ENVIRONMENTAL PRODUCT DECLARATION

as per ISO 14025 and EN 15804

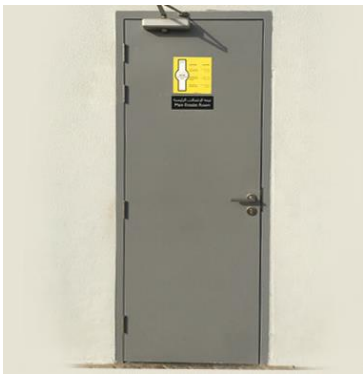
Owner of the Declaration	ASSA ABLOY
Programme holder	Institut Bauen und Umwelt e.V. (IBU)
Publisher	Institut Bauen und Umwelt e.V. (IBU)
Declaration number	EPD-ASA-20170185-IBA1-EN
Issue date	13.11.2017
Valid to	12.11.2022

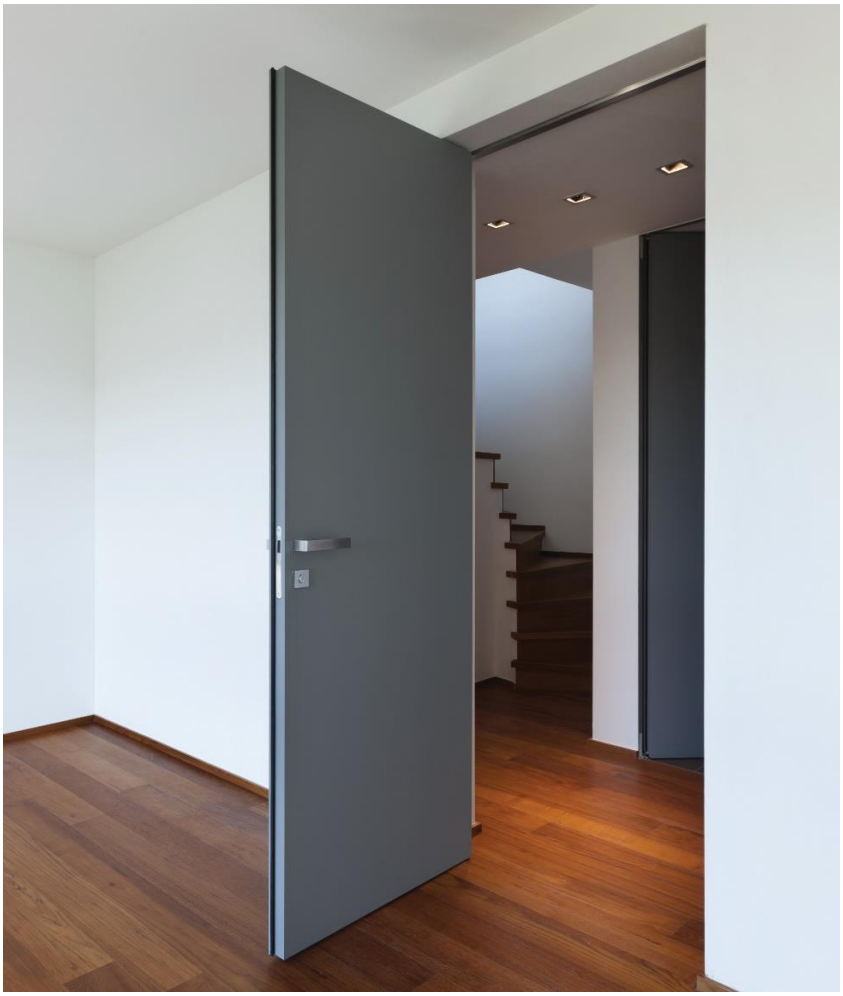
Prometal Honeycomb Core Steel Door

ASSA ABLOY Security Solutions Middle East

Institut Bauen und Umwelt e.V.

www.ibu-epd.com / https://epd-online.com





1. General Information

ASSA ABLOY Security Solutions Middle East

Programme holder
IBU - Institut Bauen und Umwelt e.V.
Panoramastr. 1
10178 Berlin
Germany

Declaration number
EPD-ASA-20170185-IBA1-EN

This Declaration is based on the Product Category Rules:
Windows and doors, 11.2014
(PCR tested and approved by the independent expert committee (SVR))

Issue date
13.11.2017

Valid to
12.11.2022

Prof. Dr.-Ing. Horst J. Bossenmayer
(President of Institut Bauen und Umwelt e.V.)

