (in GWP-GHG results):

	Product stage			Construction process stage		Use stage							End of life stage				Resource recovery stage
	Raw material supply	Transport	Manufacturing	Transport	Construction installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling-potential
Module	**A1**	**A2**	**A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
Modules declared	x	x	x	ND	ND	ND	ND	ND	ND	ND	ND	ND	x	x	x	x	x
Geography	GLO	GLO	EU	-	-	-	-	-	-	-	-	-	EU	EU	EU	EU	EU
Primary data used	25,21%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – products	>10%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – sites	ND			-	-	-	-	-	-	-	-	-	-	-	-	-	-

Description of the system boundary (X = Included in LCA; ND = Not declared)

Data quality: The EPD covers products manufactured in one factory in Kaunas (Lithuania) which provided data for the period January – December 2024. The data collection has been done internally and thoroughly. The data is based on yearly production amounts and extrapolations of measurements on specific machines and plants. The EPD covers raw material supply and transport in Global scale, product production and end-of-life in Europe scale. Garage door production involves parallel door leaf and frame manufacturing. Both are cut, painted, assembled, and fitted with accessories, then inspected, packed, and transported. The site is powered by residual mix and renewable solar energy, additionally natural gas for heating and propane and diesel for mobile machinery use. Background data was sourced from the ecoinvent 3.10.1, IDEMAT and Plastics Europe databases. No poor or very poor data was found during the assessment of relevant data using PEF method (EN 15804:2012+A2:2019, Annex E, only E.2). The data quality assessment is done in accordance with EN 15941:2024 and is assessed in terms of precision, completeness, representativeness, consistency, and sources of data. Overall, the data quality can be described as good. The EN 15804 reference package used is based on EF 3.1.

Share of primary data used: The share of primary data is calculated based on GWP-GHG results. It is a simplified indicator for data quality that supports the use of more primary data, to increase the representativeness of and comparability between EPDs. Note that the indicator does not capture all relevant aspects of data quality and is not comparable across product categories. Declaration of data sources, reference years, data categories, and share of primary data is presented below.

Process	Source type	Source	Reference year	Data category	Share of primary data, of GWP-GHG results for A1–A3
Production of steel (A1)	EPDs / databases	Confidential / Worldsteel 2023 LCA study	2021-2022	Primary data / Secondary data	10,76%
Production of aluminium (A1)	EPD	Confidential	2022-2023	Primary data	3,21%
Production of plastics and polymers (A1)	Databases	IDEMAT (2023)	2023	Secondary data	0,00%
Production of PU (A1)	Databases	Ecoinvent v3.10.1, IDEMAT (2023), Plastics Europe (2021)	2001-2024	Secondary data	0,00%
Production of additives (A1)	EPD	Confidential	2023	Primary data	0,00%
Transport of raw materials to manufacturing site (A2)	Database	Ecoinvent v3.10.1	2009-2024	Primary data	5,77%
Production of packaging (A3)	LCA study / database	Confidential / IDEMAT (2023)	2021-2023	Primary data / Secondary data	0,78%
Production ancillary materials (A3)	Database	Ecoinvent v3.10.1	2011-2024	Secondary data	0,00%
Energy used in manufacturing of product (A3)	Database	Ecoinvent v3.10.1	1996-2024	Primary data	4,69%
Waste and wastewater treatment (A3)	Database	Ecoinvent v3.10.1	1993-2024	Secondary data	0,00%
Total share of primary data, of GWP-GHG results for A1-A3					25,21%

Note. Ecoinvent datapoints are based on older background flows, but updated in 2024 (v.3)

The reported share of primary data is associated with uncertainty, as one or several EPDs that are used as data source lack information on the share of primary data used.

Cut-off criteria: The study does not exclude any modules or processes that are mandatory according to the Standards and PCR. No hazardous materials or substances are excluded. All major raw materials and energy inputs, as well as emissions and outputs from the unit processes for which data is available, are fully included in the calculation. In line with the PCR, the total excluded input and output flows do not exceed 5% of energy use or mass across the life cycle.

