ENVIRONMENTAL PRODUCT DECLARATION

as per ISO 14025 and EN 15804

Owner of the Declaration	**ASSA ABLOY Entrance Systems AB**
Programme holder	Institut Bauen und Umwelt e.V. (IBU)
Publisher	Institut Bauen und Umwelt e.V. (IBU)
Declaration number	EPD-ASA-20170041-IBA1-EN
Issue date	01.03.2017
Valid to	28.02.2022

ASSA ABLOY DS6060A curtain dock shelter aluminium

ASSA ABLOY Entrance Systems AB

Institut Bauen und Umwelt e.V.

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

1. General Information

ASSA ABLOY Entrance Systems AB

Programme holder

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

Declaration number

EPD-ASA-20170041-IBA1-EN

This Declaration is based on the Product Category Rules (PCR):

PCR Loading dock and loading dock equipment, 01.2017
(PCR tested and approved by the SVR)

Issue date

01.03.2017

Valid to

28.02.2022

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

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

ASSA ABLOY DS6060A curtain dock shelter aluminium

ASSA ABLOY Entrance Systems AB

Lodjursgatan 10
SE-261 44 Landskrona
Sweden

Declared product / Declared unit

This declaration represents 1 mechanical curtain dock shelter with the following configuration:

Dock shelter depth 600 mm, nominal height 3600 mm, nominal width 3450 mm, top curtain 1000 mm, side curtain 700 mm, curtain colour black, parking guides white, aluminium frame. Product name: ASSA ABLOY DS6060A curtain dock shelter aluminium.

Scope:

This declaration and its LCA study are relevant to the ASSA ABLOY DS6060A curtain dock shelter aluminium. The production location is Hunedoara, Romania and components are sourced from international tier one suppliers. ASSA ABLOY DS6060A curtain dock shelter aluminium size vary according to project requirements; a standard dock shelter depth 600 mm, nominal height 3600 mm, nominal width 3450 mm, curtain colour black, parking guides white, aluminium frame. 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 Norm /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 SVR)

2. Product

2.1 Product description / Product definition

Product name: ASSA ABLOY DS6060A
Product characteristic: Mechanical curtain dock shelter

The vehicle reverses backwards into the curtain dock shelter which seals it off with flexible side and top curtains, giving weather protection during the loading and unloading process when the sectional door of the loading bay is opened.
The curtain material has a very high wear and tear resistance.
Should a vehicle deviate from the dock-in centre-line and hit the shelter frame, built-in springs allow the shelter to follow the movement without being damaged.

The dock shelter consists of five main components:
1) Rear frame sides and top
2) Bracing arms and springs in the side sections
3) Front frame side and top
4) Front side curtains and front top curtain
5) Continuous roof cover curtain

The rear frame is connected to the building facade around the door opening of the loading bay. The bracing arms and springs in the side sections make the dock shelter collapsible and secures that the front part is tensed with pressure towards the vehicle. The front frame side and top hold the front curtains in place. The front curtains are in contact with the rear construction of the vehicle and seal it off to the side and the top. The continuous roof cover curtain closes the side and top sections between the rear and the front frame; this is the sidewalls and the roof of the dock shelter.

2.2 Application

The ASSA ABLOY dock shelter is part of the total docking solution. It seals off the vehicle with flexible side and top curtains, giving weather protection during the loading and unloading process when the sectional door of the loading bay is opened.
The ASSA ABLOY dock shelter is the standard solution for energy saving oriented operators.

2.3 Technical Data

The technical specifications of ASSA ABLOY DS6060A curtain dock shelter aluminium are as below:

Parameter	Value	Unit
Normal height	3600	mm
Normal width	3450	mm
Normal depth	600	mm
Top curtain	1000	mm
Side curtain	700	mm
Parking guides	white	-
Top and side curtains material, quality, thickness and weight	Double layer with high quality polyester 3.0 mm 3400 g/m²	-
Continuous roof cover material, thickness and weight	One layer high quality polyester 0.5 mm 680 g/m²	-
Flammability	DIN 75 200	-
Weight	84	kg

The standards that are applied for dock shelters are:
DIN 60 001 carrier fabric.
DIN 53 354 tensile strength and DIN 75 200 behaviour in fire.

The ASSA ABLOY DS6060A dock shelter has been designed to meet all operational and safety requirements in the loading industry according European Directives and the standards issued by the European Standardization Committee (CEN).

2.4 Delivery status

The dock shelter is delivered partly pre-assembled and in individual parts for completion and installation on site.

