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-ASAB-20151117-IBA1-EN
Issue date	18.05.2015
Valid to	17.05.2021

ASSA ABLOY RD3L, Revolving door ASSA ABLOY Entrance Systems AB



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



General Information

ASSA ABLOY Entrance Systems AB

Programme holder

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

Declaration number

EPD-ASAB-20151117-IBA1-EN

This Declaration is based on the Product **Category Rules:**

IBU: PCR Automatic doors, automatic gates, and revolving door systems (door systems) (PCR tested and approved by the independent expert committee)

Issue date

18.05.2015

Valid to

17.05.2021

wermanes

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

MINAN Dr.-Ing. Burkhart Lehmann

(Managing Director IBU)

Product

2.1 **Product description**

Product name: ASSA ABLOY RD3L **Product characteristic:**

Three-wing high capacity revolving door Pedestrian automatic revolving doors are installations that serve to automatically regulate the flow of people in residential and non-residential buildings while

providing high thermal performance. - Automatic revolving doors are made up of various assemblies mainly consisting of a support structure, glazing, drive unit, controller and safety equipment. - Revolving doors also feature elements that are designed to simplify their installation, operation, and maintenance.

- Revolving doors are typically made of metal, plastic and glass and are available in several designs for a range of requirements in diverse building types. The ASSA ABLOY RD3L range of large three-wing automatic revolving doors has been designed to achieve high pedestrian traffic flow whilst maintaining high standard of safety for the user. The door is designed so that operation is not affected or interrupted by winds or by users pushing the door wings. However, in emergency situations, the doors

ASSA ABLOY RD3L, Revolving door

Owner of the Declaration

ASSA ABLOY Entrance Systems AB Lodjursgatan 10 SE-261 44 Landskrona Sweden

Declared product / Declared unit

This declaration represents 1 revolving door consisting of 3 door leaves and surrounding frame with internal diameter of 6.2 m and internal height of 2.2 m

Scope:

This declaration and its LCA study is relevant to the revolving door ASSA ABLOY RD3L. The final assembly and production stage occurs in Ostrov u Stribra, Czech Republic at ASSA ABLOY ES Production s.r.o at: D5 Logistic Park 34901 Ostrov u Stribra, Czech Republic. Components are sourced from international tier one suppliers. ASSA ABLOY RD3L door sizes vary according to project requirements; a door with internal diameter of 6.2 m and 3 leaves is used in this declaration. 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 and data according to ISO 14025							
internally x externally							
WIND							
Dr. Wolfram Trinius							

(Independent verifier appointed by SVA)

are released immediately to facilitate escape. The large-sized compartments, which are always accessible due to the 3-wing configuration, make the ASSA ABLOY RD3L an ideal solution for continuous high-volume pedestrian traffic, while comfortably accommodating wheeled traffic such as shopping carts, luggage trolleys and wheelchairs.

The door has 4 primary parts:

- 1) Door leafs
- 2) Frame 3) Floor track
- 4) Operating system

The ASSA ABLOY RD3L has been designed to meet operational and safety requirements in the European Directives and the standards issued by the European Standardization Committee (CEN).

2.2 Application

The ASSA ABLOY RD3L is an automatic revolving door developed to provide draught free access to buildings. The door is designed to offer continuous use, a high degree of safety and maximum lifetime. The system is self-adjusting to the effects caused by normal variations in the weather conditions and to



minor friction changes caused by e.g. dust and dirt. The door can be used indoors or outdoors.

Automatic revolving doors are utilized to provide entrance and exit capabilities for many different building types. Typical revolving door applications are in:

- Commercial buildings
- Office facilities
- Hospitality facilities
- Transportation
- Healthcare
- Sporting Venues

2.3 Technical Data

The table presents the technical properties of the ASSA ABLOY RD3L revolving door:

Technical data

Name	Value	Unit
Burglar protection class acc. to EN 1627 - EN 1630	yes	-
Power input "Standby"	30	W
Power input "Operation"	170	W

Features:

The declared door has a size (W x H) 6200 x 2600 mm (Internal height)

Outer wall and night closing doors (optional): clear laminated safety glass 4+0.76+4mm (/EN 12600/1B1) Door leaves: standard -clear laminated safety glass 3+0.38+3mm (/EN 12600/2B2)

Door sections: aluminum profiles Optional: Powdercoated finish (RAL colours), Stainless steel cladding Ceiling: white laminated panels, dust protection To meet the standards of burglar protection, additional equipments has to be added.

2.4 Placing on the market / Application rules

For the placing on the market in the EEA, Switzerland and Turkey the following European directives apply to the ASSA ABLOY RD3L:

2004/108/EC Electromagnetic Compatibility Directive (EMCD)

2006/42/EC Machinery Directive (MD)

These directives provides for CE marking of the product and issuing a Declaration of Conformity.

Harmonized European standards, which have been applied:

EN 60335-1 Household and similar electrical appliances -Safety -Part 1: General requirements EN 61000-6-2 Electromagnetic compatibility (EMC) -Part 6-2: Generic standards - Immunity for industrial environments

EN 61000-6-3 Electromagnetic compatibility (EMC) — Part 6-3: Generic standards — Emission standard for residential, commercial and light-industrial environments

EN ISO 13849-1 Safety of machinery — Safety-related parts of control systems — Part 1: General principles for design

EN 16005 Power operated pedestrian doorsets - Safety in use -Requirements and test methods.