Dr.-Ing. Burkhart Lehmann
(Managing Director IBU)

Prometal Honeycomb Core Steel Door

Owner of the Declaration
Assa Abloy Security Solutions Middle East
Jebel Ali Industrial Area 1
Street 11B P.O. Box: 37765
Dubai, United Arab Emirates

Declared product / Declared unit
The declaration represents 1 steel door set – Prometal Honeycomb Core Steel Door - consisting of the following items:

- Steel Frame
- Honeycomb core steel door leaf

Scope:
This declaration and its LCA study are relevant to the Prometal Honeycomb Core Steel Door manufactured in Prometal Metal Industries Factory (LLC) of Assa Abloy Security Solutions Middle East. The final assembly and production stage occurs in factory for the Prometal Honeycomb Core Steel Door in UAE.

The owner of the declaration shall be liable for the underlying information and evidence; the IBU shall not be liable with respect to manufacturer information, life cycle assessment data and evidences.

Verification

The CEN Standard EN 15804 serves as the core PCR
Independent verification of the declaration according to ISO 14025
☐ internally ☒ externally

Dr. Wolfram Trinius
(Independent verifier appointed by SVA)

2. Product

2.1 Product description

Product name: Prometal Honeycomb Core Steel Door

Product characteristic:
- Prometal Honeycomb Core Steel Door consist of galvanized steel.
- Frame is 1.5 mm thick galvanized steel.
- Door Leaf is 1.2 mm thick galvanized steel.
- Infill of the leaf is Kraftpaper Honeycomb 180GSM
- Polyester Powder paint finish
- Complete door set is fire-rated for 120 minutes

2.2 Application

Prometal Honeycomb Core Steel Door consists of a fire-rated door set offered in various finishes for internal and external use.

2.3 Technical Data

The table presents the technical properties of Prometal Honeycomb Core Steel Door:

Item	Value	Unit
Available Finishes	Polyester Powder Coated RAL colors	-
Size	Single door	-
Width	1100	mm
Height	2400	mm
Insert type	Kraftpaper Honeycomb 180GSM	-
Installation depth	150	mm
Possible opening types	Left and right	-
Material used (door frame)	1.5	mm

2.4 Placing on the market / Application rules

The standards that can be applied for Prometal Honeycomb Core Steel Door are:

- BS 476 Part 22
- ANSI UL 10C

2.5 Delivery status

Prometal Honeycomb Core Steel Doors are delivered packed by 30 leafs and 12 frames per pallet

2.6 Base materials / Ancillary materials

The average composition for Prometal Honeycomb Core Steel Doors are as following:

Component	Percentage in mass (%)
Steel	96.42
Polyester powder coating paint	2.42
Paper	0.67
Plastics	0.49
Total	**100.0**

2.7 Manufacture

The manufacturing processes that occur in the factory for the Prometal Honeycomb Core Steel Door:
1) Shearing of steel sheets
2) Punching of hardware provisions on steel sheets
3) Bending of steel sheet to form frame profiles and door leaf
4) Welding of components to the frame and door leaf
5) Assembly of door leaf and frame by welding
5) Grinding & cleaning of the door set
6) Painting of frame and leaf
6) Packing of frame and leaf
The factory of Prometal Metal Industries Factory (LLC) has a certification of Quality Management system in accordance with ISO 9001:2008. Tier 1 suppliers are in UAE, Korea and India.

2.8 Environment and health during manufacturing

ASSA ABLOY is committed to producing and distributing door solutions with possibly small environmental impact, where health & safety is an important focus for all employees and associates.