2.5 Base materials / Ancillary materials

The average composition for ASSA ABLOY mechanical dock shelter is as following:

Component	Percentage in mass (%)
Aluminium	42.26
Plastics	44.28
Steel	13.46
Total	**100.0**

2.6 Manufacture

The final manufacturing processes occur in the factory Hunedoara, Romania. All main aluminium frame parts and steel components are delivered fully processed by local Romanian suppliers, the curtains by a Czech supplier. The production process is composed of fixing the front top and side curtains to the front aluminium frames by sliding the curtain into the slits in the frame and fixing with rivets, and by packing all the materials into the cardboard box.

The factory in Hunedoara has a Quality Management system certified according to ISO 9001:2008

2.7 Environment and health during manufacturing

ASSA ABLOY is committed to producing and distributing door opening solutions with minimal environmental impact, where health & safety is the primary focus for all employees and associates. Environmental operations, Greenhouse Gas Emissions, energy, water, waste, VOC, surface treatment and H&S are being 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.

•Code of Conduct covers human rights, labour 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.

• The factory of Hunedoara, Romania has an Environmental Management system certified according to ISO 14001:2004

2.8 Product processing/Installation

The dock shelter is delivered partly pre-assembled and in individual parts ready for completion and installation on site.
The rear frame is connected to the facade of the building in front of the door opening of the loading bay, the bracing arms are mounted to the rear frame. The front side frames with pre-mounted front curtains from the factory are connected to the bracing arms. The front top frame with pre-mounted curtains from the factory is connected with angle brackets to the side front frames and the springs are mounted in the side sections. Then the continuous roof curtain is positioned in the profile of the front and rear frame and pulled through to cover the side and roof part. The installation is performed by a qualified Installer using a drilling machine, angle grinder and other hand tools.

2.9 Packaging

The material of the dock shelter is packed in a cardboard box with plastic for the transport safety. The cardboard box and the packing material are recyclable. A wooden pallet is used for the transport, the standard transport volume of one piece is about 3600x1000x300 mm.

Material	Percentage in mass (%)
Wood	79.75
Cardboard/paper	18.68
Plastics	1.57
Total	**100.0**

2.10 Condition of use

Regular inspections by a trained qualified person are recommended a minimum of one visit per year. The

dock shelter must be inspected for wear and tear and the general functionality.

2.11 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.\

2.12 Reference service life

ASSA ABLOY mechanical curtain dock shelters are rated for 15 years of standard daily use. This reference service life based on ASSA ABLOY's own experience over the last 50 years and is valid for the 10 main competitor's products in the docking industry.

2.13 Extraordinary effects

Fire

Mechanical shelter itself is not fireproof and is not suitable to use in a fireproof system.

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.

2.14 Re-use stage

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

2.15 Disposal

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

Manufacturing

Offcuts and scraps during the manufacturing process are directed to a recycling unit. Waste is sent for destruction. No plastic waste occurs during manufacturing stage since all plastic parts are delivered completely by supplier. No processing of the parts takes place in the assembly factory.

EWC 12 01 01 Ferrous metal filings and turnings
EWC 08 02 01 Waste coating powders

Packaging

All materials incurred during installation are directed to a recycling unit.
EWC 15 01 01 paper and cardboard packaging
EWC 15 01 02 plastic packaging
EWC 15 01 03 wooden packaging

End of life

All materials are directed to a unit to be separated and processed.
EWC 17 02 03 plastic
EWC 17 04 05 iron and steel

2.16 Further information

ASSA ABLOY Entrance Systems AB
Lodjursgatan 10
SE-261 44 Landskrona
Sweden
www.assaabloyentrance.com

3. LCA: Calculation rules

3.1 Declared Unit

The declaration refers to the functional unit of 1 piece of ASSA ABLOY DS6060A curtain dock shelter aluminium as specified in Part B requirements on the EPD for PCR Loading dock and loading dock equipment

Declared unit

Name	Value	Unit
Declared unit	84.36 kg	1 piece of mechanical curtain dock shelter
Conversion factor to 1 kg	0.0012	-

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 2700 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 modelling 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 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 2015/2016 (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 paper
- Waste incineration of wood
- Waste incineration of plastics

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

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)	8.21	kg
Output substances following waste treatment on site (Plastics packaging)	0.69	kg
Output substances following waste treatment on site (Wood packaging)	35.07	kg

Reference service life

Name	Value	Unit
Reference service life	15	a

End of life (C2-C4)