Other standards or technical specifications, which have been applied:

DIN 18650-1 Powered pedestrian doors - Part 1: Product requirements and test methods DIN 18650-2 Powered pedestrian doors - Part 2: Safety at powered pedestrian doors EN 60335-2-103 Household and similar electrical appliances -Safety -Part 2: Particular requirements for drives for gates, doors and windows IEC 600335-1 Household and similar electrical appliances -Safety -Part 1: General requirements IEC 60335-2-103 Household and similar electrical appliances Safety Part 2-103: Particular requirements for drives for gates, doors and windows. Disposal of the product is subject to the WEEE Directive within Europe, Directive 2012/19/EU

For the application and use the respective national provisions apply.

2.5 Delivery status

Revolving door unit with internal diameter of 6.2 m, internal height of 2.2 m and external height 2.54 m, is delivered ready for installation.

2.6 Base materials / Ancillary materials

The average composition for ASSA ABLOY RD3L is as following:

Component	Percentage in mass (%)
Glass	41.78
Aluminium	22.28
Particle Board	11.47
Steel	17.40
Plastics	5.01
Stainless steel	1.04
Electronic	0.10
Electro-mechanics	0.71
Others	0.21
Total	100

2.7 Manufacture

Profiles are provided by tier one supplier SAPA and are delivered to the factory in Ostrov, Czech Republic. The profiles are bended and machined. The products are surface treated; either anodized (externally) or powder coated (internally). Other parts as electronics, glass, etc. arrives from tier one suppliers or the factory in China and a basic assembly is done in Ostrov. The parts are encased in pine crates and forwarded on a standard wooden pallet to on-site installation. The certified quality management system, /EN ISO 9001:2008/, ensures high standards.

Offcuts and scraps during the manufacturing process are directed to a recycling unit. Waste is sent for disposal.

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

/EWC/ 12 01 01 Ferrous metal filings and turnings /EWC/ 12 01 03 Non-ferrous metal filings and turnings /EWC/ 08 02 01 Waste coating powders /EWC/ 12 01 05 plastics.

2.8 Environment and health during manufacturing

ASSA ABLOY Entrance Systems AB 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 being routinely monitored. Inspections, audits, and reviews



are conducted periodically to ensure that applicable standards are met and environment management program effectiveness is evaluated.

- Code of Conduct covers human rights, labor practices and decent work. ASSA ABLOY Entrance Systems ABs' management is aware of their environmental roles and responsibilities, providing appropriate training, supporting accountability and recognizing outstanding performance.
- Preparation conditions (including the process of power coating) in the factory of Ostrov do not require special health and safety measures. Standard health and safety measures (work gloves, hearing protection, safety shoes, dust mask when sanding and milling, dust extraction, etc.) are observed where appropriate.
- Water and soil contamination does not occur and all production related waste is processed internally in the appropriate manner.

2.9 Product processing/Installation

The revolving door components are supplied ready for installation. The frame as well as the door leaves and central column are assembled and installed on-site. The components are assembled using simple tools including drills and hand tools. The installation is performed by certified installation technicians.

2.10 Packaging

Packaging exists for the purpose of protection during transportation. ASSA ABLOY RD3L revolving door components are initially packaged in plastic tarpaulin, polystyrene and corrugated cardboard. Finally, a revolving door is placed on a standard wooden pallet and encased in a pine crate. All of these packaging components are standard industry types and while the cardboard is recyclable. The pallets are available for immediate reuse upon delivery.

Material	Value (%)
Cardboard/ Paper	1.04
Plastics	0.34
Wood	98.62
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 /EWC/ 15 01 03 wooden packaging

2.11 Condition of use

The best way to remove dust and dirt from the ASSA ABLOY RD3L and to maintain the quality of the enamel layer is to clean the surfaces three times/year with gentle (pH 5-9), non-polishing detergent and water. Use a soft non-abrasive sponge. The cleaning should be documented.

To avoid damages to the profiles the brushes must be vacuum-cleaned weekly. Regular inspections by a trained and qualified person is recommended a minimum of two visits per year.

- Do not expose doors or profiles to alkalis. Both aluminum and glass are sensitive to alkalis.
- Do not clean with high-pressure water. Operator, programme selector and sensor may be damaged and water may enter the profiles.

- Do not use detergents or abrasive additives.
- Do not scrub with materials like Scotch-brite, as this will cause mechanical damage.

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. Monitored pressure sensitive safety sensors on both entrance post and door leafs. Monitored touchless sensor on vertical entrance post and top of door leaf. If an obstacle prohibits the rotation of the door (the resistance is higher than the pre-set value) the rotation will cease. Compressible vertical safety switches placed on the drum edges. To prevent injury, the drum edges are equipped with soft safety edges.

2.13 Reference service life

The product has reference service life of 10.000.000 cycles, which complies for 15 years of standard daily use (with the recommended service check). For this EPD the lifetime of 15 years was considered.

2.14 Extraordinary effects Fire

Not applicable

Water

Contain no substances that have any impact on water in case of flood. Electric operation of the device will be influenced negative.