Allocation, estimates and assumptions: Allocation is required if some material, energy, and waste data cannot be measured separately for the product under investigation. In this study, as per EN 15804:2012+A2:2019, allocation is conducted in the following order:

1. Allocation should be avoided
2. Allocation should be based on physical properties (e.g. mass, volume) when the difference in revenue is small
3. Allocation should be based on economic values

The allocations used in this study follow the system model 'Allocation, cut-off, 15804:2012+A2:2019'.

The methodological choices for allocation for reuse, recycling and recovery have been set according to the polluter pays principle (PPP).

The origin of the recycled content (pre- vs post-consumer) is unknown; therefore, a conservative approach was taken by assuming the entire recycled portion is post-consumer scrap, in accordance with PCR 2.0.1 section 4.5.3. Under this assumption, the scrap is treated as waste, and waste allocation is applied, meaning no environmental burdens are assigned to the recycled input.

Scenarios included in the LCA are based on realistic scenarios which are currently in use and are representative for one of the most likely scenario alternatives.

The environmental impacts of capital goods (e.g., production equipment, recycling machinery) and infrastructure (e.g., recycling facilities, transportation systems) have not been included in this assessment.

Calculation rules for averaging data: This EPD covers three garage door types: Sectional, Side Hinged, and Industrial Side Sliding models. It represents a multiple product EPD based on the "worst-case" scenario approach. The selected worst-case product is the Side Hinged (SH) garage door with dimensions 2500 × 2500 mm, as it contains the highest quantity of galvanized steel and aluminium compared to the other products within the declared product scope. The grouped products are with identical or similar functions, manufactured by a single company at one manufacturing site, with the same major steps in the A3/core processes. For each indicator and module A-C, the highest result of the included products is declared, and for module D, the lowest benefit of avoided processes and the highest load of included processes is declared.

Product life cycle

Product stage (A1-A3)

A1: This module considers the extraction and processing of raw materials.

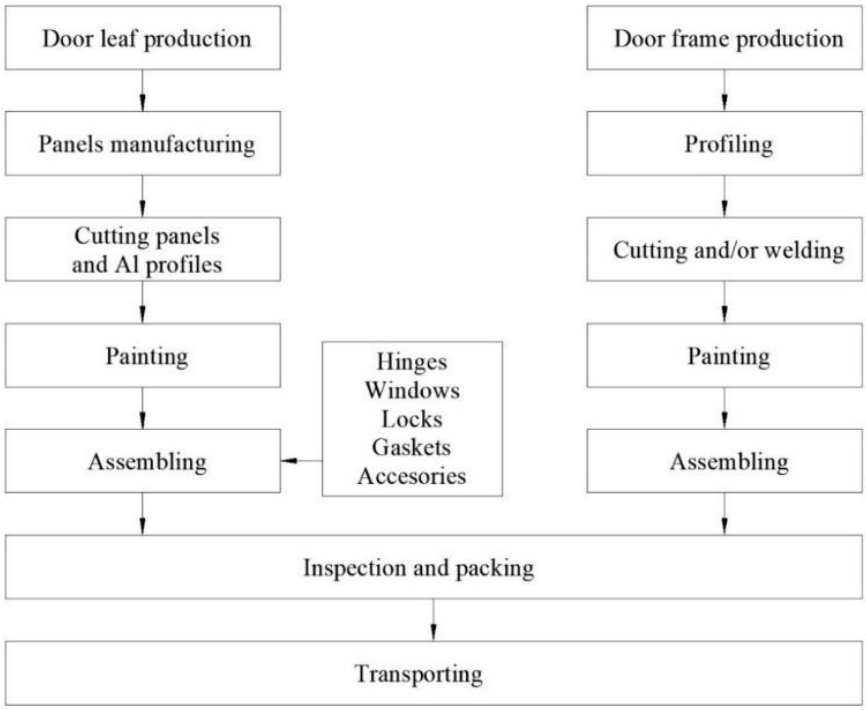
A2: The raw materials are transported to the manufacturing plant. In this case the model includes road transportation of each raw material.

