



Environmental Product
Declaration

Program Operator: Smart EPD®

www.smartepd.com

IN ACCORDANCE WITH ISO 14025



SmartEPD-2026-133-0867-01.1

Standard Won-Door FireGuard™ Door



Date of Issue

May 18, 2026

Expiration date

May 18, 2031

Last updated

Jun 01, 2026



Refer to the EPD Library at www.smartepd.com for the latest EPD listing information

General Information

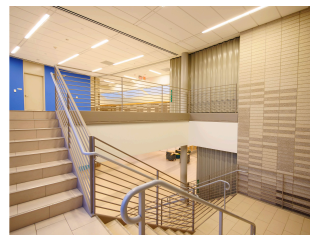
Won-Door

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🌐 wondoor.com



Product Name:	Standard Won-Door FireGuard™ Door
Declared Unit:	1 commercial steel door, nominal dimensions of 3-feet x 7-feet considered in isolation
Declaration Number:	SmartEPD-2026-133-0867-01.1
Date of Issue:	May 18, 2026
Expiration:	May 18, 2031
Last updated:	June 01, 2026
EPD Scope:	Cradle to gate with other options A1 - A3, A4, A5, C2 - C4
Market(s) of Applicability:	North America

General Organization Information

Won-Door Corporation, founded in 1962 and headquartered in Salt Lake City, Utah, is the global industry leader in the design and manufacture of accordion-style fire, security, and sound-rated door systems. Now a brand under the Horton Pedestrian Access Solutions division of Overhead Door Corporation following its acquisition in 2021, the company is best known for pioneering the Won-Door FireGuard, the world's first accordion-type horizontal sliding fire door to achieve a three-hour UL rating. These specialized systems are highly valued by architects for providing immense design flexibility; they remain retracted in wall pockets until activated by a fire or security alarm, allowing for wide-open floor plans and curved configurations that still meet strict International Building Code (IBC) and NFPA safety requirements while ensuring accessibility for individuals with disabilities.

Further information can be found at: <https://wondoor.com/>

Limitations, Liability and Ownership

Environmental declarations from different programs (ISO 14025) may not be comparable. Comparison of the environmental performance of products using EPD information shall be based on the product's use and impacts at the building level, and therefore EPDs may not be used for comparability purposes when not considering the whole building life cycle. EPD comparability is only possible when all stages of a life cycle have been considered. However, variations and deviations are possible. Example of variations: Different LCA software and background LCI datasets may lead to differences results for upstream or downstream of the life cycle stages declared. The EPD owner has sole ownership, liability, and responsibility for the EPD.

Reference Standards

Standard(s):	ISO 14025
Core PCR:	UL Part A PCR for Building-Related Products and Services v.4 Date of issue: March 01, 2022
Sub-category PCR:	UL Part B: Commercial Steel Doors and Steel Frames v.3

Date of issue: March 06, 2026

Valid until: March 06, 2031

Sub-category PCR review panel:

 Contact Smart EPD for more information.

General Program Instructions:

 Smart EPD General Program Instructions v.2.0, March 2025

Verification Information

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Verification:

Independent critical review of the LCA and data, according to ISO 14044 and ISO 14071:

External

 Amy Landis |  Michigan Technological University |  landis@mtu.edu

Independent external verification of EPD, according to ISO 14025 and reference PCR(s):

External

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Product Information

Declared Unit:

1 commercial steel door, nominal dimensions of 3-feet x 7-feet considered in isolation

Mass:

26.6 kg

Reference Service Life:

30 Years

Product Specificity:

 Product Average

 Product Specific

Product Description

The Won-Door FireGuard™ is a versatile fire-rated accordion folding door designed to provide secure solutions for various architectural openings, including narrow corridors, short ceilings, and large spans up to 200 feet wide and 30 feet tall. It serves as a fire-protected opening in egress paths, is ADA compliant, and offers fire ratings ranging from 20 to 180 minutes. The doors feature smoke and draft seals, curved track options, and customizable designs to match adjacent finishes. They are engineered to meet regulatory standards such as IBC, NFPA, and UL, ensuring safety and reliability. Additional options include key switch controls, backlit exit hardware, infrared obstruction detectors, vision panels, and air pressure resistance levels. Made in the USA, these doors are ideal for applications requiring fire safety, security, and sound control.