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. All materials are directed to a recycling unit. The components made of aluminum alloy, steel can be recycled. The plastic components can be used for energy recovery within a waste incineration process. /EWC/ 16 02 13* discarded equipment containing hazardous components (2) other than those mentioned in 16 02 09 to 16 02 12 /EWC/ 17 02 01 wood /EWC/ 17 02 03 plastic /EWC/ 17 04 01 copper, bronze, brass /EWC/ 17 04 02 aluminium /EWC/ 17 04 05 iron and steel /EWC/ 17 04 11 Cables with the exception of those outlined in 17 04 10 Note: Disposal of the motor is subject to the WEEE Directive within Europe, Directive /2012/19/EU/.

2.16 Disposal

The requirements on waste disposal and recycling listed in the European Waste Catalogue (EWC) should be followed. The requirements on waste disposal and recycling listed in the European Waste Catalogue (EWC) should be followed. As the product contains no substances harmful to the environment or human health, the entire system can be safely placed in a landfill site in cases where no waste recycling technologies are available.

In this EPD product parts made of glass were treated as a waste for landfill: EWC 17 02 02 glass.



2.17 Further information

ASSA ABLOY Entrance Systems AB Lodjursgatan 10 SE-261 44 Landskrona

3. LCA: Calculation rules

3.1 Declared Unit

The declaration refers to the functional unit of 1 piece of revolving door ASSA ABLOY RD3L as specified in Part B requirements on the EPD for PCR Automatic doors, automatic gates, and revolving door systems (door systems).

Declared unit

Name	Value	Unit
Declared unit for automatic doors and gates*	42.85	m²
Mass (with out packaging)	2096.62	kg
Mass packaging (wood, paper and plastics)	563.78	kg
Conversion factor to 1 kg	0.0005	-
Declared unit for revolving door systems (dimensions acc. to this PCR)	1	piece

*The areas for the Revolving doors are represented by the lateral area i.e. the outer wall cylinder area surrounding the revolving door leafs.

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

Use stage related to the operation of the building includes:

 B6 – Operational energy use (Energy consumption for ASSA ABLOY RD3L operation)

C1-C4 End-of-life stage:

- C2 Transport to waste processing,
- C3 Waste processing for recycling and
- C4 Disposal (landfill, waste for incineration).

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.

Module D:

Declaration of all benefits or recycling potential from EOL and A5.

3.3 Estimates and assumptions

Use phase:

Sweden www.assaabloyentrance.com

For the use phase, it is assumed that the revolving door is used in the European Union, thus an European electricity grid mix is considered within this stage.

EoL:

In the End-of-Life phase, 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 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
- Waste incineration of electronic scraps (PWBs)
- Waste incineration of wood

Regarding the recycling material of metals, the metal parts in the EoL are declared as end-of-waste status.

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)	5.86	kg
Output substances following waste treatment on site (Plastic packaging)	1.92	kg
Output substances following waste treatment on site (Wood packaging)	556.00	kg

Reference service life

Name	Value	Unit
Reference service life	15	а

Operational energy use (B6)

Name	Value	Unit
Electricity consumption per RSL (15 years)	8307	kWh

End of life (C1-C4)

Name	Value	Unit
Collected separately Aluminium, stainless steel, steel, zinc, electronic, particle board, plastic parts	1202.79	kg
Collected as mixed construction waste – glass, other construction waste for landfilling	893.84	kg
Reuse plastic parts, particle board	345.46	kg
Recycling Aluminium, stainless steel, steel, steel, zinc, copper, electronic	857.32	kg
Landfilling – glass, other construction waste for landfilling	893.84	kg

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

Name	Value	Unit
Collected separately waste type ASSA ABLOY RD3L (including packaging)	2660.59	kg
Recycling Aluminium	17.56	%
Recycling Stainless steel	0.82	%
Recycling Steel	13.71	%
Recycling Electronic and electronics (PWBs, copper)	0.64	%
Reuse Particle board	9.04	%
Reuse Plastic parts	3.95	%
Reuse packaging (paper, plastics and wood) (from A5)	21.19	%
Loss Glass, constructions waste for landfilling (no recycling potential)	33.09	%

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.

ASSA ABLOY

5. LCA: Results

Results shown below were calculated using CML 2001 – Apr. 2013 Methodology.