A3: This module includes the manufacture of products and packaging. It has considered all the energy consumption and waste generated in the production plant.

Manufacturing process

The production process of the garage doors consists of two main streams: door leaf and door frame manufacturing. Door leaf production begins with manufacturing panels, cutting panels and aluminium profiles, followed by painting and assembling. At this stage, components such as hinges, windows, locks, gaskets, and accessories are integrated. In parallel, the door frame is manufactured by profiling, cutting and/or welding, then painted and assembled. Both the door leaf and frame undergo final inspection and packing before being transported to customers.

See the manufacturing diagram below.



Construction process stage (A4-A5)

A4: This EPD does not cover the transportation module.

A5: This EPD does not cover the Installation module. The uptake of biogenic carbon (as biogenic CO_2) from packaging materials is balanced out in A3 module.

Use stage (B1-B7)

This EPD does not cover the Use stage.

End of life stage (C1-C4, D)

C1: Deconstruction, dismantling, demolition

At the end-of-life all material components after their service life are disassembled to a specific waste flow (e.g. metal, plastics and other) Demolition is assumed to be done by mobile machinery (1,1 kWh/tonne based on PCR 2019:14 Table 4).

C2: Transport of the discarded product to the processing site

It is estimated that there is no mass loss during the use of the product, therefore the end-of-life product is assumed to have the same weight as the declared product. All the end-of-life products are assumed to be sent to the closest facilities such as recycling and landfill. Transportation distance to the closest disposal area is estimated as 50 km and the transportation method is assumed as lorry which is the most common option.

C3: Waste processing for reuse, recovery, and/or recycling

At the end-of-life all material components assigned to the material-specific disposal routes – incineration, waste recycling or disposal in landfills. Recycling rate of 95% for non-glass materials (R2, 90%) and 100% incineration with energy recovery (R1 > 60%) for plastics is included as default value in EN 17213 for metal windows and doors (yield factor = 0,9, assuming 10% material losses during recycling process).

C4: Discharge (disposal)

Based on EN 17213 for metal windows and doorsets, 5% of non-glass materials are safely disposed of in landfills at end of life. The materials are chemically inert, non-toxic, and non-leaching, meaning it poses no environmental risks when landfilled. Additionally, it does not release hazardous substances or decompose over time.

Benefits and loads beyond the system boundary (D):

In the context of end-of-life scenario D, it is assumed that metal (steel and aluminium) is recovered, subsequently fully recycled into post-consumer waste and has been modelled to avoid use of primary materials. The mass of the primary materials in the product is used to prevent double counting. Additionally, the benefit from incineration with energy recovery (R1, >60 %), reducing the demand for non-renewable energy sources such as natural gas, is evaluated.

ENVIRONMENTAL PERFORMANCE

LCA results of the product(s) – main environmental performance results

The results are presented for 1m^2 of Side Hinged (SH) Garage door. Product weight per declared unit is 17,78 kg/m^2