• Environmental operations, GHG, energy, water, waste, VOC, surface treatment and H&S are routinely monitored. Inspections, audits, and reviews are conducted periodically to ensure that applicable standards are met and to evaluate the effectiveness of the environmental management program (ISO 14001:2009).
• Code of Conduct covers human rights, labor practices and decent work.
• Any waste metals during machining are separated and recycled. The waste from the painting process is delivered to waste treatment plant.

2.9 Product processing /Installation

Prometal Honeycomb Core Steel Doors are distributed through and installed by trained installation technicians, such as building technicians adhering to local/national standards and requirements. The product can also be installed directly from the end-user (professional or personal).

2.10 Packaging

Prometal Honeycomb Core Steel Doors are packed by 30 leafs and 12 frames per pallet with Polyethylene film (LDPE/PE-LD). Each corner protected by hard cardboard carton. The packaging is in total 2kgs and is fully recyclable.

100% of carton is made from recycled material

Material	Percentage in mass (%)
Cardboard	95.7
Plastics	4.3
Total	**100.0**

2.11 Condition of use

Internal and external usage is possible. Cleaning with a soft cloth would be sufficient during the use stage.

2.12 Environment and health during use

There is no harmful emissive potential. No damage to health or impairment is expected under normal use corresponding to the intended use of the product.

2.13 Reference service life

Properly installed and maintained steel metal doors can be used up to 500,000 cycles under normal working conditions, 10 years depending on cycle frequency.

2.14 Extraordinary effects

Fire

Regarding fire protection, the product is tested according to UL 10C by Fire Door Labelling Agency (BMTRADA) and is fire resistant up to 120 minutes.

Water

No substances are used which have a negative impact on ecological water quality on contact by the door with water.

Mechanical destruction

No danger to the environment can be anticipated during mechanical destruction.

2.15 Re-use stage

The product is possible to re-use during the reference service life and be moved from one location to another. The majority, by weight, of components is steel which can be recycled. The plastic components can be used for energy recovery within a waste incineration process.

2.16 Disposal

The product can be mechanically dissembled to separate the different materials. The majority, by weight, of components is steel which can be recycled. The door can be sent to a professional recycling service provider. No disposal is foreseen for the product nor for the corresponding packaging. The plastic components can be used for energy recovery in an incineration plant.

2.17 Further information

Prometal Metal Industries Factory (LLC)
Jebel Ali Industrial Area 1 Street 11B
P.O. Box: 37765 Dubai, UAE
Tel: +971 4 880 4888
Web: www.middleeast.assaabloy.com

3. LCA: Calculation rules

3.1 Declared Unit

The declaration refers to the functional unit of 1 piece of Prometal honeycomb core steel door as specified in Part B requirements on the EPD for Windows and doors, (PCR tested and approved by the independent expert committee (SVR)).

Declared unit

Name	Value	Unit
Declared unit	74.457	1 piece of Prometal honeycomb core steel door
Conversion factor to 1 kg	0.0135	-

3.2 System boundary

Type of the EPD: cradle to gate - with Options
The following life cycle stages were considered:

Production stage:

- A1 – Raw material extraction and processing
- A2 – Transport to the manufacturer and
- A3 – Manufacturing

Construction stage:

- A4 – Transport from the gate to the site
- A5 – Packaging waste processing

End-of-life stage:

- C2 – Transport to waste processing
- C3 – Waste processing
- C4 – Disposal (landfill)

This includes provision of all materials, products and energy, packaging processing and its transport, as well as waste processing up to the end-of waste state or disposal of final residues.

- D - Declaration of all benefits and loads

3.3 Estimates and assumptions

Transportation: Data on mode of transport and distances, as reported by suppliers were used for those materials and parts contributing more than 2% of total product mass. Transport by road over an average distance of 500 km was assumed.

EoL: In the End-of-Life stage, for all the materials which can be recycled, a recycling scenario with 100% collection rate was assumed.

3.4 Cut-off criteria

In the assessment, all available data from the production process are considered, i.e. all raw materials used, auxiliary materials (e.g. lubricants), thermal energy consumption and electric power consumption - including material and energy flows contributing less than 1% of mass or energy (if available). In case a specific flow contributing less than 1% in mass or energy is not available, worst case assumption proxies are selected to represent the respective environmental impacts.