DESC	CRIPT		OF THE	SYS	ГЕМ В	OUND	ARY	(X = IN	CLU	IDED IN	LCA; I	MND =	MOD	JLE N		ECI	LARED)
PROE	SUCT	STAGE	CONST ON PRO STAGE				U	SE STAC	GE			EN	id of li	FE ST/	AGE		LOADS EYOND THE SYSTEM OUNDARYS
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	Derico	Recovery- Recycling- potential
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	5 B6	B7	C1	C2	C3	C4		D
Х	Х	Х	Х	Х	MND	MND	MND	MND	MN	D X	MND	MND	Х	Х	Х		Х
RESU	JLTS	OF TH	HE LCA	- EN'	VIRON	IMENT		IPACT	: On	e piece	of AS	SA AB	LOY R	D3L,	Revol	vin	g door
Param	neter	U	Init	A	1-3	A4		A5		B6	(2	C3		C4		D
GW	/P	[kg C	O ₂ -eq.]	7.37	E+03	1.06E+	+02	9.17E+0)2	3.95E+03	6.33	E+01	1.16E-	01	6.96E+0)2	-5.20E+03
OD	Р	[kg CF	C11-eq.]	8.98	E-07	5.06E	-10	3.63E-0	9	2.70E-06	3.03	E-10	7.97E-	11	2.98E-0	9	1.90E-06
AF		[kg S	O2-eq.]	5.06	E+01	4.84E	-01	1.29E-0	1	1.86E+01	2.90	E-01	5.49E-	04	2.60E-0)1	-2.75E+01
EP	0	[kg P0	J₄ ³⁻ eq.]	3.36	E+00	1.10E	-01	1.98E-0	2	1.05E+00	6.61	E-02	3.09E-	05	2.96E-0	2	-1.33E+00
POC	CP	[kg eth	ene-eq.]	3.22	E+00	-1.56E	-01	1.05E-0	2	1.11E+00	-9.34	4E-02	3.26E-	05	2.11E-0	2	-1.57E+00
ADF	ΡE	[kg S	Sb-eq.]	3.78	E-01	3.98E-	-06	1.25E-0	5	5.46E-04	2.38	E-06	1.61E-	-08	3.61E-0	15	-6.56E-02
ADF	۶F	1]	(UN	9.84	E+04	1.46E+	+03	2.03E+0)2	4.48E+04	8.73	E+02	1.32E+	-00	6.60E+0)2	-5.30E+04
Capti	ion								pletior		or non fo						ial; POCP = n potential for
RESULTS OF THE LCA - RE								1088	il lesource:								
					SOUR		E: On			ASSA	ABLOY	RD3L		olving			
Para	ameter	·U	nit	A1-3		CE US A4	E: On	e piec A5				RD3L	, <mark>Revo</mark> C3	olving	door C4		D
Para PE	ameter ERE	· U	nit /J] 3	A1-3	4	A4 -	E: On	A5 -		ASSA / B6	ABLOY C2	RD3L	C3 -	olving	C4 -		-
Para PE PE	erre ERE ERM	U] 	nit //J] 3 //J] 0	A1-3 .99E+04 .00E+00	4 D	A4 - -		A5 - -	e of	ASSA / B6 -	ABLOY C2 -		C3 - -		C4 - -		-
Para PE PE PE	erre ERE ERM ERT	U ^] /] /] /] /]	nit 3 AJ] 3 AJ] 0 AJ] 3	A1-3 .99E+04 .00E+00 .99E+04	4 D 4 5.	A4 -		A5 -	e of	ASSA / B6	ABLOY C2		C3 -		C4 -	1	-
Para PE PE PE	ameter ERE ERM ERT NRE	U · · · · · · · · · · · · · · · · · · ·	nit 3 AJ] 3 AJ] 0 AJ] 3 AJ] 3	A1-3 .99E+04 .00E+00 .99E+04 .14E+05	4 D 4 5. ⁻ 5	A4 - -		A5 - -	e of	ASSA / B6 -	ABLOY C2 -		C3 - -		C4 - -	1	-
Para PE PE PE PE	ERE ERM ERT NRE NRM	U //] //] //] //] //]	nit 3 AJ] 3 AJ] 0 AJ] 3 AJ] 3 AJ] 3 AJ] 3 AJ] 3 AJ] 3 AJ] 1 AJ] 0	A1-3 .99E+04 .00E+00 .99E+04 .14E+09	4 5 5 0	A4 - - 75E+01 - -	2.0	A5 - - 00E+01 - -	e of 1.:	ASSA / B6 - - 28E+04 - -	ABLOY - - 3.44E- - -	+01	C3 - - 3.79E-0 - -	1	C4 - - 3.90E+0 - -		- -1.97E+04 -
Para PE PE PE PE	ameter ERE ERM ERT NRE NRM	U	nit 3 AJ] 3 AJ] 0 AJ] 3 AJ] 3 AJ] 1 AJ] 0 AJ] 1 AJ] 0 AJ] 1 AJ] 1	A1-3 .99E+04 .00E+00 .99E+04 .14E+09 .00E+00 .14E+09	4 5. 5 5 5 1.4	A4 - 75E+01 - 46E+03	2.0	A5 - 	1.2	ASSA / B6 - - 28E+04 - - 02E+04	ABLOY C2 - 3.44E- - - 8.76E-	+01	C3 - - 3.79E-0 - - 2.07E+0	1	C4 - 3.90E+0 - 7.04E+0	2	- -1.97E+04 - - -6.64E+04
Para PE PE PE PE S	ERE ERM ERT NRE NRM NRT SM	U	nit 3 AJ] 3 AJ] 0 AJ] 3 AJ] 1 AJ] 1 AJ] 0 AJ] 1 AJ] 6	A1-3 .99E+04 .00E+00 .99E+04 .14E+09 .00E+00 .14E+09 .81E+02	4 5. 5 5 5 1. 2 0.	A4 - - 75E+01 - 46E+03 00E+00	2.0 2.4 0.0	A5 - - - - - - - - - - - - -	2 of 1.2 7.0	ASSA / B6 - - 28E+04 - 02E+04 00E+00	ABLOY C2 - 3.44E - - 8.76E- 0.00E	+01 +02 +00	C3 - 3.79E-0 - 2.07E+C 0.00E+C	1	C4 - 3.90E+0 - 7.04E+02 0.00E+00	2	- -1.97E+04 - - -6.64E+04 0.00E+00
