ENVIRONMENTAL PRODUCT DECLARATION

as per ISO 14025 and EN 15804

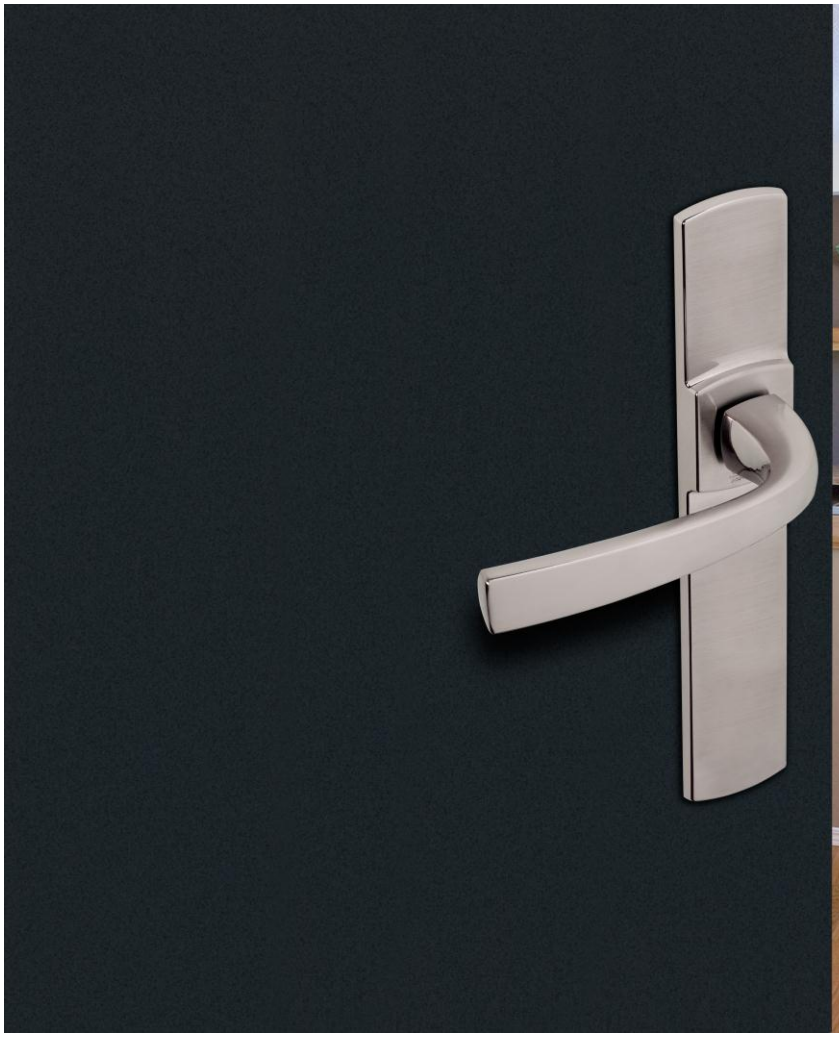
Owner of the Declaration	**Assa Abloy Aube Anjou SA**
Programme holder	Institut Bauen und Umwelt e.V. (IBU)
Publisher	Institut Bauen und Umwelt e.V. (IBU)
Declaration number	EPD-ASA-20150168-IBA1-EN
Issue date	10.06.2015
Valid to	09.06.2020

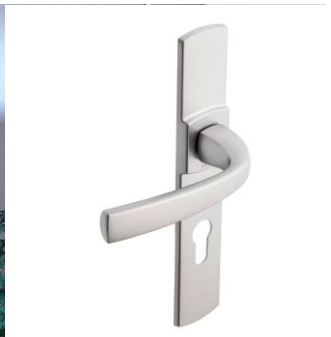
Hinges and Handles – Muze door handle set

Assa Abloy Aube Anjou SA

Institut Bauen und Umwelt e.V.

www.bau-umwelt.com / https://epd-online.com





1. General Information

Assa Abloy Aube Anjou SA

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

Declaration number
EPD-ASA-20150168-IBA1-EN

This Declaration is based on the Product Category Rules:
IBU: PCR Locks and fittings , 07.2014
(PCR tested and approved by the independent expert committee (SVA))

Issue date
10.06.2015

Valid to
09.06.2020

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

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

Muze door handle set

Owner of the Declaration
Assa Abloy Aube Anjou SA
21 Rue Michel Couet
49160 Longue
France

Declared product / Declared unit
The declaration represents 1 door handle set – Muze door handle - consisting of the following items:
- 2 handles mounted on backplate
- 1 plastic bag including 1 spindle and 2 screws

Scope:
This declaration and its LCA study are relevant to the Muze door handle sets manufactured in Assa Abloy Aube Anjou SA (ANJOU PLANT). 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: Muze door handle set
Product characteristic:
- Muze door handle set consist of two handles and two plates made of chromed zinc.
- Handles are assembled on backplate with a patented nylon bush.
- Handles are free to rotate 360 until mounting
- The set includes accessories for installation on 38-48 mm doors (M4 screws + 7mm spindle)
- Indoor backplate includes two countersunk drilled holes
- Outdoor backplate includes two tapped pillars

2.2 Application
Muze door handles consist of a whole range of door handles offered in various finishing to equip various kind of internal residential doors.