Impacts relating to the production of machines and facilities required during production are out of the scope of this assessment.

3.5 Background data

For life cycle modeling of the considered products, the GaBi 6 Software System for Life Cycle Engineering, developed by thinkstep AG, is used /GaBi 6 2015/. The GaBi-database contains consistent and documented datasets which are documented in the online GaBi-documentation /GaBi 6 2015D/.
To ensure comparability of results in the LCA, the basic data of GaBi database were used for energy, transportation and auxiliary materials.

3.6 Data quality

The requirements for data quality and background data correspond to the specifications of the /IBU PCR PART A/.
thinkstep AG performed a variety of tests and checks during the entire project to ensure high quality of the completed project. This obviously includes an extensive review of project-specific LCA models as well as the background data used.
The technological background of the collected data reflects the physical reality of the declared products. The datasets are complete and conform to the system boundaries and the criteria for the exclusion of inputs and outputs.
All relevant background datasets are taken from the GaBi 6 software database.

3.7 Period under review

The period under review is 2015/16 (12-month average).

3.8 Allocation

Regarding incineration, the software model for the waste incineration plant (WIP) is adapted according to the material composition and heating value of the combusted material. In this EPD, the following specific life cycle inventories for the WIP are considered for:

- Waste incineration of plastic
- Waste incineration of paper

Regarding the recycling material of metals, the metal parts in the EoL are declared as end-of-waste status. Thus, these materials are considered in module D. Specific information on allocation within the background data is given in the GaBi dataset documentation.

3.9 Comparability

Basically, a comparison or an evaluation of EPD data is only possible if all the data sets to be compared were created according to /EN 15804/ and the building context, respectively the product-specific characteristics of performance, are considered.

4. LCA: Scenarios and additional technical information

The following technical information is a basis for the declared modules or can be used for developing specific scenarios in the context of a building assessment if modules are not declared (MND).

Transport to the building site (A4)

Name	Value	Unit
Truck transport		
Litres of fuel diesel with maximum load (27t payload)	39.4	l/100km
Transport distance truck	500	km
Capacity utilization (incl. empty runs) of truck	85	%

Installation into the building (A5)

Name	Value	Unit
Output substances following waste treatment on site (Paper packaging)	2	kg
Output substances following waste treatment on site (Plastics packaging)	0.09	kg

Reference service life

Name	Value	Unit
Reference service life	10	a

Transport to waste processing (C2)

Name	Value	Unit
Truck transport		
Litres of fuel diesel with maximum load (27t payload)	39.4	l/100km
Transport distance truck	500	km
Capacity utilization (incl. empty runs) of truck	85	%

End of life (C2-C4)

Name	Value	Unit
Collected separately Steel and Plastics	72.15	kg
Incineration plastics	0.36	kg
Recycling Steel	71.79	kg
Landfilling of paint	1.8	kg

Reuse, recovery and/or recycling potentials (D), relevant scenario information

Name	Value	Unit
Collected separately waste type (including packaging)	74.54	kg
Recycling Steel	96.3	%
Reuse Paper	0.63	%
Incineration of Plastics	0.61	%
Construction waste for landfilling (no recycling potential)	2.43	%

5. LCA: Results

Results shown below were calculated using CML 2000 – Apr. 2013 Methodology.

DESCRIPTION OF THE SYSTEM BOUNDARY (X = INCLUDED IN LCA; MND = MODULE NOT DECLARED)

PRODUCT STAGE			CONSTRUCTION PROCESS STAGE		USE STAGE							END OF LIFE STAGE				BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARYS
Raw material supply	Transport	Manufacturing	Transport from the gate to the site	Assembly	Use	Maintenance	Repair	Replacement[1)]	Refurbishment[1)]	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling-potential
A1	**A2**	**A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
X	X	X	X	X	MND	MND	MND	MND	MND	MND	MND	MND	X	X	X	X

RESULTS OF THE LCA - ENVIRONMENTAL IMPACT: One piece of Prometal Honeycomb core steel door