Para PE PE PE PE PE R	ERE ERM ERT NRE NRM NRT SM RSF	U	nit 3 AJ] 3 AJ] 0 AJ] 1 AJ] 1 AJ] 0 AJ] 1 AJ] 0 AJ] 1 AJ] 0	A1-3 .99E+04 .99E+04 .14E+02 .00E+00 .14E+02 .81E+02 .00E+00	4 5.° 5 5 5 5 1 2 0.0	A4 - - 75E+01 - - 46E+03 00E+00 00E+00	2.0 2.4 0.0 0.0	A5 - 00E+01 - .1E+02 10E+00 00E+00	7.0 0.0	ASSA / B6 - - 28E+04 - - 02E+04 00E+00 00E+00	ABLOY C2 - 3.44E- - 8.76E- 0.00E- 0.00E-	+01	C3 - - 3.79E-0 - - 2.07E+C 0.00E+C	1 1 10 10	C4 - - - - 7.04E+02 0.00E+00 0.00E+00	2 D D	- -1.97E+04 - - -6.64E+04 0.00E+00 0.00E+00
Para PE PE PE PE R	ERE ERM ERT NRE NRM SM SM RSF	U	nit 3 AJ] 3 AJ] 0 AJ] 3 AJ] 1 AJ] 1 AJ] 1 AJ] 0 AJ] 1 AJ] 0	A1-3 .99E+04 .00E+00 .99E+04 .14E+09 .00E+00 .14E+09 .81E+02 .00E+00	4 0 4 5 5 5 1 5 2 0 0 0	A4 - - 75E+01 - 46E+03 00E+00 00E+00 00E+00	2.0 2.0 2.4 0.0 0.0 0.0	A5 - - - - - - - - - - - - -	e of 1.1 7.1 0.0	ASSA / B6 - - 28E+04 - 02E+04 00E+00 00E+00 00E+00	ABLOY C2 - - 3.44E- - 8.76E- 0.00E- 0.00E- 0.00E-	+01	C3 - - 3.79E-0 - 2.07E+C 0.00E+C 0.00E+C		C4 - - - - 7.04E+02 0.00E+00 0.00E+00	2 D D D	- -1.97E+04 - - -6.64E+04 0.00E+00 0.00E+00 0.00E+00
Para PE PE PE PE R R Nf Ca	ERE ERM ERT NRE NRM SM SSF RSF FW	· U (N	nit 3 AJ] 3 AJ] 3 AJ] 3 AJ] 1 AJ] 1 AJ] 1 AJ] 1 AJ] 1 AJ] 0 AJ] 1 Kg] 6 AJ] 0 AJ] 0 AJ] 0 AJ] 0 AJ] 0 Kg] 6 RE = US 0 RE = US 0 RE = US 0 RE = US 0 PENRE PENRE PENRM 0 Drimary e 0	A1-3 .99E+04 .00E+00 .99E+04 .14E+09 .00E+00 .14E+09 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .03E+0 e of remable prin Use of = Use of nergy re	4	A4 - - 75E+01 - 46E+03 00E+00 0	2.4 2.4 0.0 0.0 2.3 energy e surces u rimary e primary Jse of s enerwab	A5 - - - - - - - - - - - - -	e of 1.1 <	ASSA / B6 - - 28E+04 - - 02E+04 00E+00 00E+00 00E+00 17E+01 wabie prim taterials; PU and prime rices used erial; RSF = fuels; FW =	ABLOY C2 - 3.44E- - 3.44E- - 8.76E- 0.00E- 0.00E- 0.00E- 2.43E ary energe RT = To ewable p as raw m = Use of f = Use of f	+01 +02 +00 +00 +00 -02 gy resou al use o rimary e aterials; renewab het fresh	C3 - - 3.79E-0 - - 2.07E+C 0.00E+C 0.00E+C 0.00E+C 9.34E-0 rcces use f renewa nergy re PENRT le secon water	1 1 00 00 00 4 4 d as ra 10 ble prin source: = Tota dary fu	C4 - - 3.90E+0 - 7.04E+0 0.00E+000E+0	2 0 0 1 als; 1 rgy s rav ion r F =	- -1.97E+04 - - -6.64E+04 0.00E+00 0.00E+00 0.00E+00 -5.21E+01 PERM = Use resources; w materials; renewable Use of non
Para PE PE PE PE R R Nf Ca	ERE ERM ERT INRE INRE INRT SM SSF RSF EW ption	U [N] [N] <t< td=""><td>nit 3 AJ] 3 AJ] 3 AJ] 3 AJ] 1 AJ] 1 AJ] 1 AJ] 1 AJ] 1 AJ] 0 AJ] 1 Kg] 6 AJ] 0 AJ] 0 AJ] 0 AJ] 0 AJ] 0 Kg] 6 RE = US 0 RE = US 0 RE = US 0 RE = US 0 PENRE PENRE PENRM 0 Drimary e 0</td><td>A1-3 .99E+04 .00E+00 .99E+04 .14E+09 .00E+00 .14E+09 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .03E+0 e of remable prin Use of = Use of nergy re</td><td>4 </td><td>A4 - - 75E+01 - 46E+03 00E+00 0</td><td>2.4 2.4 0.0 0.0 2.3 energy e surces u rimary e primary Jse of s enerwab</td><td>A5 - - - - - - - - - - - - -</td><td>e of 1.1 <</td><td>ASSA / B6 - - 28E+04 - - 02E+04 00E+00 00E+00 00E+00 17E+01 wabie prim taterials; PU and prime rices used erial; RSF = fuels; FW =</td><td>ABLOY C2 - 3.44E- - 3.44E- - 8.76E- 0.00E- 0.00E- 0.00E- 2.43E ary energe RT = To ewable p as raw m = Use of f = Use of f</td><td>+01 +02 +00 +00 +00 -02 gy resou al use o rimary e aterials; renewab het fresh</td><td>C3 - - 3.79E-0 - - 2.07E+C 0.00E+C 