Name	Value	Unit
Collected separately Aluminium, Steel, Plastics	84.36	kg
Recycling Aluminium	35.65	kg
Recycling Steel	11.35	kg
Incineration Plastic Parts	37.36	kg

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

Name	Value	Unit
Collected separately waste type (including packaging)	128.34	kg
Recycling Steel	8.85	%
Recycling Aluminium	27.78	%
Incineration Plastic Parts (incl. packaging)	29.64	%
Reuse Paper packaging (from A5)	6.40	%
Incineration of wood (from A5)	27.33	%

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 ASSA ABLOY DS6060A curtain dock shelter aluminium

Parameter	Parameter	Unit	A1 - A3	A4	A5	C2	C3	C4	D
GWP	Global warming potential	[kg CO_2-Eq.]	4.61E+02	1.62E+01	6.98E+01	4.02E-01	0.00E+00	9.38E+01	-4.17E+02
ODP	Depletion potential of the stratospheric ozone layer	[kg CFC11-Eq.]	1.21E-07	7.76E-11	2.82E-10	1.92E-12	0.00E+00	2.83E-10	1.29E-07
AP	Acidification potential of land and water	[kg SO_2-Eq.]	2.61E+00	7.52E-02	1.09E-02	1.84E-03	0.00E+00	2.39E-02	-2.04E+00
EP	Eutrophication potential	[kg $(PO_4)^{3-}$- Eq.]	1.51E-01	1.70E-02	1.71E-03	4.20E-04	0.00E+00	1.81E-03	-1.02E-01
POCP	Formation potential of tropospheric ozone photochemical oxidants	[kg Ethen Eq.]	2.15E-01	-2.38E-02	8.50E-04	-5.93E-04	0.00E+00	1.16E-03	-1.25E-01
ADPE	Abiotic depletion potential for non-fossil resources	[kg Sb Eq.]	1.51E-03	6.11E-07	1.04E-06	1.52E-08	0.00E+00	6.20E-06	-5.92E-05
ADPF	Abiotic depletion potential for fossil resources	[MJ]	6.54E+03	2.24E+02	1.63E+01	5.55E+00	0.00E+00	3.97E+01	-4.36E+03

RESULTS OF THE LCA - RESOURCE USE: One piece ASSA ABLOY DS6060A curtain dock shelter aluminium

Parameter	Parameter	Unit	A1 - A3	A4	A5	C2	C3	C4	D
PERE	Renewable primary energy as energy carrier	[MJ]	2.52E+03	-	-	-	-	-	-
PERM	Renewable primary energy resources as material utilization	[MJ]	0.00E+00	-	-	-	-	-	-
PERT	Total use of renewable primary energy resources	[MJ]	2.52E+03	8.80E+00	1.58E+00	2.19E-01	0.00E+00	2.91E+00	-1.47E+03
PENRE	Non-renewable primary energy as energy carrier	[MJ]	7.79E+03	-	-	-	-	-	-
PENRM	Non-renewable primary energy as material utilization	[MJ]	0.00E+00	-	-	-	-	-	-
PENRT	Total use of non-renewable primary energy resources	[MJ]	7.79E+03	2.24E+02	1.92E+01	5.56E+00	0.00E+00	4.41E+01	-5.41E+03
SM	Use of secondary material	[kg]	7.34E+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]	4.74E+00	6.21E-03	1.84E-01	1.54E-04	0.00E+00	2.29E-01	-3.87E+00

RESULTS OF THE LCA – OUTPUT FLOWS AND WASTE CATEGORIES: One piece ASSA ABLOY DS6060A curtain dock shelter aluminium

Parameter	Parameter	Unit	A1 - A3	A4	A5	C2	C3	C4	D
HWD	Hazardous waste disposed	[kg]	2.67E-01	5.11E-04	1.34E-03	1.27E-05	0.00E+00	3.08E-03	-1.12E-01
NHWD	Non-hazardous waste disposed	[kg]	6.28E+01	2.82E-02	1.21E+00	7.00E-04	0.00E+00	8.74E+00	-5.28E+01
RWD	Radioactive waste disposed	[kg]	4.97E-01	2.94E-04	1.17E-03	7.29E-06	0.00E+00	1.76E-03	-4.19E-01
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	4.33E+01	0.00E+00	4.72E+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	8.33E+01	0.00E+00	0.00E+00	1.80E+02	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 72% and 100% to the overall results for all the environmental impact assessment categories hereby considered. Aluminium and steel account in total for more than 85% of 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.ibu-epd.com