Parameter	Parameter	Unit	A1 - A3	A4	A5	C2	C3	C4	D
GWP	Global warming potential	[kg CO_2-Eq.]	2.14E+02	1.77E+00	9.33E-01	1.77E+00	0.00E+00	9.14E-01	-1.17E+02
ODP	Depletion potential of the stratospheric ozone layer	[kg CFC11-Eq.]	2.61E-09	8.49E-12	3.92E-12	8.48E-12	0.00E+00	2.75E-12	5.45E-10
AP	Acidification potential of land and water	[kg SO_2-Eq.]	8.88E-01	8.11E-03	2.19E-04	8.10E-03	0.00E+00	2.33E-04	-4.47E-01
EP	Eutrophication potential	[kg $(PO_4)^{3-}$- Eq.]	7.52E-02	1.85E-03	3.25E-05	1.85E-03	0.00E+00	1.76E-05	-3.72E-02
POCP	Formation potential of tropospheric ozone photochemical oxidants	[kg Ethen Eq.]	1.01E-01	-2.62E-03	1.42E-05	-2.61E-03	0.00E+00	1.13E-05	-6.70E-02
ADPE	Abiotic depletion potential for non-fossil resources	[kg Sb Eq.]	5.41E-03	6.68E-08	2.76E-08	6.67E-08	0.00E+00	6.04E-08	-2.38E-06
ADPF	Abiotic depletion potential for fossil resources	[MJ]	2.54E+03	2.45E+01	2.93E-01	2.44E+01	0.00E+00	3.87E-01	-1.10E+03

RESULTS OF THE LCA - RESOURCE USE: One piece of Prometal Honeycomb core steel door

Parameter	Parameter	Unit	A1 - A3	A4	A5	C2	C3	C4	D
PERE	Renewable primary energy as energy carrier	[MJ]	9.34E+01	-	-	-	-	-	-
PERM	Renewable primary energy resources as material utilization	[MJ]	0.00E+00	-	-	-	-	-	-
PERT	Total use of renewable primary energy resources	[MJ]	9.34E+01	9.64E-01	2.55E-02	9.63E-01	0.00E+00	2.83E-02	2.03E+01
PENRE	Non-renewable primary energy as energy carrier	[MJ]	2.60E+03	-	-	-	-	-	-
PENRM	Non-renewable primary energy as material utilization	[MJ]	0.00E+00	-	-	-	-	-	-
PENRT	Total use of non-renewable primary energy resources	[MJ]	2.60E+03	2.45E+01	3.38E-01	2.45E+01	0.00E+00	4.30E-01	-1.03E+03
SM	Use of secondary material	[kg]	7.87E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	Use of renewable secondary fuels	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	Use of non-renewable secondary fuels	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	Use of net fresh water	[m^3]	8.31E-01	6.80E-04	2.61E-03	6.79E-04	0.00E+00	2.23E-03	-6.37E-02

RESULTS OF THE LCA – OUTPUT FLOWS AND WASTE CATEGORIES: One piece of Prometal Honeycomb core steel door

Parameter	Parameter	Unit	A1 - A3	A4	A5	C2	C3	C4	D
HWD	Hazardous waste disposed	[kg]	4.11E-02	5.59E-05	2.34E-05	5.58E-05	0.00E+00	3.00E-05	7.89E-02
NHWD	Non-hazardous waste disposed	[kg]	3.94E+00	3.09E-03	3.87E-02	3.08E-03	0.00E+00	8.51E-02	-1.67E+00
RWD	Radioactive waste disposed	[kg]	2.44E-02	3.21E-05	1.78E-05	3.21E-05	0.00E+00	1.71E-05	2.65E-02
CRU	Components for re-use	[kg]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MFR	Materials for recycling	[kg]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.23E+01	0.00E+00	0.00E+00
MER	Materials for energy recovery	[kg]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EEE	Exported electrical energy	[MJ]	0.00E+00	0.00E+00	1.33E+00	0.00E+00	0.00E+00	1.75E+00	0.00E+00
EET	Exported thermal energy	[MJ]	0.00E+00	0.00E+00	3.71E+00	0.00E+00	0.00E+00	4.80E+00	0.00E+00

6. LCA: Interpretation

This chapter contains an interpretation of the Life Cycle Impact Assessment categories. Stated percentages in the whole interpretation are related to the overall life cycle, excluding credits (module D).

