

ENVIRONMENTAL PRODUCT DECLARATION

as per ISO 14025 and EN 15804


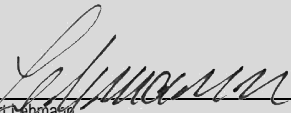
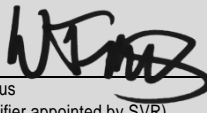
Owner of the Declaration	ASSA ABLOY
Programme holder	Institut Bauen und Umwelt e.V. (IBU)
Publisher	Institut Bauen und Umwelt e.V. (IBU)
Declaration number	EPD-ASA-20150226-IBA1-EN
Issue date	21.08.2015
Valid to	20.08.2020

Doors – Bellecour Steel Security Door ASSA ABLOY – Fichet

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



1. General Information

<p>ASSA ABLOY – Fichet</p> <hr/> <p>Programme holder IBU - Institut Bauen und Umwelt e.V. Panoramastr. 1 10178 Berlin Germany</p> <hr/> <p>Declaration number EPD-ASA-20150226-IBA1-EN</p> <hr/> <p>This Declaration is based on the Product Category Rules: Windows and doors, 11.2014 (PCR tested and approved by the independent expert committee (SVR))</p> <hr/> <p>Issue date 21.08.2015</p> <hr/> <p>Valid to 20.08.2020</p> <hr/> <p></p> <hr/> <p>Prof. Dr.-Ing. Horst J. Bossenmayer (President of Institut Bauen und Umwelt e.V.)</p> <hr/> <p></p> <hr/> <p>Dr.-Ing. Burkhard Lehmann (Managing Director IBU)</p>	<p>Bellecour Steel Security Door</p> <hr/> <p>Owner of the Declaration ASSA ABLOY Assa Abloy Cote Picarde Rue Alexandre Fichet 80460 Oust Marest</p> <hr/> <p>Declared product / Declared unit This declaration represents one Bellecour steel security door</p> <hr/> <p>Scope: This declaration and its LCA study are relevant to Bellecour steel doors at a single manufacturing ASSA ABLOY Door Group site - Oust Marest France. All Bellecour component assembly and manufacturing processes are performed at our manufacturing facility - Assa Abloy Oust Marest. The Bellecour doors are marketed under the following ASSA ABLOY Door Group brand: Fichet. 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 evidence.</p> <hr/> <p>Verification</p> <table border="1"> <tr> <td colspan="2">The CEN Standard EN 15804 serves as the core PCR</td> </tr> <tr> <td colspan="2">Independent verification of the declaration and data according to ISO 14025</td> </tr> <tr> <td><input type="checkbox"/> internally</td> <td><input checked="" type="checkbox"/> externally</td> </tr> </table> <hr/> <p></p> <hr/> <p>Dr. Wolfram Trinius (Independent verifier appointed by SVR)</p>	The CEN Standard EN 15804 serves as the core PCR		Independent verification of the declaration and data according to ISO 14025		<input type="checkbox"/> internally	<input checked="" type="checkbox"/> externally
The CEN Standard EN 15804 serves as the core PCR							
Independent verification of the declaration and data according to ISO 14025							
<input type="checkbox"/> internally	<input checked="" type="checkbox"/> externally						

2. Product

2.1 Product description

Product name: Bellecour Steel Security Door

Product characteristics: Bellecour door is used for internal residential applications. It is a complete door solution, designed to offer a large number of performances: fire resistance, burglary resistance, sound and thermal insulation.

The door is designed to be easily installed on existing doorframe. The door includes a high security lock case, a double plasterboard to increase fire resistance, a metallic structure with central metallic welded wire mesh and an adjustable pivoting system. This tailor-made solution offers a wide range of customizations such as door coatings or various wooden surfaces, door handles and molding decorations.

2.2 Application

Bellecour can only be used indoors. Common applications are interior door openings for residential applications, especially for retrofit market.