2.3 Technical Data
The table presents the technical properties of Muze door handle set:

Technical data

Parameter	Value
Available Finishes:	Satin Chrome, Dark Chrome, Brushed Nickel
Available Sizes:	195 mm and 165 mm c-c
Width:	40 mm
Height:	220 mm

2.4 Placing on the market / Application rules
Since there is no harmonization legislation of the European Union, a CE-marking for placing the products on the market is not possible. Applicable standard for the production of the Muze door handles is /EN 1906: 2012/.

2.5 Delivery status
Muze door handle sets are delivered packed by 10 sets in a box size - 220 mm x 386 mm x 220 mm

2.6 Base materials / Auxiliary materials

The average composition for Muze door handle sets is as following:

Component	Percentage in mass (%)
Zinc	92.70
Steel	6.22
Plastic	1.04
Others	0.04
Total	**100.0**

2.7 Manufacture

The manufacturing processes occur at in factory Assa Abloy Aube Anjou SA, 21 Rue Michel Couet 49160 LONGUE (France):
1) Zinc die casting for plates and handles
2) Emerying and polishing of plates and handles
3) Plastic injection of nylon bearing
4) Chrome plating for plates and handles
5) Machining of spindle and packaging with screws
6) Robotized assembly and packaging of the complete sets

The factory of Assa Abloy Aube Anjou SA, 21 Rue Michel Couet, 49160 LONGUE (France) has a certification of Quality Management system in accordance with /ISO 9001:2008/
Location of suppliers:
Zinc: Belgium
Plastic granulate: France
Screws: France
Steel profile: France

2.8 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, 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 Environment Management program /ISO 14001:2009/ effectiveness 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.
- Any waste metals during machining are separated and recycled. The waste from the water-based painting process is delivered to waste treatment plant.

2.9 Product processing/Installation

Muze door handle sets are distributed through and installed by trained installation technicians, such as locksmiths, carpenters etc .adhering to local/national standards and requirements. The product can also be installed directly from the end-user (professional or personal)

2.10 Packaging

Muze door handle sets are packed by 10 individual plastic bags sets in a cardboard box with dimensions: 220 mm x 386 mm x 220 mm
100% of carton is made from recycled material.

Material	Value (%)
Cardboard/paper	75.5
Plastics	24.5
Total	**100.0**

All materials incurred during installation are directed to a recycling unit.
Waste codes according to European Waste Catalogue and Hazardous Waste List - Valid from 1 January 2002.
EWC 15 01 01 paper and cardboard packaging
EWC 15 01 02 plastic packaging.

2.11 Condition of use

Inside use only to avoid corrosion. Cleaning with a wet soft cloth

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

Approved for 100.000 cycles under normal working conditions, 10 years depending on cycle frequency.

2.14 Extraordinary effects

Fire
N/A

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 phase

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 zinc which can be recycled. The plastic components can be used for energy recovery within a waste incineration process.
Waste codes according to European Waste Catalogue /EWC/ and Hazardous Waste List -Valid from 1 January 2002;
/EWC/ 17 02 03 plastic
/EWC/ 17 04 04 zinc
/EWC/ 17 04 05 iron and steel

2.16 Disposal

No disposal is foreseen for the product nor for the corresponding packaging.

2.17 Further information

Assa Abloy Aube Anjou SA
21 Rue Michel Couet
49160 LONGUE (France)

3. LCA: Calculation rules

3.1 Declared Unit

The declaration refers to the functional unit of 1 piece of Muze door handle as specified in Part B requirements on the EPD for PCR Locks and fittings: (mechanical & electromechanical locks & Fittings)

Declared unit

Name	Value	Unit
Declared unit	1	piece of door handle
Mass (without packaging)	0.643	kg
Conversion factor to 1 kg	1.556	-

3.2 System boundary

Type of the EPD: cradle to gate - with Options
The following life cycle phases 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
- 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 or recycling potential from EOL and A5.

3.3 Estimates and assumptions

EoL:
In the End-of-Life phase, for all the materials which can be recyalced, 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 PE INTERNATIONAL 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/.
PE INTERNATIONAL 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).