0.00E+C 0.00E+C 9.34E-0 rcces use f renewa nergy re PENRT le secon water</td><td>1 1 00 00 00 4 4 d as ra 10 ble prin source: = Tota dary fu</td><td>C4 - - 3.90E+0 - 7.04E+0 0.00E+000E+0</td><td>2 0 0 1 als; 1 rgy s rav ion r F =</td><td>- -1.97E+04 - - -6.64E+04 0.00E+00 0.00E+00 0.00E+00 -5.21E+01 PERM = Use resources; renewable</td></t<>	nit 3 AJ] 3 AJ] 3 AJ] 3 AJ] 1 AJ] 1 AJ] 1 AJ] 1 AJ] 1 AJ] 0 AJ] 1 Kg] 6 AJ] 0 AJ] 0 AJ] 0 AJ] 0 AJ] 0 Kg] 6 RE = US 0 RE = US 0 RE = US 0 RE = US 0 PENRE PENRE PENRM 0 Drimary e 0	A1-3 .99E+04 .00E+00 .99E+04 .14E+09 .00E+00 .14E+09 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .03E+0 e of remable prin Use of = Use of nergy re	4	A4 - - 75E+01 - 46E+03 00E+00 0	2.4 2.4 0.0 0.0 2.3 energy e surces u rimary e primary Jse of s enerwab	A5 - - - - - - - - - - - - -	e of 1.1 <	ASSA / B6 - - 28E+04 - - 02E+04 00E+00 00E+00 00E+00 17E+01 wabie prim taterials; PU and prime rices used erial; RSF = fuels; FW =	ABLOY C2 - 3.44E- - 3.44E- - 8.76E- 0.00E- 0.00E- 0.00E- 2.43E ary energe RT = To ewable p as raw m = Use of f = Use of f	+01 +02 +00 +00 +00 -02 gy resou al use o rimary e aterials; renewab het fresh	C3 - - 3.79E-0 - - 2.07E+C 0.00E+C 0.00E+C 0.00E+C 9.34E-0 rcces use f renewa nergy re PENRT le secon water	1 1 00 00 00 4 4 d as ra 10 ble prin source: = Tota dary fu	C4 - - 3.90E+0 - 7.04E+0 0.00E+000E+0	2 0 0 1 als; 1 rgy s rav ion r F =	- -1.97E+04 - - -6.64E+04 0.00E+00 0.00E+00 0.00E+00 -5.21E+01 PERM = Use resources; renewable
Para PE PE PE PE R R NF F Ca	ERE ERM ERT INRE INRM INRT SM SSF RSF IN Ption	U [N] [N] <t< td=""><td>nit 3 AJ] 3 AJ] 3 AJ] 3 AJ] 1 AJ] 1 AJ] 1 AJ] 1 AJ] 1 AJ] 0 AJ] 1 Kg] 6 AJ] 0 AJ] 0 AJ] 0 AJ] 0 AJ] 0 Kg] 6 RE = US 0 RE = US 0 RE = US 0 RE = US 0 PENRE PENRE PENRM 0 Drimary e 0</td><td>A1-3 .99E+04 .00E+00 .99E+04 .14E+09 .00E+00 .14E+09 .81E+02 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .14E+09.14E+09 .14E+09 .14E+09.14E+09</td><td>4 </td><td>A4 - - 75E+01 - 46E+03 00E+00 0</td><td>2.4 2.4 0.0 0.0 2.3 energy e surces u rimary e primary Jse of s enerwab</td><td>A5 - - - - - - - - - - - - -</td><td>e of 1.1 <</td><td>ASSA / B6 - - 28E+04 - - 02E+04 00E+00 00E+00 00E+00 00E+00 17E+01 wable prim taterials; PE ng non ren rrces used erial; RSF = fuels; FW = CATEG</td><td>ABLOY C2 - 3.44E- - 3.44E- - 8.76E- 0.00E- 0.00E- 0.00E- 2.43E ary energe RT = To ewable p as raw m = Use of f = Use of f</td><td>+01 +02 +00 +00 +00 -02 gy resou al use o rimary e aterials; renewab het fresh</td><td>C3 - - 3.79E-0 - - 2.07E+C 0.00E+C 0.00E+C 0.00E+C 9.34E-0 rcces use f renewa nergy re PENRT le secon water</td><td>1 1 00 00 00 4 4 d as ra 10 ble prin source: = Tota dary fu</td><td>C4 - - 3.90E+0 - 7.04E+0 0.00E+000E+0</td><td>2 0 0 1 als; 1 rgy s rav ion r F =</td><td>- -1.97E+04 - - -6.64E+04 0.00E+00 0.00E+00 0.00E+00 -5.21E+01 PERM = Use resources; w materials; renewable Use of non</td></t<>	nit 3 AJ] 3 AJ] 3 AJ] 3 AJ] 1 AJ] 1 AJ] 1 AJ] 1 AJ] 1 AJ] 0 AJ] 1 Kg] 6 AJ] 0 AJ] 0 AJ] 0 AJ] 0 AJ] 0 Kg] 6 RE = US 0 RE = US 0 RE = US 0 RE = US 0 PENRE PENRE PENRM 0 Drimary e 0	A1-3 .99E+04 .00E+00 .99E+04 .14E+09 .00E+00 .14E+09 .81E+02 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .14E+09.14E+09 .14E+09 .14E+09.14E+09	4	A4 - - 75E+01 - 46E+03 00E+00 0	2.4 2.4 0.0 0.0 2.3 energy e surces u rimary e primary Jse