Further information can be found at: <https://wondoer.com/fireguard/>

Product Specifications

Product SKU(s):

Standard Won-Door FireGuard™ Door

Product Classification Codes:Masterformat - 08 31 14

Options:✓ Fire Door

Table 1. Material Composition

Material/Component Category	Origin	% Mass
Drive and electrical	US	5.12
Fasteners	US	4.31
Hardware and movement	US	16.7
Sealing and insulation	US	1.36
Structure and frame	US	72.5

Packaging Material	Origin	kg Mass
Cardboard		0.560
Plastic Idpe		0.0200

Biogenic Carbon Content	kg C per commercial steel door, nominal dimensions of 3-feet x 7-feet considered in isolation
Biogenic carbon content in product	0None
Biogenic carbon content in accompanying packaging	0.26

Hazardous Materials
Lead acid battery

EPD Data Specificity

Primary Data Year:Jan 1, 2024 - Dec 31, 2024

Manufacturing Specificity:

✗ Industry Average

✗ Manufacturer Average

✓ Facility Specific

Averaging:
Averaging was not conducted for this EPD

Table 2. System Boundary

Production	A1	Raw material supply	✓
	A2	Transport	✓
	A3	Manufacturing	✓
Construction	A4	Transport to site	✓
	A5	Assembly / Install	✓
Use	B1	Use	ND
	B2	Maintenance	ND
	B3	Repair	ND
	B4	Replacement	ND
	B5	Refurbishment	ND
	B6	Operational Energy Use	ND
	B7	Operational Water Use	ND
End of Life	C1	Deconstruction	ND
	C2	Transport	✓
	C3	Waste Processing	✓
	C4	Disposal	✓
Benefits & Loads Beyond System Boundary	D	Recycling, Reuse Recovery Potential	ND

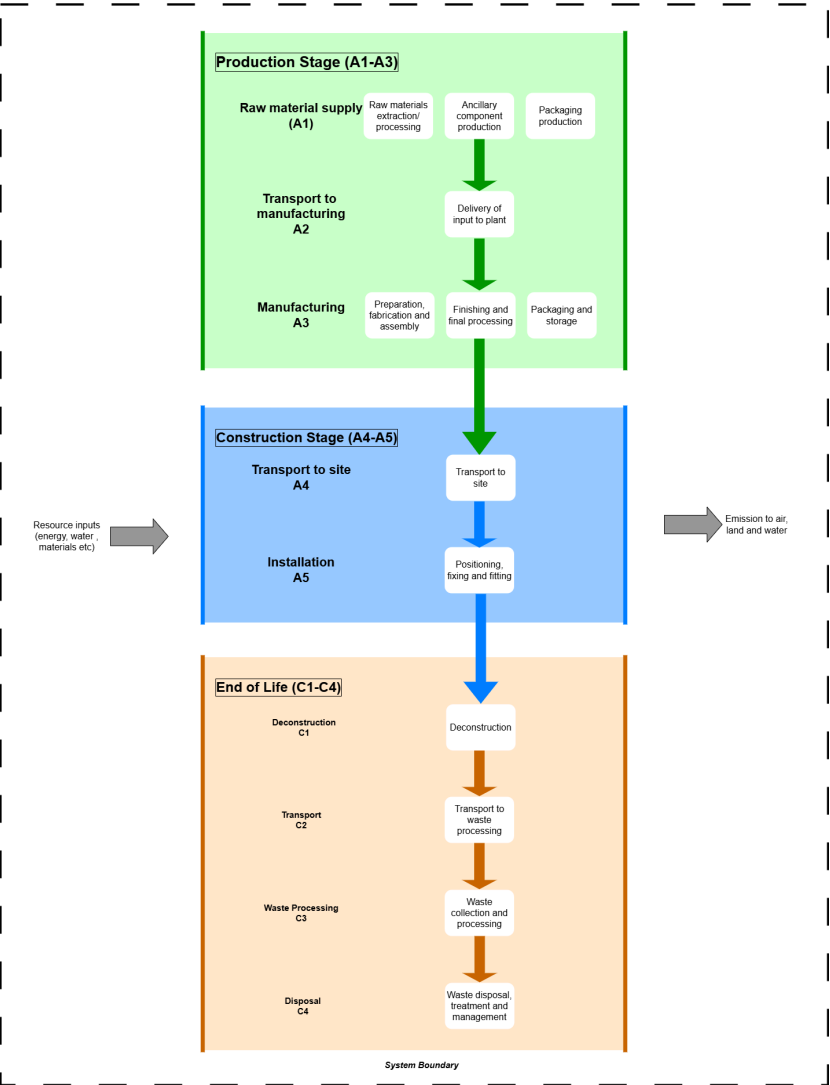
Note:

ND = Module not declared

Plants

 WON-DOOR 1865 South 3480 West, Salt Lake City, UT 84104, USA

Product Flow Diagram



Software And Database

- LCA Software:
 - SimaPro v. 10.2
- LCI Foreground Database(s):
 - Ecoinvent v. 3.11
 - Cut-off by Classification
- LCI Background Database(s):
 - Ecoinvent v. 3.11
 - Cut-off by Classification

A foreground LCI database is the database used to model the primary, site-specific data collected for this EPD. A background LCI database is the database used to model generic or non-specific data.

Data Quality

Precision & Completeness

- **Precision:** Inventory data were directly measured, calculated, or conservatively estimated from primary sources using consistent units and QA checks. Background processes from ecoinvent v3 were adopted with their documented uncertainty/precision metadata where available, preserving a transparent record of data quality.
- **Completeness:** The product system's mass balance and inventory completeness were thoroughly checked. Some exclusions were made in line with the PCR requirements, such as personnel impacts, R&D activities, business travel, and point-of-sale infrastructure. However, no data were intentionally omitted.

Consistency and Reproducibility

- **Consistency:** Primary data for all modules were consistently gathered aiming at the highest level of detail possible. Background processes were modeled mainly with the ecoinvent database. The same allocation rules, cut-off criteria, and impact assessment methods were applied throughout, ensuring methodological coherence and consistent data quality across the entire LCA model.
- **Reproducibility:** This study ensures reproducibility by providing comprehensive disclosure of input–output data, dataset choices, and modeling approaches. A knowledgeable third party should be able to approximate the results using the same data and modeling methods.

Representativeness

- **Temporal:** Primary data were collected for a 12-month period representing the 2024 calendar year to ensure the representativeness of post-consumer content. Secondary data from the ecoinvent v3 database are typically representative of recent years.
- **Geographical:** Primary data represent Won-Door's production facility. Where applicable, differences in electric grid mix were considered using appropriate secondary data. The use of country-specific data ensures high geographical representativeness, and proxy data were only used when country-specific data were unavailable.
- **Technological:** Both primary and secondary data were tailored to the specific technologies studied, ensuring high technological representativeness.

Life Cycle Module Description

Modules A1–A3: The LCA model covers the production of raw materials and components for commercial steel doors and steel frames (A1), which are then transported to the manufacturing facility by truck or other relevant modes of transport (A2). The manufacturing stage (A3) begins with receipt of these materials, which are cut, formed, welded, finished, and assembled into finished steel doors and frames. When applicable, additional components such as insulation cores, glazing kits, louvers, vision panels, reinforcements, and hardware preparations are incorporated during fabrication and assembly.

Modules A4–A5: Once manufacturing is completed, the finished steel doors and steel frames are transported to the construction site or distribution point and then to the end user (A4). For installation (A5), material losses associated with installation may be considered where relevant. This module includes treatment of installation waste and disposal of packaging materials generated during delivery and installation.