Transport to the building site (A4)

Name	Value	Unit
Truck transport		
Litres of fuel diesel with maximum load (27 t payload)	39.4	l/100 km
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)	0.04	kg
Output substances following waste treatment on site (Plastic packaging)	0.013	kg

Reference service life

Name	Value	Unit
Reference service life	10	a

End of life (C1-C4)

Name	Value	Unit
Collected separately Zinc, steel, plastics	0.643	kg
Collected as mixed construction waste – construction waste for landfilling	0.0002	kg
Reuse Plastics	0.006	kg
Recycling Zinc, steel	0.6358	kg
Landfilling - Construction waste for landfilling	0.0002	kg

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

Name	Value	Unit
Collected separately waste type (including packaging)	0.695	kg
Recycling Zinc	85.64	%
Recycling Steel	5.75	%
Reuse Plastics	0.96	%
Reuse Paper packaging (from A5)	5.75	%
Reuse Plastic packaging (from A5)	1.87	%
Loss Construction waste for landfilling (no recycling potential)	0.03	%

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	MND	X	X

RESULTS OF THE LCA - ENVIRONMENTAL IMPACT: One piece of Muze door handle

Parameter	Parameter	Unit	A1-A3	A4	A5	C2	C4	D
GWP	Global warming potential	[kg CO_2-Eq.]	4.92E+00	1.86E-02	8.91E-02	3.73E-03	1.55E-02	-2.36E+00
ODP	Depletion potential of the stratospheric ozone layer	[kg CFC11-Eq.]	7.53E-09	1.46E-12	3.57E-13	1.39E-12	4.89E-14	-6.29E-10
AP	Acidification potential of land and water	[kg SO_2-Eq.]	2.31E-02	8.58E-05	2.12E-05	1.77E-05	3.69E-06	-1.14E-02
EP	Eutrophication potential	[kg $(PO_4)^{3-}$- Eq.]	1.95E-03	1.79E-05	2.88E-06	2.33E-06	3.04E-07	-6.19E-04
POCP	Formation potential of tropospheric ozone photochemical oxidants	[kg Ethen Eq.]	1.48E-03	-2.38E-05	1.32E-06	-1.80E-06	1.90E-07	-7.10E-04
ADPE	Abiotic depletion potential for non fossil resources	[kg Sb Eq.]	4.00E-03	9.24E-10	3.17E-09	3.63E-10	9.05E-10	-3.41E-03
ADPF	Abiotic depletion potential for fossil resources	[MJ]	5.86E+01	2.59E-01	2.96E-02	5.34E-02	6.10E-03	-2.92E+01

RESULTS OF THE LCA - RESOURCE USE: One piece of Muze door handle

Parameter	Parameter	Unit	A1-A3	A4	A5	C2	C4	D
PERE	Renewable primary energy as energy carrier	[MJ]	2.08E+01	-	-	-	-	-
PERM	Renewable primary energy resources as material utilization	[MJ]	0.00E+00	-	-	-	-	-
PERT	Total use of renewable primary energy resources	[MJ]	2.08E+01	1.59E-02	2.49E-03	7.77E-03	4.60E-04	-1.06E+01
PENRE	Non renewable primary energy as energy carrier	[MJ]	1.11E+02	-	-	-	-	-
PENRM	Non renewable primary energy as material utilization	[MJ]	0.00E+00	-	-	-	-	-
PENRT	Total use of non renewable primary energy resources	[MJ]	1.11E+02	2.73E-01	3.39E-02	6.65E-02	6.82E-03	-3.97E+01
SM	Use of secondary material	[kg]	2.07E-02	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
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
FW	Use of net fresh water	[m^3]	7.25E-02	2.28E-05	2.44E-04	1.71E-05	3.82E-05	-3.80E-02

RESULTS OF THE LCA – OUTPUT FLOWS AND WASTE CATEGORIES: One piece of Muze door handle

Parameter	Parameter	Unit	A1-A3	A4	A5	C2	C4	D
HWD	Hazardous waste disposed	[kg]	1.22E-02	5.52E-06	2.35E-06	5.05E-06	4.76E-07	-4.35E-03
NHWD	Non hazardous waste disposed	[kg]	3.13E-01	4.14E-05	4.45E-03	1.54E-05	1.27E-03	1.76E-02
RWD	Radioactive waste disposed	[kg]	2.09E-02	5.49E-06	1.70E-06	5.22E-06	2.85E-07	-4.20E-03
CRU	Components for re-use	[kg]	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	4.00E-02	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	-
EEE	Exported electrical energy	[MJ]	0.00E+00	0.00E+00	1.34E-01	0.00E+00	2.80E-02	-
EET	Exported thermal energy	[MJ]	0.00E+00	0.00E+00	3.73E-01	0.00E+00	7.69E-02	-

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 phase (modules A1-A3) contributes between 97% and 100% to the overall results for all the environmental impact assessment categories hereby considered. Within the production phase, the main contribution for all the impact categories is the production of steel and zinc mainly due to the energy consumption on this process. Steel and zinc account in total with app. 98% 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 phase, 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 Electronic Access Control Systems. www.bau-umwelt.com

