

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-20160164-IBA1-EN
Issue date	16.08.2016
Valid to	15.08.2021

OneSystem Panic lock
ASSA ABLOY

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



1. General Information

<p>ASSA ABLOY</p> <hr/> <p>Programme holder IBU - Institut Bauen und Umwelt e.V. Panoramastr. 1 10178 Berlin Germany</p> <hr/> <p>Declaration number EPD-ASA-20160164-IBA1-EN</p> <hr/> <p>This Declaration is based on the Product Category Rules: IBU: PCR Building Hardware products, 02.2016 (PCR tested and approved by the SVR)</p> <hr/> <p>Issue date 16.08.2016</p> <hr/> <p>Valid to 15.08.2021</p> <hr/> <p> Prof. Dr.-Ing. Horst J. Bossemayer (President of Institut Bauen und Umwelt e.V.)</p> <hr/> <p> Dr.-Ing. Birkhart Lehmann (Managing Director IBU)</p>	<p>OneSystem Panic lock</p> <hr/> <p>Owner of the Declaration ASSA ABLOY Sicherheitstechnik GmbH Bildstockstraße 20 72458 Albstadt GERMANY</p> <hr/> <p>Declared product / Declared unit The declaration represents 1 single point lock, with latch and bolt and panic function</p> <hr/> <p>Scope: This declaration and its LCA study are relevant to ASSA ABLOY OneSystem Standard Panic, with latch and bolt. The primary manufacturing processes are made by external suppliers and the final manufacturing processes and assembly for all lock components occur at the manufacturing factory in ASSA ABLOY, Romania. 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.</p> <hr/> <p>Verification</p> <table border="1"> <tr> <td colspan="2">The CEN Norm /EN 15804/ serves as the core PCR</td> </tr> <tr> <td colspan="2">Independent verification of the declaration according to /ISO 14025/</td> </tr> <tr> <td><input type="checkbox"/> internally</td> <td><input checked="" type="checkbox"/> externally</td> </tr> </table> <hr/> <p> Dr. Wolfram Trinius (Independent verifier appointed by SVR)</p>	The CEN Norm /EN 15804/ serves as the core PCR		Independent verification of the declaration according to /ISO 14025/		<input type="checkbox"/> internally	<input checked="" type="checkbox"/> externally
The CEN Norm /EN 15804/ serves as the core PCR							
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2. Product

2.1 Product description

Product name: ASSA ABLOY OneSystem Panic lock.

Product characteristic: single point locks for pan

- Latch reversible between DIN left hand and right hand
- Panic function inwards/outwards is reversible
- Optional with top locking
- Deadbolt with anti manipulation design
- For Euro profile cylinders and Swiss round profile cylinders
- Bolt: single turn with 20 mm throw
- Small rear backset 15 mm
- Panic function in B, C, D, E ,P available
- Tested for 1,000,000 cycles and 300 kg door weight
- Compliance with EN 179/EN 1125, EN 12209.

2.2 Application

OneSystem Standard panic locks are designed for single or double leaf doors and is typically installed in tubular frame doors in steel, aluminum and wooden doors - commercial project doors, fire doors, special doors, multi-functional doors, controlled security doors

in office buildings, hospitals, hotels, shopping centres, public buildings, industrial buildings etc.

2.3 Technical Data

Technical data

Name	Value	Unit
Version: narrow stile in Backset	30,35,40,45	mm
Version: wide stile in Backset	50,55,65,80,100	mm
Distance (wide stile)	72 / 74	mm
Distance (narrow stile)	92 / 94	mm
Types	Profile cylinder / Round cylinder	-
Permitted door dimensions	1500 X 4000	mm
Permitted door weight	300	kg
Bolt throw	20 mm with single turn	-

2.4 Placing on the market / Application rules

For the placing on the market in the EU/EFTA (with the exception of Switzerland) the Regulation (EU) No.

305/2011 applies. The products need a Declaration of Performance taking into consideration

- /EN 12209:2003/AC 2005/ Building hardware - Mechanically operated locks and plates - Requirements and test methods
- /EN 179:2008/ Building hardware — Emergency exit devices operated by a lever handle or push pad, for use on escape routes — Requirements and test methods
- /EN 1125:2008/ Building hardware — Panic exit devices operated by a horizontal bar, for use on escape routes — Requirements and test methods

and shall be CE-marked.

For the application and use the respective national provisions apply.

2.5 Delivery status

The locks are delivered as separate lock case in a box size - 350mm x 27mm x 65 mm.