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.ibu-epd.com

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 PCR Loading dock and loading dock equipments.
www.ibu-epd.com

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

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

ISO 9001:2008
Quality management systems - Requirements

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

OHSAS 18001:2007
Occupational Health and Safety Assessment Series

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

DIN 60 001
Carrier fabric

DIN 53 354
Tensile strength

DIN 75 200
Behaviour in fire

EWC
Waste codes according to European Waste Catalogue and Hazardous Waste List - Valid from 1 January 2002.
http://ec.europa.eu/environment/waste/framework/list.htm

EWC 15 01 01
paper and cardboard packaging

EWC 15 01 02
plastic packaging

EWC 15 01 03
wooden packaging

EWC 17 02 03
plastic

EWC 17 04 05 iron and steel

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 ASSA ABLOY DS6060A curtain dock shelter aluminium

Parameter	Parameter	Unit	A1 - A3	A4	A5	C2	C3	C4	D
GWP	Global warming potential	[kg CO_2-Eq.]	4.61E+02	1.62E+01	6.98E+01	4.02E-01	0.00E+00	9.38E+01	-4.17E+02
ODP	Depletion potential of the stratospheric ozone layer	[kg CFC11-Eq.]	1.29E-07	8.25E-11	3.00E-10	2.05E-12	0.00E+00	3.01E-10	1.38E-07
AP	Acidification potential of land and water	[kg SO_2-Eq.]	2.49E+00	9.80E-02	1.27E-02	2.40E-03	0.00E+00	2.80E-02	-1.92E+00
EP	Eutrophication potential	[kg N-eq.]	9.85E-02	6.88E-03	6.96E-04	1.70E-04	0.00E+00	8.55E-04	-5.32E-02
Smog	Ground-level smog formation potential	[kg O_3-eq.]	2.50E+01	2.01E+00	2.51E-01	4.95E-02	0.00E+00	2.20E-01	-1.79E+01
Resources	Resources – resources fossil	[MJ]	6.43E+02	3.22E+01	1.89E+00	7.98E-01	0.00E+00	4.09E+00	-4.04E+02

RESULTS OF THE LCA - RESOURCE USE: One piece ASSA ABLOY DS6060A curtain dock shelter aluminium

Parameter	Parameter	Unit	A1 - A3	A4	A5	C2	C3	C4	D
PERE	Renewable primary energy as energy carrier	[MJ]	2.52E+03	-	-	-	-	-	-
PERM	Renewable primary energy resources as material utilization	[MJ]	0.00E+00	-	-	-	-	-	-
PERT	Total use of renewable primary energy resources	[MJ]	2.52E+03	8.80E+00	1.58E+00	2.19E-01	0.00E+00	2.91E+00	-1.47E+03
PENRE	Non-renewable primary energy as energy carrier	[MJ]	7.79E+03	-	-	-	-	-	-
PENRM	Non-renewable primary energy as material utilization	[MJ]	0.00E+00	-	-	-	-	-	-
PENRT	Total use of non-renewable primary energy resources	[MJ]	7.79E+03	2.24E+02	1.92E+01	5.56E+00	0.00E+00	4E+01	-5.41E+03
SM	Use of secondary material	[kg]	7.34E+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]	4.74E+00	6.21E-03	1.84E-01	1.54E-04	0.00E+00	2.29E-01	-3.87E+00

RESULTS OF THE LCA – OUTPUT FLOWS AND WASTE CATEGORIES: One piece ASSA ABLOY DS6060A curtain dock shelter aluminium

Parameter	Parameter	Unit	A1 - A3	A4	A5	C2	C3	C4	D
HWD	Hazardous waste disposed	[kg]	2.67E-01	5.11E-04	1.34E-03	1.27E-05	0.00E+00	3.08E-03	-1.12E-01
NHWD	Non-hazardous waste disposed	[kg]	6.28E+01	2.82E-02	1.21E+00	7.00E-04	0.00E+00	8.74E+00	-5.28E+01
RWD	Radioactive waste disposed	[kg]	4.97E-01	2.94E-04	1.17E-03	7.29E-06	0.00E+00	1.76E-03	-4.19E-01
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	4.33E+01	0.00E+00	4.72E+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	8.33E+01	0.00E+00	0.00E+00	1.80E+02	-
EET	Exported thermal energy	[MJ]	0.00E+00	0.00E+00	2.34E+02	0.00E+00	0.00E+00	4.93E+02	-

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