Modules C1–C4 and D: At end of life (C1–C4), the steel doors and steel frames are assumed to be removed from the building, collected, and sent to appropriate waste management processes. Individual material streams, including steel and other ancillary materials, are handled separately for recycling, energy recovery, or disposal as applicable. Loads and benefits beyond the system boundary are considered in Module D, including the potential benefits associated with recovery and recycling of steel and the displacement of primary materials.

LCA Discussion

Allocation Procedure

Allocation of co-products was avoided, to the extent possible, based on the guidance given in ISO 14044:2006, 4.3. Energy use at the facility level was allocated by the amount of product produced. The manufacturing process does not consume water or generate wastewater or air emissions, other than those from fuel combustion. Solid waste was estimated using packaging masses and material losses and allocated following the polluter pays principle.

Cut-off Procedure

The system boundary was defined based on relevance to the goal of the study. For the raw material (A1) and process related inputs (A3), all available energy and material flow data have been included in the model.

Renewable Electricity

Energy Attribute Certificates (EACs) such as Renewable Energy Certificates (RECs) or Power Purchase Agreements (PPAs) are included in the baseline reported results: ✗ No

Scenarios

Transport to the building/construction site (A4)

A4 Module

Fuel Type:	Diesel
Vehicle Type:	Truck and Trailer
Transport Distance:	1540 km
Capacity Utilization:	33.0 %
Packaging Mass:	0.582 kg
Weight of products transported:	27.2 kg
Capacity utilization volume factor:	1
Assumptions for scenario development:	Transport distance includes finished product to distribution center and distribution center to point of sale.

Installation in to the building/construction site (A5)

A5 Module

Mass of Packaging Waste Specified by Type:	0.582 kg
Biogenic Carbon Contained in Packaging (kg C):	0.258 kg
Assumptions for scenario development:	Installation is performed by trained technicians according to manufacturer and national standards. Because units are custom-sized and pre-assembled, zero material loss is assumed. The only A5 input is the disposal of product packaging.

End of Life (C1 - C4)

C1 - C4 Modules

Collection Process

Collected with Mixed Construction Waste:	26.6 kg
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Recovery

Recycling:	14.3 kg
Landfill:	11.3 kg

Incineration: 1.06 kg

Assumptions for scenario development:

There are no harmful substances or emissions that are required to be reported per the PCR.

Results

Table 3. Environmental Impact Assessment Results

IPCC AR5 GWP 100, TRACI 2.2, CML 2016 v4.8

per 1 commercial steel door, nominal dimensions of 3-feet x 7-feet considered in isolation of product.

LCA results are relative expressions and do not predict impacts on category endpoints, the exceeding of thresholds, safety margins or risks.

Impact Category	Unit	Method	A1 - A3	A4	A5	C2	C3	C4
GWP-total	kg CO2 eq	IPCC AR5 GWP 100	1.52e+2	3.71e+0	4.84e-2	9.80e-2	2.51e+0	1.16e-1
GWP-fossil	kg CO2 eq	IPCC AR5 GWP 100	1.52e+2	3.70e+0	4.84e-2	9.79e-2	2.51e+0	1.15e-1
GWP-biogenic	kg CO2 eq	IPCC AR5 GWP 100	2.81e-1	7.60e-4	6.41e-6	2.01e-5	1.50e-4	4.08e-5
GWP-luluc	kg CO2 eq	IPCC AR5 GWP 100	2.42e-1	1.27e-3	8.82e-7	3.37e-5	1.96e-5	6.53e-4
ODP	kg CFC-11 eq	TRACI 2.2	1.55e-6	5.91e-8	3.98e-11	1.56e-9	8.30e-10	1.01e-9
AP	kg SO2 eq	TRACI 2.2	7.56e-1	7.65e-3	2.29e-5	2.02e-4	5.37e-4	5.32e-4
SFP	kg O3 eq	TRACI 2.2	8.99e+0	1.47e-1	6.59e-4	3.89e-3	1.60e-2	1.23e-2
EP-freshwater	kg P eq	TRACI 2.2	7.35e-2	1.38e-4	1.15e-6	3.64e-6	2.31e-5	1.70e-5
EP-marine	kg N eq	TRACI 2.2	8.17e-2	1.27e-3	6.09e-6	3.36e-5	1.48e-4	1.07e-4
ADP-fossil	MJ	CML 2016 v4.8	1.65e+3	5.62e+1	2.10e-2	1.49e+0	4.60e-1	1.31e+0