Mandatory impact category indicators according to EN 15804:2012+A2:2019, EF 3.1

Results per declared unit							
Indicator	**Unit**	**A1-A3**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-total	kg CO_2 eq.	8,33E+01	7,21E-03	9,57E-02	4,96E+00	5,56E-03	-2,64E+01
GWP-fossil	kg CO_2 eq.	8,33E+01	7,21E-03	9,57E-02	4,96E+00	5,56E-03	-2,61E+01
GWP-biogenic	kg CO_2 eq.	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
GWP-luluc	kg CO_2 eq.	4,05E-02	7,39E-07	4,28E-05	4,32E-04	3,18E-06	-3,00E-01
ODP	kg CFC 11 eq.	4,63E-07	1,10E-10	1,41E-09	5,91E-09	1,61E-10	-2,68E-07
AP	mol H^+ eq.	3,68E-01	6,51E-05	3,26E-04	4,72E-03	3,94E-05	-1,18E-01
EP-freshwater	kg P eq.	1,44E-02	2,08E-07	7,45E-06	2,17E-04	4,57E-07	-1,15E-02
EP-marine	kg N eq.	7,49E-02	3,02E-05	1,07E-04	1,43E-03	1,50E-05	-2,21E-02
EP-terrestrial	mol N eq.	7,98E-01	3,31E-04	1,17E-03	1,43E-02	1,64E-04	-2,20E-01
POCP	kg NMVOC eq.	2,54E-01	9,86E-05	4,81E-04	4,00E-03	5,87E-05	-8,62E-02
ADP-minerals&metals*	kg Sb eq.	5,59E-04	2,59E-09	2,67E-07	2,18E-05	8,83E-09	2,36E-05
ADP-fossil*	MJ	1,10E+03	9,43E-02	1,39E+00	5,13E+00	1,36E-01	-3,21E+02
WDP*	m^3	5,58E+00	2,36E-04	6,86E-03	3,85E-01	3,93E-04	-2,67E+01
Acronyms	GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption						

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.

The results of the end-of-life stage (modules C1-C4) should be considered when using the results of the product stage (modules A1-A3).

A portion of data used in this EPD is based on data derived from a 3.0 version of the Emission Factor (EF) database. The use of the older EF version was assessed and determined to yield results that are either identical or conservative in comparison to those that would be obtained using the current EF version 3.1.

Additional mandatory and voluntary impact category indicators, EF 3.1

Results per declared unit							
Indicator	**Unit**	**A1-A3**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-GHG[1]	kg CO_2 eq.	8,33E+01	7,21E-03	9,57E-02	4,96E+00	5,56E-03	-2,64E+01
Particulate matter	Incidence	2,77E-06	1,85E-09	9,58E-09	5,55E-08	8,95E-10	-1,80E-06
Ionizing radiation	kBq U235e	9,39E-01	4,18E-05	1,21E-03	3,96E-02	8,56E-05	-2,81E+00
Ecotoxicity (freshwater)	CTUe	8,67E+02	5,19E-03	1,96E-01	1,17E+01	1,14E-02	-4,59E+01
Human toxicity, cancer	CTUh	5,93E-08	7,41E-13	1,58E-11	6,90E-10	1,02E-12	-2,69E-08
Human tox. non-cancer	CTUh	1,01E-06	1,17E-11	8,99E-10	3,26E-08	2,35E-11	-1,24E-07
SQP (Land use related impacts/soil quality)	-	4,43E+02	6,61E-03	1,40E+00	9,58E+00	2,68E-01	-4,22E+01

Note: For additional environmental impact indicators calculations secondary data for extruded aluminium profiles and metal coated steel sheets were used instead of EPDs (S-P-13858, S-P-01921, ver. 2023), because these EPDs did not declare additional indicators.

Resource use indicators

Results per declared unit							
Indicator	**Unit**	**A1-A3**	**C1**	**C2**	**C3**	**C4**	**D**
PERE	MJ	6,40E+01	5,97E-04	1,90E-02	8,30E-01	1,32E-03	-8,52E+01
PERM	MJ	4,42E-03	0,00E+00	0,00E+00	-4,20E-03	-2,21E-04	0,00E+00
PERT	MJ	6,41E+01	5,97E-04	1,90E-02	8,25E-01	1,09E-03	-8,52E+01
PENRE	MJ	1,03E+03	9,43E-02	1,39E+00	-6,58E+01	1,36E-01	-3,21E+02
PENRM	MJ	5,39E+01	0,00E+00	0,00E+00	-5,12E+01	-2,70E+00	0,00E+00
PENRT	MJ	1,09E+03	9,43E-02	1,39E+00	-1,17E+02	-2,56E+00	-3,21E+02
SM	kg	2,48E+00	3,92E-05	5,91E-04	6,22E-03	3,43E-05	9,80E+00
RSF	MJ	4,50E-03	1,02E-07	7,51E-06	2,98E-04	7,10E-07	-1,57E-03
NRSF	MJ	2,04E-06	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	m^3	2,38E+01	6,23E-06	2,05E-04	7,51E-03	1,42E-04	-5,47E-01
Acronyms	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water						