of s enerwab	A5 - - - - - - - - - - - - -	e of 1.1 <	ASSA / B6 - - 28E+04 - - 02E+04 00E+00 00E+00 00E+00 00E+00 17E+01 wable prim taterials; PE ng non ren rrces used erial; RSF = fuels; FW = CATEG	ABLOY C2 - 3.44E- - 3.44E- - 8.76E- 0.00E- 0.00E- 0.00E- 2.43E ary energe RT = To ewable p as raw m = Use of f = Use of f	+01 +02 +00 +00 +00 -02 gy resou al use o rimary e aterials; renewab het fresh	C3 - - 3.79E-0 - - 2.07E+C 0.00E+C 0.00E+C 0.00E+C 9.34E-0 rcces use f renewa nergy re PENRT le secon water	1 1 00 00 00 4 4 d as ra 10 ble prin source: = Tota dary fu	C4 - - 3.90E+0 - 7.04E+0 0.00E+000E+0	2 0 0 1 als; 1 rgy s rav ion r F =	- -1.97E+04 - - -6.64E+04 0.00E+00 0.00E+00 0.00E+00 -5.21E+01 PERM = Use resources; w materials; renewable Use of non
Para PE PE PE PE R R Ca RESU Revo	ERE ERM ERT INRE INRE INRT SM SSF RSF RSF TW ption	U (N (N (N (N (N (N (N (N (N (N	nit 3 AJ] 3 AJ] 3 AJ] 1 AJ] 1 AJ] 1 AJ] 1 AJ] 1 AJ] 0 AJ] 0 AJ] 0 AJ] 0 AJ] 0 n³] 6 FRE = US of renews PENRE PENRE PENRM orimary e HE LCA 1	A1-3 .99E+04 .00E+00 .99E+04 .14E+09 .00E+00 .14E+09 .81E+02 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .14E+09	4 5 5 5 1. 2 0. 0 0. 0 0. 0 0. 1 4. ewable p mary ene fnon rene fnon rene fnon rene fnon rene	A4 - - 75E+01 - 46E+03 00E+00 0	2.4 0.0 0.0 0.0 2.3 energy e primary Jse of ss enewab	A5 - - - - - - - - - - - - -	e of 1 7 0 <td>ASSA / B6 - - 28E+04 - - 02E+04 00E+00 00E+00 00E+00 17E+01 wable prime aterials; PU ing non ren irrces used erial; RSF = fuels; FW = CATEG</td> <td>ABLOY C2 - 3.44E- - 3.44E- - 8.76E- 0.00E- 0.00E-</td> <td>+01 +02 +00 +00 +00 +00 02 gy resou al use o rimary e aterials; enewab het fresh : One</td> <td>C3 - - 3.79E-0 - 2.07E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 9.34E-0 rces use f renewa nergy re PENRT le secon water piece</td> <td>1 1 1 1 1 1 1 1 1 1 1 1 1 1</td> <td>C4 - - 3.90E+0 - - 7.04E+02 0.00E+0000000000</td> <td>2 0 0 1 als; 1 rgy s rav ion r F =</td> <td>- -1.97E+04 - - -6.64E+04 0.00E+00 0.00E+00 0.00E+00 -5.21E+01 PERM = Use resources; v materials; renewable Use of non</td>	ASSA / B6 - - 28E+04 - - 02E+04 00E+00 00E+00 00E+00 17E+01 wable prime aterials; PU ing non ren irrces used erial; RSF = fuels; FW = CATEG	ABLOY C2 - 3.44E- - 3.44E- - 8.76E- 0.00E-	+01 +02 +00 +00 +00 +00 02 gy resou al use o rimary e aterials; enewab het fresh : One	C3 - - 3.79E-0 - 2.07E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 9.34E-0 rces use f renewa nergy re PENRT le secon water piece	1 1 1 1 1 1 1 1 1 1 1 1 1 1	C4 - - 3.90E+0 - - 7.04E+02 0.00E+0000000000	2 0 0 1 als; 1 rgy s rav ion r F =	- -1.97E+04 - - -6.64E+04 0.00E+00 0.00E+00 0.00E+00 -5.21E+01 PERM = Use resources; v materials; renewable Use of non
Para PE PE PE PE R R NF Ca RESU Revol	ERE ERM ERT INRE INRM INRT SM SSF SW INTS INTS INTS INTS INTS INTS INTS INTS	U [N] [N] <t< td=""><td>nit 3 AJ] 3 AJ] 3 AJ] 3 AJ] 3 AJ] 1 AJ] 1 AJ] 1 AJ] 1 AJ] 1 AJ] 1 Kg] 6 AJ] 0 RE = US 0 of renews: 0 PENRM 0 orimary e 1 1E LCA A1-3 1</td><td>A1-3 .99E+04 .00E+00 .99E+04 .14E+09 .00E+00 .14E+09 .81E+02 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .14E+09 .00E+00 .14E+09 .00E+00 .14E+09 .00E+00 .14E+09 .00E+00 .14E+09 .00E+00 .14E+09 .00E+00 .14E+09 .00E+00 .14E+09 .00E+00 .14E+09 .00E+00 .14E+09 .00E+00 .14E+09 .00E+00 .14E+09 .00E+00 .00E+00 .14E+09 .00E+00 .00E+00 .14E+09 .00E+00 .00E+00 .14E+09 .00E+00 .00E+00 .00E+00 .14E+09 .00E+00</td><td>4 5 5 5 5 1 2 0 0 0 1 4 1 4 1 4 1 4 1 4 1 4 1 4 1 4 1 4 1 4 1 4</td><td>A4 - - 75E+01 - - 46E+03 00E+00 00E+00 00E+00 00E+00 00E+00 005E-02 orimary e argy resc awable p newable p newable</td><td>2.4 2.4 0.0 0.0 2.3 energy e purces u rimary e primary Jse of s enewab VS AN</td><td>A5 - - - - - - - - - - - - -</td><td>ree of 1.1.1 7.