2.3 Technical Data

Properties of the Bellecour door:

- Burglary resistance: A2P BP1
- Fire resistance: EI2 30

- Sound insulation: 42 dB
- Thermal insulation: 2,1 W/m².°K

2.4 Placing on the market / Application rules

No legal provisions applicable.

Bellecour meets the requirements of:

- CNPP H64 rules for burglary resistance (private certification system from the French insurance companies for burglary resistant products)
- EN 1634-1: standard for fire resistance
- ISO 140-1 & ISO 717-1 for sound insulation
- ISO 10077-1 & ISO 10077-2 for thermal insulation

2.5 Delivery status

Finished Bellecour doors are placed horizontally on cardboard pallet and banded to pallet for shipment. Minimum of 1 and max 6 doors per pallet.

2.6 Base materials / Ancillary materials

The average composition for ASSA ABLOY Bellecour steel security door is as follows:

Component	Percentage in mass (%)
Aluminum	4.3
Plastics	0.4
Brass	0.4
Steel	60.8
Wood	5.3
Others (fiber gypsum board, rock wool, adhesives, coating powder)	28.8
Total	100

2.7 Manufacture

The manufacturing process takes place in our factory Assa Abloy Cote Picarde, Rue Alexandre Fichet, 80460 Oust Marest.

The door production process is composed of:

- cutting
- folding
- stamping
- CNC
- electrostatic powder painting

AACP Production Process is third party certified by DEKRA according to ISO 9001

2.8 Environment and health during manufacturing

ASSA ABLOY Cote Picarde is committed to protecting human health and the environment; meeting or exceeding legislation, regulations, codes, and guidelines. Painting and welding areas of the manufacturing plant have an extraction ventilation system to remove dust, VOC and air borne materials. Sound abatement is implemented where possible and Personal Protective Equipment is provided. Waste water is pre-treated prior to dispensing into city waste water treatment system.

- AACP Production Process is third party certified by DEKRA according to ISO 9001 & ISO 14001

- 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 that applicable standards are met and the effectiveness of the environmental management program is evaluated.

- Code of Conduct covers human rights, labor practices and decent work. The management of ASSA ABLOY is aware of their roles and responsibilities, providing appropriate training, supporting accountability and recognizing outstanding performance.

2.9 Product processing/Installation

Doors are typically installed into residential applications. Personal Protective Equipment should be provided at construction site.

2.10 Packaging

Finished Bellecour doors are placed horizontally on cardboard pallet and banded to pallet for shipment. Minimum of 1 and max 6 doors per pallet.

Component	Percentage in mass (%)
Wood	76.6
Cardboard/paper	23.4
Total	100.0

2.11 Condition of use

Doors are delivered with final painting (used of pre-coated steel sheet). Gaskets are used to control the flow of air, smoke, heat or cold and sound through the door opening.

Repairs or replacement are not usually necessary. No cleaning efforts need to be taken into consideration.

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 steel doors often last 30 years or longer. Bellecour doors have cycle tested (open/closed) 200 000 cycles with no issues. The location and intended use of the steel door assembly, the environment to which it is exposed, and the cycling of the door assembly will determine the steel door assembly life expectancy.

2.14 Extraordinary effects

Fire

Fire Protection

Fire Door Labeling Agency: Efectis

Test: EN1634-1

Rating: EI2 30

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

Re-use

Bellecour is tailor made, but can be reused during the reference service life and moved from one similar door opening to another.

Recycling

In collaboration with the Fédération Française du Bâtiment, customers can utilize a locator tool, allowing them to find a recycling center near them. The locator tool is hosted on the Fédération Française du Bâtiment's website (<http://www.dechets-chantier.ffbatiment.fr>); it simply asks the user for location information, and provides the nearest recycling location. The tool is free to use. This free program provides recycling and/or disposal of door and frame products that have reached the end of their life cycle and are beyond the product's warranty period.