Note: Option A was chosen for the calculations of the primary energy indicators. according to on Annex 3 of PCR 2019:14

[1] 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_2 is set to zero.

Waste indicators

Results per declared unit							
Indicator	**Unit**	**A1-A3**	**C1**	**C2**	**C3**	**C4**	**D**
Hazardous waste disposed	kg	5,32E-01	1,05E-04	2,35E-03	1,09E-01	1,51E-04	-7,67E+00
Non-hazardous waste disposed	kg	2,93E+01	1,43E-03	4,35E-02	3,25E+00	8,90E-01	-6,18E+01
Radioactive waste disposed	kg	4,41E-03	1,02E-08	2,96E-07	1,01E-05	2,09E-08	-7,47E-04

Output flow indicators

Results per declared unit							
Indicator	**Unit**	**A1-A3**	**C1**	**C2**	**C3**	**C4**	**D**
Components for re-use	kg	3,97E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Material for recycling	kg	2,70E-02	0,00E+00	0,00E+00	1,49E+01	0,00E+00	0,00E+00
Materials for energy recovery	kg	4,01E-02	0,00E+00	0,00E+00	00,0E+00	0,00E+00	0,00E+00
Exported energy, electricity	MJ	0,00E+00	0,00E+00	0,00E+00	6,90E+00	0,00E+00	0,00E+00
Exported energy, thermal	MJ	0,00E+00	0,00E+00	0,00E+00	1,35E+01	0,00E+00	0,00E+00

Additional LCA results (other environmental performance results) of the product(s)

Additional results for end-of-life 100% scenarios for modules C1-C4, D

End-of-life scenario documentation (corresponding scenarios)

Scenario parameter	Value (scenario 100% recycling)	Value (scenario 100% incineration)	Value (scenario 100% disposal)
Collection process – kg collected separately	17,78	17,78	17,78
Collection process – kg collected with mixed waste	-	-	-
Recovery process – kg for re-use	-	-	-
Recovery process – kg for recycling	17,78	-	-
Recovery process – kg for energy recovery	-	17,78	
Disposal (total) – kg for final deposition	-	-	17,78
Scenario assumptions e.g. transportation	50 km	50 km	50 km

Note. Yield factor = 0,9 (assuming 10% of material is lost in the recovery process)

Mandatory impact category indicators according to EN 15804 (corresponding scenario 100% recycling)

Results per declared unit						
Indicator	**Unit**	**C1**	**C2**	**C3**	**C4**	**D**
GWP- total	kg CO_2 eq.	7,21E-03	9,57E-02	5,97E-01	0,00E+00	-2,73E+01
GWP-fossil	kg CO_2 eq.	7,21E-03	9,57E-02	6,04E-01	0,00E+00	-2,70E+01
GWP-biogenic	kg CO_2 eq.	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
GWP- luluc	kg CO_2 eq.	7,39E-07	4,28E-05	4,87E-04	0,00E+00	-3,16E-01
ODP	kg CFC 11 eq.	1,10E-10	1,41E-09	3,37E-09	0,00E+00	-2,59E-07
AP	mol H+ eq.	6,51E-05	3,26E-04	2,33E-03	0,00E+00	-1,25E-01
EP-freshwater	kg P eq.	2,08E-07	7,45E-06	1,66E-04	0,00E+00	-1,22E-02
EP- marine	kg N eq.	3,02E-05	1,07E-04	8,89E-04	0,00E+00	-2,32E-02
EP-terrestrial	mol N eq.	3,31E-04	1,17E-03	6,19E-03	0,00E+00	-2,31E-01
POCP	kg NMVOC eq.	9,86E-05	4,81E-04	3,35E-03	0,00E+00	-8,96E-02
ADP-minerals & metals*	kg Sb eq.	2,59E-09	2,67E-07	2,38E-05	0,00E+00	2,30E-05
ADP-fossil*	MJ	9,43E-02	1,39E+00	5,47E+00	0,00E+00	-3,27E+02
WDP*	m^3	2,36E-04	6,86E-03	1,32E-01	0,00E+00	-2,82E+01