The production stage (modules A1-A3) contributes between 95% and 99% to the overall results for all the environmental impact assessment categories hereby considered. Within the production stage, the main contribution for all the impact categories is the production of steel mainly due to the energy consumption on this process.

Steel accounts in total with approx. 97% to the overall mass of the product, therefore, the impacts are in line with the mass composition of the product. The environmental impacts for the transport (A2) have a negligible impact within this stage.

In the end-of-life stage, there are loads and benefits (module D, negative values) considered. The benefits are considered beyond the system boundaries and are declared for the recycling potential of the metals and for the credits from the incineration process (energy substitution).

7. Requisite evidence

Not applicable in this EPD.

8. References

Institut Bauen und Umwelt
Institut Bauen und Umwelt e.V., Berlin (pub.): Generation of Environmental Product Declarations (EPDs);

General principles
For the EPD range of Institut Bauen und Umwelt e.V. (IBU), 2013-04
www.bau-umwelt.de

PCR Part A
Institut Bauen und Umwelt e.V., Berlin (pub.): Product Category Rules for Construction Products from the range of Environmental Product Declarations of Institut Bauen und Umwelt (IBU), Part A: Calculation Rules for the Life Cycle Assessment and Requirements on the Background Report. April 2013
www.bau-umwelt.de

PCR Part B
IBU PCR Part B: PCR Guidance-Texts for Building-Related Products and Services. From the range of Environmental Product Declarations of Institute Construction and Environment e.V. (IBU). Part B: Requirements on the EPD for Windows and doors.
www.bau-umwelt.com

ISO 14025
ISO 14025:2011-10: Environmental labels and declarations — Type III environmental declarations — Principles and procedures

EN 15804
EN 15804: 2012+A1:2014: Sustainability of construction works — Environmental Product Declarations — Core rules for the product category of construction products

ISO 14001:2004
Environmental management systems - Requirements with guidance for use (ISO 14001:2004 + Cor. 1:2009)

EN 1634-1
Fire resistance and smoke control tests for door and shutter assemblies, openable windows and elements of building hardware. Fire resistance test for door and shutter assemblies and openable windows.

EN 14351-1+A1:2010
Windows and doors. Product standard, performance characteristics.
Windows and external pedestrian door sets without resistance to fire and/or smoke leakage characteristics.

GaBi 6 2013
Software-System and Database for Life Cycle Engineering. Copyright, TM. Stuttgart, Leinfelden-Echterdingen, 1992-2013.

GaBi 6 2013D
Documentation of GaBi 6: Software-System and Database for Life Cycle Engineering. Copyright, TM. Stuttgart, Leinfelden-Echterdingen, 1992-2013.
http://documentation.gabi-software.com/

EN 20140-3
Acoustics - Measurement of sound insulation in buildings and of building elements.

ISO 10077-2:2012
Thermal performance of windows, doors and shutters. Calculation of thermal transmittance. Numerical method for frames

ISO 10077-1:2005+Ap1:2010
Thermal performance of windows, doors and shutters - Calculation of thermal transmittance

ISO 717-1
Acoustics. Rating of sound insulation in buildings and of building elements. Airborne sound insulation

EN 12400:2004
Windows and pedestrian doors. Mechanical durability. Requirements and classification

9. Annex

Results shown below were calculated using TRACI Methodology.