2.6 Base materials / Ancillary materials

The average composition of the lock, as following:

Component	Percentage in mass (%)
Aluminum	26.79
Brass	1.83
Zinc	1.83
Stainless Steel	50.41
Steel	18.76
Plastics	0.38
Total	100.0

2.7 Manufacture

The primary manufacturing processes are made by different suppliers and the final manufacturing processes for lock cases occur at factory ASSA ABLOY Romania.

The components come from processes like stamped steel, turning, zinc and steel casting. Final assembly takes place in Romania.

The factory of ASSA ABLOY Romania has a quality management system certified according to /ISO 9001:2008/.

2.8 Environment and health during manufacturing

ASSA ABLOY is committed to producing and distributing door opening solutions, where health & safety is the primary focus for all employees and associates.

- Environmental operations, GHG, energy, water, waste, VOC, surface treatment and H&S are being routinely monitored. Inspections, audits, and reviews are conducted periodically to ensure applicable standards are met and environment management program according to /ISO 14001:2004/ is evaluated. Code of Conduct covers human rights, labor practices and decent work. Management of ASSA ABLOY is aware of their environmental roles and responsibilities, providing

appropriate training, supporting accountability and recognizing outstanding performance.

2.9 Product processing/Installation

The OneSystem single point locks are distributed through and installed by trained installation technicians, such as locksmiths, carpenters etc. adhering to local/national standards and requirements.

2.10 Packaging

The lock is packed in a cardboard box with corrugated carton inlays, including one manual. Packaging and the manual is fully recyclable.

Material	Value (%)
Cardboard/paper	100
Total	100.0

Waste codes according to European Waste Catalogue and Hazardous Waste List - Valid from 1 January 2002:

EWC 15 01 01 paper and cardboard packaging.

2.11 Condition of use

Annual inspection is recommended in order to guarantee correct functionality of the product and the door leaf. The inspection includes: checking, fixing screws to ensure they are properly tight, correct adjustments (door gaps), compliance with local legal inspection standards and greasing all the moving parts.

2.12 Environment and health during use

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

2.13 Reference service life

Approved for 1.000.000 cycles under normal working conditions. The typical life time is 15-20 years, dependent on frequency of cycles.

2.14 Extraordinary effects Fire

The locks are tested for usage in fire and smoke protection doors according to /EN1634-1/.

Water

Contain no substances that have any impact on water in case of flood.

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 door to another. The majority, by weight, of components is steel which can be recycled.

Waste codes according to European Waste Catalogue and Hazardous Waste List - Valid from 1 January 2002:

EWC 17 04 05 iron and steel.

2.16 Disposal

The majority, of components is steel, stainless steel and aluminum, which can be recycled. The locks can be mechanically dissembled to separate the different materials. 100% of the materials used are recyclable.

2.17 Further information

ASSA ABLOY Sicherheitstechnik GmbH
Bildstockstraße 20
72458 Albstadt
GERMANY.

3. LCA: Calculation rules

3.1 Declared Unit

The declaration refers to 1 piece of OneSystem Standard Panic lock as specified in Part B requirements on the EPD for PCR Building Hardware products.

Declared unit

Name	Value	Unit
Declared unit	1	Piece of panic lock
Mass (without packaging)	2.239	kg
Conversion factor to 1 kg	0.446	-

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 burdens and benefits or recycling potential from EoL and A5.

3.3 Estimates and assumptions

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. In case a specific data representing the 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 2013/. The GaBi-database contains consistent and documented datasets which are documented in the online

GaBi-documentation /GaBi 6 2013D/.

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. The last revision of the used background data has taken place not longer than 10 years ago.

3.7 Period under review

The period under review is 2013/14 (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 taken into account.

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).

Installation into the building (A5)

Name	Value	Unit
Output substances following waste treatment on site (Paper packaging)	0.04951	kg

Reference service life

Name	Value	Unit
Reference service life	15 - 20	a

End of life (C2 and C4)

Name	Value	Unit
Collected separately Aluminum, steel, stainless steel, plastics, brass	2.239	kg
Collected as mixed construction waste – construction waste for landfilling	0	kg
Reuse Plastics	0.008	kg
Recycling Aluminum, steel, stainless steel, brass	2.239	kg
Construction waste for landfilling	0	kg

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

Name	Value	Unit
Collected separately waste type (including packaging)	2.289	kg
Recycling Aluminum	26.21	%
Recycling Brass	1.80	%
Recycling Zinc	1.79	%
Recycling Steel	18.35	%
Recycling Stainless steel	49.31	%
Reuse Plastics	0.38	%
Reuse Paper packaging (from A5)	2.16	%