Mandatory impact category indicators according to EN 15804 (corresponding scenario 100% incineration)

Results per declared unit						
Indicator	**Unit**	**C1**	**C2**	**C3**	**C4**	**D**
GWP- total	kg CO_2 eq.	7,21E-03	9,57E-02	4,23E+01	0,00E+00	-7,43E+00
GWP-fossil	kg CO_2 eq.	7,21E-03	9,57E-02	4,23E+01	0,00E+00	-7,43E+00
GWP-biogenic	kg CO_2 eq.	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
GWP- luluc	kg CO_2 eq.	7,39E-07	4,28E-05	3,28E-04	0,00E+00	-6,25E-04
ODP	kg CFC 11 eq.	1,10E-10	1,41E-09	1,56E-08	0,00E+00	-2,21E-07
AP	mol H+ eq.	6,51E-05	3,26E-04	9,64E-03	0,00E+00	-8,72E-03
EP-freshwater	kg P eq.	2,08E-07	7,45E-06	1,32E-04	0,00E+00	-1,63E-04
EP- marine	kg N eq.	3,02E-05	1,07E-04	5,49E-03	0,00E+00	-3,13E-03
EP-terrestrial	mol N eq.	3,31E-04	1,17E-03	4,67E-02	0,00E+00	-3,38E-02
POCP	kg NMVOC eq.	9,86E-05	4,81E-04	1,17E-02	0,00E+00	-1,98E-02
ADP-minerals & metals*	kg Sb eq.	2,59E-09	2,67E-07	3,04E-06	0,00E+00	-6,49E-06
ADP-fossil*	MJ	9,43E-02	1,39E+00	8,24E+00	0,00E+00	-1,17E+02
WDP*	m^3	2,36E-04	6,86E-03	2,79E+00	0,00E+00	-5,08E-01

Mandatory impact category indicators according to EN 15804 (corresponding scenario 100% disposal)

Results per declared unit						
Indicator	**Unit**	**C1**	**C2**	**C3**	**C4**	**D**
GWP- total	kg CO_2 eq.	7,21E-03	9,57E-02	0,00E+00	1,04E-01	0,00E+00
GWP-fossil	kg CO_2 eq.	7,21E-03	9,57E-02	0,00E+00	1,11E-01	0,00E+00
GWP-biogenic	kg CO_2 eq.	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
GWP- luluc	kg CO_2 eq.	7,39E-07	4,28E-05	0,00E+00	6,34E-05	0,00E+00
ODP	kg CFC 11 eq.	1,10E-10	1,41E-09	0,00E+00	3,22E-09	0,00E+00
AP	mol H+ eq.	6,51E-05	3,26E-04	0,00E+00	7,87E-04	0,00E+00
EP-freshwater	kg P eq.	2,08E-07	7,45E-06	0,00E+00	9,12E-06	0,00E+00
EP- marine	kg N eq.	3,02E-05	1,07E-04	0,00E+00	3,00E-04	0,00E+00
EP-terrestrial	mol N eq.	3,31E-04	1,17E-03	0,00E+00	3,28E-03	0,00E+00
POCP	kg NMVOC eq.	9,86E-05	4,81E-04	0,00E+00	1,17E-03	0,00E+00
ADP-minerals & metals*	kg Sb eq.	2,59E-09	2,67E-07	0,00E+00	1,76E-07	0,00E+00
ADP-fossil*	MJ	9,43E-02	1,39E+00	0,00E+00	2,72E+00	0,00E+00
WDP*	m^3	2,36E-04	6,86E-03	0,00E+00	7,86E-03	0,00E+00