DESCRIPTION OF THE SYSTEM BOUNDARY (X = INCLUDED IN LCA; MND = MODULE NOT DECLARED)

PRODUCT STAGE			CONSTRUCTION PROCESS STAGE		USE STAGE							END OF LIFE STAGE				BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARYS
Raw material supply	Transport	Manufacturing	Transport from the gate to the site	Assembly	Use	Maintenance	Repair	Replacement[1)]	Refurbishment[1)]	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse- Recovery- Recycling- potential
A1	**A2**	**A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
X	X	X	X	X	MND	MND	MND	MND	MND	MND	MND	MND	X	X	X	X

RESULTS OF THE LCA - ENVIRONMENTAL IMPACT: One piece of Prometal Honeycomb core steel door

Parameter	Parameter	Unit	A1 - A3	A4	A5	C2	C3	C4	D
GWP	Global warming potential	[kg CO_2-Eq.]	2.14E+02	1.77E+00	9.33E-01	1.77E+00	0.00E+00	9.14E-01	-1.17E+02
ODP	Depletion potential of the stratospheric ozone layer	[kg CFC11-Eq.]	2.78E-09	9.03E-12	4.16E-12	9.02E-12	0.00E+00	2.93E-12	5.78E-10
AP	Acidification potential of land and water	[kg SO_2-Eq.]	9.27E-01	1.06E-02	2.63E-04	1.06E-02	0.00E+00	2.73E-04	-4.54E-01
EP	Eutrophication potential	[kg N-eq.]	5.60E-02	7.49E-04	1.33E-05	7.48E-04	0.00E+00	8.32E-06	-2.73E-02
Smog	Ground-level smog formation potential	[kg O_3-eq.]	1.28E+01	2.18E-01	5.09E-03	2.18E-01	0.00E+00	2.15E-03	-6.72E+00
Resources	Resources – resources fossil	[MJ]	1.51E+02	3.52E+00	3.31E-02	3.51E+00	0.00E+00	3.98E-02	1.44E+01

RESULTS OF THE LCA - RESOURCE USE: One piece of Prometal Honeycomb core steel door

Parameter	Parameter	Unit	A1 - A3	A4	A5	C2	C3	C4	D
PERE	Renewable primary energy as energy carrier	[MJ]	9.34E+01	-	-	-	-	-	-
PERM	Renewable primary energy resources as material utilization	[MJ]	0.00E+00	-	-	-	-	-	-
PERT	Total use of renewable primary energy resources	[MJ]	9.34E+01	9.64E-01	2.55E-02	9.63E-01	0.00E+00	2.83E-02	2.03E+01
PENRE	Non-renewable primary energy as energy carrier	[MJ]	2.60E+03	-	-	-	-	-	-
PENRM	Non-renewable primary energy as material utilization	[MJ]	0.00E+00	-	-	-	-	-	-
PENRT	Total use of non-renewable primary energy resources	[MJ]	2.60E+03	2.45E+01	3.38E-01	2.45E+01	0.00E+00	4E-01	-1.03E+03
SM	Use of secondary material	[kg]	7.87E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	Use of renewable secondary fuels	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	Use of non-renewable secondary fuels	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	Use of net fresh water	[m^3]	8.31E-01	6.80E-04	2.61E-03	6.79E-04	0.00E+00	2.23E-03	-6.37E-02

RESULTS OF THE LCA – OUTPUT FLOWS AND WASTE CATEGORIES: One piece of Prometal Honeycomb core steel door

Parameter	Parameter	Unit	A1 - A3	A4	A5	C2	C3	C4	D
HWD	Hazardous waste disposed	[kg]	4.11E-02	5.59E-05	2.34E-05	5.58E-05	0.00E+00	3.00E-05	7.89E-02
NHWD	Non-hazardous waste disposed	[kg]	3.94E+00	3.09E-03	3.87E-02	3.08E-03	0.00E+00	8.51E-02	-1.67E+00
RWD	Radioactive waste disposed	[kg]	2.44E-02	3.21E-05	1.78E-05	3.21E-05	0.00E+00	1.71E-05	2.65E-02
CRU	Components for re-use	[kg]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-
MFR	Materials for recycling	[kg]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.23E+01	0.00E+00	-
MER	Materials for energy recovery	[kg]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-
EEE	Exported electrical energy	[MJ]	0.00E+00	0.00E+00	1.33E+00	0.00E+00	0.00E+00	1.75E+00	-
EET	Exported thermal energy	[MJ]	0.00E+00	0.00E+00	2.79E+01	0.00E+00	0.00E+00	8.28E+01	-

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