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 BOUNDARIES
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 OneSystem Panic lock

Parameter	Parameter	Unit	A1-3	A4	A5	C2	C3	C4	D
GWP	Global warming potential	[kg CO ₂ -Eq.]	1.32E+01	5.45E-02	7.01E-02	5.45E-03	0.00E+00	2.02E-02	-7.24E+00
ODP	Depletion potential of the stratospheric ozone layer	[kg CFC11-Eq.]	2.16E-09	2.61E-13	3.21E-13	2.61E-14	0.00E+00	6.10E-14	2.68E-09
AP	Acidification potential of land and water	[kg SO ₂ -Eq.]	7.75E-02	2.49E-04	1.60E-05	2.49E-05	0.00E+00	5.16E-06	-3.43E-02
EP	Eutrophication potential	[kg (PO ₄) ³⁻ -Eq.]	4.29E-03	5.69E-05	2.79E-06	5.69E-06	0.00E+00	3.91E-07	-1.94E-03
POCP	Formation potential of tropospheric ozone photochemical oxidants	[kg Ethen Eq.]	4.72E-03	-8.04E-05	1.13E-06	-8.04E-06	0.00E+00	2.51E-07	-2.81E-03
ADPE	Abiotic depletion potential for non fossil resources	[kg Sb Eq.]	1.49E-03	2.05E-09	1.27E-09	2.05E-10	0.00E+00	1.34E-09	-2.80E-05
ADPF	Abiotic depletion potential for fossil resources	[MJ]	1.40E+02	7.51E-01	1.96E-02	7.51E-02	0.00E+00	8.57E-03	-6.71E+01

RESULTS OF THE LCA - RESOURCE USE: One piece of OneSystem Panic lock

Parameter	Parameter	Unit	A1-3	A4	A5	C2	C3	C4	D
PERE	Renewable primary energy as energy carrier	[MJ]	3.73E+01	-	-	-	-	-	-
PERM	Renewable primary energy resources as material utilization	[MJ]	0.00E+00	-	-	-	-	-	-
PERT	Total use of renewable primary energy resources	[MJ]	3.73E+01	2.96E-02	1.83E-03	2.96E-03	0.00E+00	6.28E-04	-2.33E+01
PENRE	Non renewable primary energy as energy carrier	[MJ]	1.60E+02	-	-	-	-	-	-
PENRM	Non renewable primary energy as material utilization	[MJ]	0.00E+00	-	-	-	-	-	-
PENRT	Total use of non renewable primary energy resources	[MJ]	1.60E+02	7.54E-01	2.30E-02	7.54E-02	0.00E+00	9.52E-03	-8.03E+01
SM	Use of secondary material	[kg]	7.35E-01	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]	9.34E-02	2.09E-05	2.04E-04	2.09E-06	0.00E+00	4.95E-05	-5.99E-02

RESULTS OF THE LCA – OUTPUT FLOWS AND WASTE CATEGORIES: One piece of OneSystem Panic lock

Parameter	Parameter	Unit	A1-3	A4	A5	C2	C3	C4	D
HWD	Hazardous waste disposed	[kg]	4.98E-03	1.72E-06	1.58E-06	1.72E-07	0.00E+00	6.65E-07	1.63E-03
NHWD	Non hazardous waste disposed	[kg]	2.16E+00	9.48E-05	1.76E-03	9.48E-06	0.00E+00	1.89E-03	-6.40E-01
RWD	Radioactive waste disposed	[kg]	8.48E-03	9.87E-07	1.35E-06	9.87E-08	0.00E+00	3.79E-07	-5.23E-03
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	4.05E-02	0.00E+00	2.19E+00	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	8.87E-02	0.00E+00	0.00E+00	3.88E-02	0.00E+00
EET	Exported thermal energy	[MJ]	0.00E+00	0.00E+00	2.50E-01	0.00E+00	0.00E+00	1.06E-01	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 98% and 100% 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, stainless steel and aluminum, with almost 99%, mainly due to the energy

consumption on this process. Stainless steel, steel and aluminum account with 96% 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

IBU 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 Building Hardware products, 02.2016. www.bau-umwelt.com

EN 15804

EN 15804:2012+A1:2013: Sustainability of construction works — Environmental Product Declarations — Core rules for the product category of construction products.

GaBi 6 2013

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

GaBi 6 2013D

GaBi 6 2013D: Documentation of GaBi 6: Software-System and Database for Life Cycle Engineering.