ADDITIONAL INFORMATION

Manufacturing energy scenario documentation

Scenario parameter	**Value**	**Source**
Electricity, high voltage, residual mix	0,64 kg CO_2e / kWh	Data sources: ecoinvent 3.10.1 Country: Lithuania
Electricity production, photovoltaic, 3kWp slanted-roof installation, multi-Si, panel, mounted	0,10 kg CO2e / kWh	Data sources: ecoinvent 3.10.1 Country: Lithuania
Heat production, natural gas, at industrial furnace >100kW	0,28 kg CO_2e / kWh	Data sources: ecoinvent 3.10.1 Country: Europe
Propane, burned in building machine	0,34 kg CO_2e / kWh	Data sources: ecoinvent 3.10.1 Country: World
Diesel, burned in building machine	0,36 kg CO_2e / kWh	Data sources: ecoinvent 3.10.1 Country: World

End-of-life scenario documentation (most probable scenario)

Scenario parameter	**Value**
Collection process – kg collected separately	17,78
Collection process – kg collected with mixed waste	-
Recovery process – kg for re-use	-
Recovery process – kg for recycling	14,93
Recovery process – kg for energy recovery	1,95
Disposal (total) – kg for final deposition	0,89
Scenario assumptions e.g. transportation	50 km.

Note. Yield factor = 0,9 (assuming 10% of material is lost in the recovery process)

ABBREVIATIONS

Abbreviation	Definition
General Abbreviations	
EN	European Norm (Standard)
EPD	Environmental Product Declaration
EF	Environmental Footprint
ISO	International Organization for Standardization
LCA	Life Cycle Assessment
PCR	Product Category Rules
c-PCR	Complementary Product Category Rules
CEN	European Committee for Standardization
CPC	Central product classification
Environmental Impact Indicators (EN 15804)	
GHG	Greenhouse gas
GWP	Global Warming Potential (kg CO_2 eq.)
GWP-fossil	Global Warming Potential from fossil sources (kg CO_2 eq.)
GWP-biogenic	Global Warming Potential from biogenic sources (kg CO_2 eq.)
GWP-luluc	Global Warming Potential from land use and land use change (kg CO_2 eq.)
GWP-total	Total Global Warming Potential (kg CO_2 eq.)
GWP-GHG	Global Warming Potential for greenhouse gases (kg CO_2 eq.)
ODP	Ozone Depletion Potential (kg CFC-11 eq.)
AP	Acidification Potential (mol H^+ eq.)
EP	Eutrophication Potential
EP-freshwater	Freshwater eutrophication potential (kg P eq.)
EP-marine	Marine eutrophication potential (kg N eq.)
EP-terrestrial	Terrestrial eutrophication potential (mol N eq.)
POCP	Photochemical Ozone Creation Potential (kg NMVOC eq.)
ADP	Abiotic Depletion Potential
ADP-minerals&metals	Abiotic depletion potential for non-fossil resources (kg Sb eq.)
ADP-fossil	Abiotic depletion potential for fossil resources (MJ)
WDP	Water Deprivation Potential (m^3)
Resource Use Indicators	
PERE	Use of renewable primary energy excluding renewable primary energy resources used as raw materials (MJ)
PERM	Use of renewable primary energy resources used as raw materials (MJ)
PERT	Total use of renewable primary energy resources (MJ)
PENRE	Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials (MJ)
PENRM	Use of non-renewable primary energy resources used as raw materials (MJ)
PENRT	Total use of non-renewable primary energy resources (MJ)
SM	Use of secondary material (kg)
RSF	Use of renewable secondary fuels (MJ)
NRSF	Use of non-renewable secondary fuels (MJ)
FW	Use of net fresh water (m^3)
Waste Indicators	
HW	Hazardous Waste (disposed) (kg)
NHW	Non-Hazardous Waste (disposed) (kg)
RW	Radioactive Waste (disposed) (kg)
Output Flow Indicators	
CFR	Components for Reuse (kg)
MR	Material for Recycling (kg)
MER	Materials for Energy Recovery (kg)
EEE	Exported Energy, Electricity (MJ)
EET	Exported Energy, Thermal (MJ)
Lifecycle Stages / Modules	
A1	Raw material supply
A2	Transport
A3	Manufacturing
A4	Transport to site