Note:

Not all abbreviated indicators listed below may be present in the results above. The inclusion of indicators varies based on PCR requirements.

Abbreviations:

GWP = Global Warming Potential, 100 years (may also be denoted as GWP-total, GWP-fossil (fossil fuels), GWP-biogenic (biogenic sources), GWP-luluc (land use and land use change)), ODP = Ozone Depletion Potential, AP = Acidification Potential, EP = Eutrophication Potential, SFP = Smog Formation Potential, POCP = Photochemical oxidant creation potential, ADP-Fossil = Abiotic depletion potential for fossil resources, ADP-Minerals&Metals = Abiotic depletion potential for non-fossil resources, WDP = Water deprivation potential, PM = Particular Matter Emissions, IRP = Ionizing radiation, human health, ETP-fw = Eco-toxicity (freshwater), HTP-c = Human toxicity (cancer), HTP-nc = Human toxicity (non-cancer), SQP = Soil quality index.

These six impact categories are globally deemed mature enough to be included in Type III environmental declarations. Other categories are being developed and defined and LCA should continue making advances in their development. However, the EPD users shall not use additional measures for comparative purposes

Table 4. Resource Use Indicator

per 1 commercial steel door, nominal dimensions of 3-feet x 7-feet considered in isolation of product.

Indicator	Unit	A1 - A3	A4	A5	C2	C3	C4
RPRE	MJ	3.87e+2	6.43e-1	8.21e-4	1.70e-2	1.85e-2	2.70e-1
RPRM	MJ	9.42e+0	0	0	0	0	0
RPRT	MJ	3.97e+2	6.43e-1	8.21e-4	1.70e-2	1.85e-2	2.70e-1
NRPRE	MJ	1.65e+3	5.62e+1	2.10e-2	1.49e+0	4.60e-1	1.31e+0
NRPRM	MJ	0	0	0	0	0	0
NRPRT	MJ	1.65e+3	5.62e+1	2.10e-2	1.49e+0	4.60e-1	1.31e+0
SM	kg	0	0	0	0	0	0
RSF	MJ	0	0	0	0	0	0
NRSF	MJ	0	0	0	0	0	0
RE	MJ	0	0	0	0	0	0
FW	m3	5.44e+1	2.39e-1	3.17e-3	0	0	0

Note:

Not all abbreviated indicators listed below may be present in the results above. The inclusion of indicators varies based on PCR requirements.

Abbreviations:

RPRE or PERE = Renewable primary resources used as energy carrier (fuel), RPRM or PERM = Renewable primary resources with energy content used as material, RPRT or PERT = Total use of renewable primary resources with energy content, NRPRE or PENRE = Non-renewable primary resources used as an energy carrier (fuel), NRPRM or PENRM = Non-renewable primary resources with energy content used as material, NRPRT or PENRT = Total non-renewable primary resources with energy content, SM = Secondary materials, RSF = Renewable secondary fuels, NRSF = Non-renewable secondary fuels, RE = Recovered energy, ADPF = Abiotic depletion potential, FW = Use of net freshwater resources, VOCs = Volatile Organic Compounds.

Table 5. Waste and Output Flow Indicators

per 1 commercial steel door, nominal dimensions of 3-feet x 7-feet considered in isolation of product.