EN 15804
EN 15804:2012+A1:2014: 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, PE INTERNATIONAL 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, PE INTERNATIONAL AG, Leinfelden-Echterdingen, 1992-2013.
http://documentation.gabi-software.com/

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

EN 1906:2012
Building Hardware.Lever handles and knobs furnitures. Requirements and tests methods. ISBN 978 0 580 67832 5

ISO 9001:2008
Quality management systems – Requirements

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

EWC
European Waste Catalog

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	MND	X	X

RESULTS OF THE LCA - ENVIRONMENTAL IMPACT: One piece of Muze door handle

Parameter	Parameter	Unit	A1-3	A4	A5	C2	C4	D
GWP	Global warming potential	[kg CO_2-Eq.]	4.92E+00	1.86E-02	8.91E-02	3.73E-03	1.55E-02	-2.36E+00
ODP	Depletion potential of the stratospheric ozone layer	[kg CFC11-Eq.]	8.01E-09	1.56E-12	3.80E-13	1.48E-12	5.20E-14	-6.69E-10
AP	Acidification potential of land and water	[kg SO_2-Eq.]	2.31E-02	1.09E-04	2.53E-05	1.95E-05	4.32E-06	-1.07E-02
EP	Eutrophication potential	[kg N-eq.]	1.17E-03	7.43E-06	1.20E-06	1.14E-06	1.40E-07	-3.75E-04
Smog	Ground-level smog formation potential	[kg O_3-eq.]	3.10E-01	2.12E-03	4.41E-04	2.90E-04	3.80E-05	-9.28E-02
Resources		[MJ]	5.31E+00	3.56E-02	3.28E-03	6.01E-03	6.34E-04	-2.75E+00

RESULTS OF THE LCA - RESOURCE USE: One piece of Muze door handle

Parameter	Parameter	Unit	A1-A3	A4	A5	C2	C4	D
PERE	Renewable primary energy as energy carrier	[MJ]	2.08E+01	-	-	-	-	-
PERM	Renewable primary energy resources as material utilization	[MJ]	0.00E+00	-	-	-	-	-
PERT	Total use of renewable primary energy resources	[MJ]	2.08E+01	1.59E-02	2.49E-03	7.77E-03	4.60E-04	-1.06E+01
PENRE	Non renewable primary energy as energy carrier	[MJ]	1.11E+02	-	-	-	-	-
PENRM	Non renewable primary energy as material utilization	[MJ]	0.00E+00	-	-	-	-	-
PENRT	Total use of non renewable primary energy resources	[MJ]	1.11E+02	2.73E-01	3.39E-02	6.65E-02	6.82E-03	-3.97E+01
SM	Use of secondary material	[kg]	2.07E-02	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
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
FW	Use of net fresh water	[m³]	7.25E-02	2.28E-05	2.44E-04	1.71E-05	3.82E-05	-3.80E-02

RESULTS OF THE LCA – OUTPUT FLOWS AND WASTE CATEGORIES: One piece of Muze door handle

Parameter	Parameter	Unit	A1-A3	A4	A5	C2	C4	D
HWD	Hazardous waste disposed	[kg]	1.22E-02	5.52E-06	2.35E-06	5.05E-06	4.76E-07	-4.35E-03
NHWD	Non hazardous waste disposed	[kg]	3.13E-01	4.14E-05	4.45E-03	1.54E-05	1.27E-03	1.76E-02
RWD	Radioactive waste disposed	[kg]	2.09E-02	5.49E-06	1.70E-06	5.22E-06	2.85E-07	-4.20E-03
CRU	Components for re-use	[kg]	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	4.00E-02	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	-
EEE	Exported electrical energy	[MJ]	0.00E+00	0.00E+00	1.34E-01	0.00E+00	2.80E-02	-
EET	Exported thermal energy	[MJ]	0.00E+00	0.00E+00	3.73E-01	0.00E+00	7.69E-02	-

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

Tel +49 (0)30 3087748- 0
Fax +49 (0)30 3087748- 29
Mail info@bau-umwelt.com
Web **www.bau-umwelt.com**

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

Tel +49 (0)30 - 3087748- 0
Fax +49 (0)30 – 3087748 - 29
Mail info@bau-umwelt.com
Web **www.bau-umwelt.com**

Author of the Life Cycle Assessment
PE INTERNATIONAL AG
Hauptstraße 111-113
70771 Leinfelden-Echterdingen
Germany

Tel +49 (0)711 341817-0
Fax +49 (0)711 341817-25
Mail info@pe-international.com
Web **www.pe-international.com**

Owner of the Declaration
Assa Abloy Aube Anjou SA
21 Rue Michel Couet
49160 LONGUE (France)

Tel +33 141289100
Mail info@assaabloy.fr
Web **www.assaabloy.fr**