2.16 Disposal

Materials or product parts that could not be recycled or separately collected (fiber gypsum board, rock wool, adhesives, coating powder) were assumed to be disposed on local landfill.

2.17 Further information

For additional information on our products, please visit our web sites:

<http://www.assaabloy.fr>

<http://www.fichet-pointfort.fr>

3. LCA: Calculation rules

3.1 Declared Unit

The declaration refers to the functional unit of 1 piece of Bellecour steel door as specified in Part B requirements on the EPD for Windows and doors/IBU PCR Part B/.

Declared unit

Name	Value	Unit
Declared unit	1	piece of Bellecour steel door
Conversion factor to 1 kg	0.013	-
Area	1.9	sqm/pc
Ratio to reference door	0.71	Measuring 1.23 m x 2.18 m = 2.68 sqm/pc (reference door based on EN14351-1)

3.2 System boundary

Type of the EPD: cradle to gate - with options.
The following life cycle stages were considered for Bellecour steel door:

A1-A3 Production stage:

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

A4-A5 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)

These information modules include provision and transport of all materials, products, as well as energy and water provisions, waste processing up to the end-of-waste state or disposal of final residues.

Module D:

- Declaration of all benefits or recycling potential from EoL and A5

3.3 Estimates and assumptions

Transport:

For materials and pre-products the actual means of transport and distances, provided by the suppliers, were considered.

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 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 validations during the commission of the present study in order to ensure its quality of the present document and results. 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:

- Waste incineration of plastic
- Waste incineration of paper
- Waste incineration of wood

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

In the EPD scenarios and/or technical information for Modules A5, C2-C4 and D are given.

Installation into the building (A5)

Name	Value	Unit
Output substances following waste treatment on site (Paper packaging)	1.2	kg
Output substances following waste treatment on site (Wood packaging)	4.0	kg

Reference service life

Name	Value	Unit
Reference service life	30	a

End of life (C2-C4)

Name	Value	Unit
Collected separately Aluminum, brass, steel, plastics, paper, wood	56.8	kg
Collected as mixed construction waste	23.0	kg
Recycling Aluminum, brass, steel	52.3	kg
Thermal Treatment Plastics, paper, wood	4.5	kg
Landfilling	23.0	kg

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

Name	Value	Unit
Collected separately waste type Steel door (including packaging)	84.96	kg
Recycling aluminum	4.01	%
Recycling brass	0.44	%
Recycling steel	57.08	%
Thermal Treatment Plastics	0.36	%
Thermal Treatment Wood	4.93	%
Construction waste for landfilling (no recycling potential)	27.04	%
Reuse Packaging (paper, wood) (from A5)	6.14	%

5. LCA: Results

Results shown below were calculated using CML2001 – 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: 1 piece – Bellecour steel security door

Parameter	Unit	A1-3	A4	A5	C2	C3	C4	D
Global warming potential	[kg CO ₂ -Eq.]	1.74E+02	2.02E+00	8.23E+00	2.02E-01	0.00E+00	9.09E+00	-1.15E+02
Depletion potential of the stratospheric ozone layer	[kg CFC11-Eq.]	8.64E-09	9.68E-12	3.37E-11	9.68E-13	0.00E+00	3.67E-11	1.39E-08
Acidification potential of land and water	[kg SO ₂ -Eq.]	6.65E-01	9.25E-03	1.30E-03	9.25E-04	0.00E+00	3.19E-03	-4.85E-01
Eutrophication potential	[kg (PO ₄) ³⁻ -Eq.]	5.68E-02	2.11E-03	2.08E-04	2.11E-04	0.00E+00	4.22E-04	-3.37E-02
Formation potential of tropospheric ozone photochemical oxidants	[kg Ethen Eq.]	7.39E-02	-2.98E-03	1.02E-04	-2.98E-04	0.00E+00	2.64E-04	-5.51E-02
Abiotic depletion potential for non fossil resources	[kg Sb Eq.]	8.56E-04	7.62E-08	1.18E-07	7.62E-09	0.00E+00	3.25E-07	1.66E-04
Abiotic depletion potential for fossil resources	[MJ]	1.61E+03	2.79E+01	1.91E+00	2.79E+00	0.00E+00	5.91E+00	-1.11E+03