Indicator	Unit	A1 - A3	A4	A5	C2	C3	C4
HWD	kg	0	0	0	0	0	3.97e-1
NHWD	kg	8.18e-2	0	4.91e-3	0	0	1.09e+1
HLLRW	kg	0	0	0	0	0	0
ILLRW	kg	0	0	0	0	0	0
CRU	kg	0	0	0	0	0	0
MR	kg	1.62e-1	0	5.07e-1	0	1.43e+1	0
MER	kg	2.98e-1	0	6.97e-2	0	1.06e+0	0
EE	MJ	8.63e+0	0	1.40e+0	0	3.25e+1	0

Note:

Not all abbreviated indicators listed below may be present in the results above. The inclusion of indicators varies based on PCR requirements.

Abbreviations:

HWD = Hazardous waste disposed, NHWD = Non-hazardous waste disposed, RWD = Radioactive waste disposed, HLRW = High-level radioactive waste, ILLRW = Intermediate- and low-level radioactive waste, CRU = Components for re-use, MFR or MR = Materials for recycling, MER = Materials for energy recovery, MNER = Materials for incineration, no energy recovery, EE or EEE = Recovered energy exported from the product system, EET = Exported thermal energy.

Table 6. Carbon Emissions and Removals

per 1 commercial steel door, nominal dimensions of 3-feet x 7-feet considered in isolation of product.

Results use AR5

Indicator	Unit	A1 - A3	A4	A5	C2	C3	C4
Bio Carbon Removal from Product	kg CO2	0	0	0	0	0	0
Bio Carbon Emission from Product	kg CO2	0	0	0	0	0	0
Bio Carbon Removal from Packaging	kg CO2	-1.25e+0	0	0	0	0	0
Bio Carbon Emission from Packaging	kg CO2	3.01e-1	0	9.48e-1	0	0	0
Bio Carbon Emission from Waste during Manufacturing (renewable source)	kg CO2	0	0	0	0	0	0
Calcination Carbon Removal	kg CO2	0	0	0	0	0	0
Carbonation Carbon Emission	kg CO2	0	0	0	0	0	0
Carbon Emission from Waste during Manufacturing (non-renewable source)	kg CO2	0	0	0	0	0	0

Note:

Not all abbreviated indicators listed below may be present in the results above. The inclusion of indicators varies based on PCR requirements.

Abbreviations:

BCRP = Biogenic Carbon Removal from Product, BCEP = Biogenic Carbon Emission from Product, BCRK = Biogenic Carbon Removal from Packaging, BCEK = Biogenic Carbon Emission from Packaging, BCEW = Biogenic Carbon Emission from Combustion of Waste from Renewable Sources Used in Production Processes, CCE = Calcination Carbon Emissions, CCR = Carbonation Carbon Removals, CWNR = Carbon Emissions from Combustion of Waste from Non-Renewable Sources used in Production Processes, GWP-luc = Carbon Emissions from Land-use Change.