A5	Construction/Installation
B1	Use
B2	Maintenance
B3	Repair
B4	Replacement
B5	Refurbishment
B6	Operational energy use
B7	Operational water use
C1	Deconstruction/Demolition
C2	Transport to waste processing
C3	Waste processing
C4	Disposal
D	Reuse-Recovery-Recycling potential
Other Relevant Terms	
SVHC	Substances of Very High Concern
EC No.	European Community Number
MJ	Megajoule
kg	Kilogram
m^3	Cubic Meter
NMVOC	Non-Methane Volatile Organic Compounds
Sb eq.	Antimony Equivalents
P eq.	Phosphorus Equivalents
N eq.	Nitrogen Equivalents
CFC-11 eq.	Chlorofluorocarbon-11 Equivalents
CO_2 eq.	Carbon Dioxide Equivalents
kg C	Kilograms of Carbon
kg CO_2 eq.	Kilograms of Carbon Dioxide Equivalent
ND	Not Declared
REACH	Registration, Evaluation, Authorisation, and Restriction of Chemicals
ppm	Parts per million
PEF	Product Environmental Footprint
PPP	Polluter pays principle
EU	Europe
PVC	Polyvinylchloride
EPDM	Ethylene propylene diene monomer rubber
EPS	Expandable polystyrene
GLO	Global
SH	Side Hinged (Garage doors)
SSD	Side Sliding (Garage doors)

REFERENCES

a) ISO 14040:2006 Environmental management. Life cycle assessment. Principles and frameworks.
b) ISO 14044:2006 Environmental management. Life cycle assessment. Requirements and guidelines.
c) ISO 14025:2010 Environmental labels and declarations – Type III environmental declarations Principles and procedures.
d) ISO 14021:2021: Environmental labels and declarations — Self-declared environmental claims (Type II environmental labelling).
e) General Programme Instructions for the International EPD System version 5.0.1 (2025-02-07)
f) EN 15804:2012+A2:2019 Sustainability in construction works – Environmental product declarations – Core rules for the product category of construction products.
g) PCR 2019:14 Construction Products (EN 15804:2012+A2:2019) version 2.0.1 (2025-06-05)
h) PCR 2019:14-c-PCR-007 Being updated - Windows and doors (EN 17213) (c-PCR to PCR 2019:14) (1.0.0) 2025-04-08
i) EN 17213 (2020), Windows and doors - Environmental Product Declarations - Product category rules for windows and pedestrian doorsets
j) EN 15941:2024. Sustainability of construction works – Data quality for environmental assessment of products and construction works – Selection and use of data.
k) OECD. (2024). *Unlocking potential in the global scrap steel market*. Organisation for Economic Co-operation and Development. https://www.oecd.org/content/dam/oecd/en/publications/reports/2024/12/unlocking-potential-in-the-global-scrap-steel-market_b7014135/d7557242-en.pdf
l) Garage doors LCA background report.
m) Ecoinvent v3.10.1 (2024), IDEMAT (2023), Plastics Europe (2021) databases.

VERSION HISTORY

Original Version of the EPD, 2025-10-08

INTERNATIONAL EPD SYSTEM

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