RESULTS OF THE LCA - RESOURCE USE: 1 piece – Bellecour steel security door

Parameter	Unit	A1-3	A4	A5	C2	C3	C4	D
Renewable primary energy as energy carrier	[MJ]	3.63E+02	-	-	-	-	-	-
Renewable primary energy resources as material utilization	[MJ]	0.00E+00	-	-	-	-	-	-
Total use of renewable primary energy resources	[MJ]	3.63E+02	1.10E+00	1.87E-01	1.10E-01	0.00E+00	5.18E-01	-1.30E+02
Non renewable primary energy as energy carrier	[MJ]	1.72E+03	-	-	-	-	-	-
Non renewable primary energy as material utilization	[MJ]	0.00E+00	-	-	-	-	-	-
Total use of non renewable primary energy resources	[MJ]	1.72E+03	2.80E+01	2.26E+00	2.80E+00	0.00E+00	6.45E+00	-1.17E+03
Use of secondary material	[kg]	7.51E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
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
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
Use of net fresh water	[m ³]	1.03E+00	7.76E-04	2.18E-02	7.76E-05	0.00E+00	8.26E-03	-4.18E-01

RESULTS OF THE LCA – OUTPUT FLOWS AND WASTE CATEGORIES: 1 piece – Bellecour steel security door

Parameter	Unit	A1-3	A4	A5	C2	C3	C4	D
Hazardous waste disposed	[kg]	3.02E-02	6.37E-05	1.58E-04	6.37E-06	0.00E+00	3.58E-04	4.20E-02
Non hazardous waste disposed	[kg]	1.31E+01	3.52E-03	1.36E-01	3.52E-04	0.00E+00	2.03E+01	-6.36E+00
Radioactive waste disposed	[kg]	4.44E-02	3.66E-05	1.38E-04	3.66E-06	0.00E+00	2.13E-04	-2.23E-02
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
Materials for recycling	[kg]	0.00E+00	0.00E+00	1.22E+00	0.00E+00	8.05E+01	0.00E+00	0.00E+00
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
Exported electrical energy	[MJ]	0.00E+00	0.00E+00	9.76E+00	0.00E+00	0.00E+00	1.18E+01	0.00E+00
Exported thermal energy	[MJ]	0.00E+00	0.00E+00	2.74E+01	0.00E+00	0.00E+00	3.28E+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 95% 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, with almost. 99%, mainly due to the energy consumption on this process.

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

IBU PCR Part A

IBU PCR Part A: Institut Bauen und Umwelt e.V., Königswinter (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 Windows and doors.
www.bau-umwelt.com

DIN EN ISO 14025

DIN EN 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

GaBi 6 2013

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

GaBi 6 2013D

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

CNPP H64

CNPP H64: rules for burglary resistance (private certification system from the French insurance companies for burglary resistant product)

EN 1634-1

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

ISO 10077-1

ISO 10077-1:2006: Thermal performance of windows, doors and shutters. Calculation of thermal transmittance. General

ISO 10077-2

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

ISO 140-1

ISO 140-1: Acoustics. Measurement of sound insulation in buildings and of building elements. Requirements for laboratory test facilities with suppressed flanking transmission.