Copyright, TM. Stuttgart, thinkstep AG, Leinfelden-Echterdingen, 1992-2013. <http://documentation.gabi-software.com/>

ISO 14025:2011

Environmental labels and declarations — Type III environmental declarations — Principles and procedures

ISO 9001:2008

Quality management systems – Requirements

ISO 14001:2004

Environmental management systems - Requirements with guidance for use

EN 1634-1:2014

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

EWC

European Waste Catalogue

EN 12209:2003/AC 2005

Building hardware - Mechanically operated locks and plates - Requirements and test methods

EN 179:2008

Building hardware — Emergency exit devices operated by a lever handle or push pad, for use on escape routes — Requirements and test methods

EN 1125:2008

Building hardware — Panic exit devices operated by a horizontal bar, for use on escape routes — Requirements and test methods

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 OneSystem Panic lock

Parameter	Parameter	Unit	A1-3	A4	A5	C2	C3	C4	D
GWP	Global warming potential	[kg CO ₂ -Eq.]	1.32E+01	5.45E-02	7.01E-02	5.45E-03	0.00E+00	2.02E-02	-7.24E+00
ODP	Depletion potential of the stratospheric ozone layer	[kg CFC11-Eq.]	2.30E-09	2.77E-13	3.41E-13	2.77E-14	0.00E+00	6.49E-14	2.85E-09
AP	Acidification potential of land and water	[kg SO ₂ -Eq.]	7.45E-02	3.26E-04	1.94E-05	3.26E-05	0.00E+00	6.05E-06	-3.28E-02
EP	Eutrophication potential	[kg N-eq.]	3.50E-03	2.30E-05	1.12E-06	2.30E-06	0.00E+00	1.84E-07	-1.12E-03
Smog	Ground-level smog formation potential	[kg O ₃ -eq.]	7.30E-01	6.70E-03	4.52E-04	6.70E-04	0.00E+00	4.75E-05	-3.47E-01
Resources	Resources – fossil resources	[MJ]	1.02E+01	1.08E-01	2.31E-03	1.08E-02	0.00E+00	8.82E-04	-3.61E+00

RESULTS OF THE LCA - RESOURCE USE: One piece of OneSystem Panic lock

Parameter	Parameter	Unit	A1-3	A4	A5	C2	C3	C4	D
PERE	Renewable primary energy as energy carrier	[MJ]	3.73E+01	-	-	-	-	-	-
PERM	Renewable primary energy resources as material utilization	[MJ]	0.00E+00	-	-	-	-	-	-
PERT	Total use of renewable primary energy resources	[MJ]	3.73E+01	2.96E-02	1.83E-03	2.96E-03	0.00E+00	6.28E-04	-2.33E+01
PENRE	Non renewable primary energy as energy carrier	[MJ]	1.60E+02	-	-	-	-	-	-
PENRM	Non renewable primary energy as material utilization	[MJ]	0.00E+00	-	-	-	-	-	-
PENRT	Total use of non renewable primary energy resources	[MJ]	1.60E+02	7.54E-01	2.30E-02	7.54E-02	0.00E+00	9.52E-03	-8.03E+01
SM	Use of secondary material	[kg]	7.35E-01	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]	9.34E-02	2.09E-05	2.04E-04	2.09E-06	0.00E+00	4.95E-05	-5.99E-02

RESULTS OF THE LCA – OUTPUT FLOWS AND WASTE CATEGORIES: One piece of OneSystem Panic lock

Parameter	Parameter	Unit	A1-3	A4	A5	C2	C3	C4	D
HWD	Hazardous waste disposed	[kg]	4.98E-03	1.72E-06	1.58E-06	1.72E-07	0.00E+00	6.65E-07	1.63E-03
NHWD	Non hazardous waste disposed	[kg]	2.16E+00	9.48E-05	1.76E-03	9.48E-06	0.00E+00	1.89E-03	-6.40E-01
RWD	Radioactive waste disposed	[kg]	8.48E-03	9.87E-07	1.35E-06	9.87E-08	0.00E+00	3.79E-07	-5.23E-03
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	4.05E-02	0.00E+00	2.19E+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	-
EEE	Exported electrical energy	[MJ]	0.00E+00	0.00E+00	8.87E-02	0.00E+00	0.00E+00	3.88E-02	-
EET	Exported thermal energy	[MJ]	0.00E+00	0.00E+00	2.50E-01	0.00E+00	0.00E+00	1.06E-01	-



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