Table 7. Scaling Factors

Door area	Weight
1 m2	13.6 kg
3ft x 7ft	26.6 kg
600 ft2	760.kg

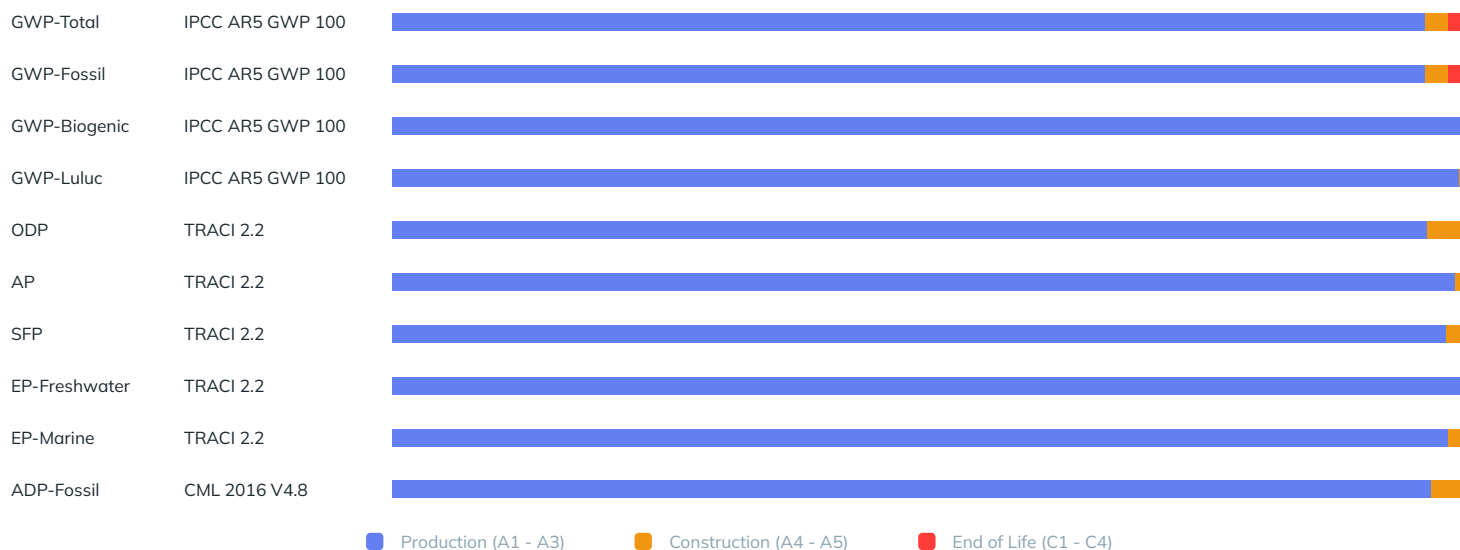
Product weights in the table were derived from door area using a constant mass-per-area assumption based on the reference configuration. This approach is applicable only to geometrically similar door variants with the same material composition, thickness, and manufacturing process.

Interpretation

The manufacturing of Won-Door products involves the direct procurement of raw materials and their subsequent processing at US-based facilities. The Product Stage (A1–A3) is the primary impact driver due to the energy required for raw material extraction and assembly. A limitation of this study is that upstream impacts are based on industry-average profiles rather than specific supplier data.

The 30-year Reference Service Life is contingent upon standard indoor use and adherence to the manufacturer's maintenance schedule. To modify the current environmental profile, evaluating a transition to renewable energy sources for manufacturing is suggested. Additionally, Won-Door should assess substituting raw material inputs with alternative options and prioritize collecting primary data from suppliers regarding their specific production techniques or energy mixes.

0% 20% 40% 60% 80% 100%



Additional Environmental Information

During the use stage, the Standard Fireguard Door is chemically stable and does not emit volatile organic compounds (VOCs) or other harmful substances into the indoor environment.

The product's emergency backup system utilizes lead-acid batteries. These are classified as hazardous due to their lead and sulfuric acid content; however, these materials are contained within sealed units and pose no health risk under normal operating conditions. Detailed safety, handling, and toxicological information is provided in the Product Safety Data Sheet (SDS), available upon request.

At the end of the product's life, these batteries must be removed and managed through specialized hazardous waste streams. This requirement is reflected in the Hazardous Waste Disposed (HWD) indicator reported in Module C4.

No other substances included in the REACH Candidate List of Substances of Very High Concern (SVHC) are present in the product above a concentration of 0.1% by weight.

Further Information

Reference Service Life

Name	Value	Unit
RDL	30	Years
Declared product properties (at the gate) and finishes, etc.	24-gauge V-grooved steel panels; factory-applied thermal set polyester.	Material Specs / Gauge
Design application parameters	Compliance with UL 864 and UL 263 and IBC §1010.3.3 for fire-rated openings.	Regulatory Standards
An assumed quality of work	Installed in accordance with manufacturer instructions, NFPA72 and NFPA 80 by factory-trained technicians.	Installation Standard
Outdoor environment	Not applicable (Indoor use only).	Exposure Type

Name	Value	Unit
Indoor environment	Climate-controlled building interior; non-corrosive.	Environment Class
Use conditions	Emergency standby; annual inspection/operational tests	Cycles / Frequency

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