ISO 717-1

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

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: 1 piece – Bellecour steel security door

Parameter	Parameter	Unit	A1-3	A4	A5	C2	C3	C4	D
GWP	Global warming potential	[kg CO ₂ -Eq.]	1.74E+02	2.02E+00	8.23E+00	2.02E-01	0.00E+00	9.09E+00	-1.15E+02
ODP	Depletion potential of the stratospheric ozone layer	[kg CFC11-Eq.]	9.18E-09	1.03E-11	3.58E-11	1.03E-12	0.00E+00	3.90E-11	1.48E-08
AP	Acidification potential of land and water	[kg SO ₂ -Eq.]	6.77E-01	1.21E-02	1.52E-03	1.21E-03	0.00E+00	3.59E-03	-4.78E-01
EP	Eutrophication potential	[kg N-eq.]	4.50E-02	8.54E-04	8.46E-05	8.54E-05	0.00E+00	2.43E-04	-2.26E-02
Smog	Ground-level smog formation potential	[kg O ₃ -eq.]	9.04E+00	2.49E-01	3.10E-02	2.49E-02	0.00E+00	6.32E-02	-6.04E+00
Resources	Resources – fossil resources	[MJ]	6.51E+01	4.01E+00	2.22E-01	4.01E-01	0.00E+00	7.14E-01	-2.80E+01

RESULTS OF THE LCA - RESOURCE USE: 1 piece – Bellecour steel security door

Parameter	Parameter	Unit	A1-3	A4	A5	C2	C3	C4	D
PERE	Renewable primary energy as energy carrier	[MJ]	3.63E+02	-	-	-	-	-	-
PERM	Renewable primary energy resources as material utilization	[MJ]	0.00E+00	-	-	-	-	-	-
PERT	Total use of renewable primary energy resources	[MJ]	3.63E+02	1.10E+00	1.87E-01	1.10E-01	0.00E+00	5.18E-01	-1.30E+02
PENRE	Non renewable primary energy as energy carrier	[MJ]	1.72E+03	-	-	-	-	-	-
PENRM	Non renewable primary energy as material utilization	[MJ]	0.00E+00	-	-	-	-	-	-
PENRT	Total use of non renewable primary energy resources	[MJ]	1.72E+03	2.80E+01	2.26E+00	2.80E+00	0.00E+00	6.45E+00	-1.17E+03
SM	Use of secondary material	[kg]	7.51E+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]	1.03E+00	7.76E-04	2.18E-02	7.76E-05	0.00E+00	8.26E-03	-4.18E-01

RESULTS OF THE LCA – OUTPUT FLOWS AND WASTE CATEGORIES:

1 piece – Bellecour steel security door

Parameter	Parameter	Unit	A1-3	A4	A5	C2	C3	C4	D
HWD	Hazardous waste disposed	[kg]	3.02E-02	6.37E-05	1.58E-04	6.37E-06	0.00E+00	3.58E-04	4.20E-02
NHWD	Non hazardous waste disposed	[kg]	1.31E+01	3.52E-03	1.36E-01	3.52E-04	0.00E+00	2.03E+01	-6.36E+00
RWD	Radioactive waste disposed	[kg]	4.44E-02	3.66E-05	1.38E-04	3.66E-06	0.00E+00	2.13E-04	-2.23E-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	1.22E+00	0.00E+00	8.05E+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	9.76E+00	0.00E+00	0.00E+00	1.18E+01	-
EET	Exported thermal energy	[MJ]	0.00E+00	0.00E+00	2.74E+01	0.00E+00	0.00E+00	3.28E+01	-



Institut Bauen
und Umwelt e.V.

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



Institut Bauen
und Umwelt e.V.

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



thinkstep

Author of the Life Cycle Assessment

thinkstep AG
Hauptstraße 111
70771 Leinfelden-Echterdingen
Germany

Tel +49 711 34 18 17 22
Fax +49 711 34 18 17 25
Mail info@thinkstep.com
Web www.thinkstep.com

ASSA ABLOY

Owner of the Declaration

Assa Abloy Cote Picarde
Rue Alexandre Fichet
80460 Oust Marest

Web <http://www.assaabloy.fr>
<http://www.fichet-pointfort.fr>