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0</td><td>ASSA / B6 - - 28E+04 - - 02E+04 00E+00 00E+00 00E+00 17E+01 wable prim aterials; PE ng non ren rrces used erial; RSF = fuels; FW = CATEG 5 +00</td><td>ABLOY C2 - - 3.44E- - - 8.76E- 0.00E- 0.00E- 0.00E- 2.43E ary energy ewable p as raw m = Use of r ORIES C2</td><td>+01 +02 +00 +00 +00 02 gy resou aterials; enewab het fresh : One 2.</td><td>C3 - - - - - - - 2.07E+C 0.00E+C 0.00E+C 0.00E+C 9.34E-0 rcces use f renewa nergy re PENRT le secon water piece C3</td><td>1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0</td><td>C4 - - - - - 7.04E+00 0.00E+0000000000</td><td>2 0 0 1 als; 1 rgy s rav ion r F =</td><td>- -1.97E+04 - - -6.64E+04 0.00E+00 0.00E+00 0.00E+00 0.00E+00 -5.21E+01 PERM = Use resources; w materials; renewable Use of non</td></t<>	nit 3 AJ] 3 AJ] 3 AJ] 3 AJ] 3 AJ] 1 AJ] 1 AJ] 1 AJ] 1 AJ] 1 AJ] 1 Kg] 6 AJ] 0 RE = US 0 of renews: 0 PENRM 0 orimary e 1 1E LCA A1-3 1	A1-3 .99E+04 .00E+00 .99E+04 .14E+09 .00E+00 .14E+09 .81E+02 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .14E+09 .00E+00 .14E+09 .00E+00 .14E+09 .00E+00 .14E+09 .00E+00 .14E+09 .00E+00 .14E+09 .00E+00 .14E+09 .00E+00 .14E+09 .00E+00 .14E+09 .00E+00 .14E+09 .00E+00 .14E+09 .00E+00 .14E+09 .00E+00 .00E+00 .14E+09 .00E+00 .00E+00 .14E+09 .00E+00 .00E+00 .14E+09 .00E+00 .00E+00 .00E+00 .14E+09 .00E+00	4 5 5 5 5 1 2 0 0 0 1 4 1 4 1 4 1 4 1 4 1 4 1 4 1 4 1 4 1 4 1 4	A4 - - 75E+01 - - 46E+03 00E+00 00E+00 00E+00 00E+00 00E+00 005E-02 orimary e argy resc awable p newable	2.4 2.4 0.0 0.0 2.3 energy e purces u rimary e primary Jse of s enewab VS AN	A5 - - - - - - - - - - - - -	ree of 1.1.1 7.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0	ASSA / B6 - - 28E+04 - - 02E+04 00E+00 00E+00 00E+00 17E+01 wable prim aterials; PE ng non ren rrces used erial; RSF = fuels; FW = CATEG 5 +00	ABLOY C2 - - 3.44E- - - 8.76E- 0.00E- 0.00E- 0.00E- 2.43E ary energy ewable p as raw m = Use of r ORIES C2	+01 +02 +00 +00 +00 02 gy resou aterials; enewab het fresh : One 2.	C3 - - - - - - - 2.07E+C 0.00E+C 0.00E+C 0.00E+C 9.34E-0 rcces use f renewa nergy re PENRT le secon water piece C3	1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	C4 - - - - - 7.04E+00 0.00E+0000000000	2 0 0 1 als; 1 rgy s rav ion r F =	- -1.97E+04 - - -6.64E+04 0.00E+00 0.00E+00 0.00E+00 0.00E+00 -5.21E+01 PERM = Use resources; w materials; renewable Use of non
Para PE PE PE PE R PE Ca R Ca R ESU Revo Parama HWI NHW	Ameter ERE ERM ERT NRM SM SSF SM SSF SW Ption Uting eter D D D	U [N] [N] <td>nit 3 AJ] 3 AJ] 3 AJ] 3 AJ] 1 AJ] 1 AJ] 1 AJ] 1 AJ] 1 AJ] 0 AJ] 1 (g] 6 AJ] 0 CRE = US 0 PENRE = PENRM PENRE = PENRM PENRE = PENRM PAI-3 1.01E+ 9.00E+ 6.28E+</td> <td>A1-3 .99E+04 .00E+00 .99E+04 .14E+09 .00E+00 .14E+09 .81E+02 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .14E+09 .00E+00 .00E+00 .14E+09 .00E+00 .00E+00 .14E+09 .00E+00 .00E+00 .14E+09 .00E+00 .00E+00 .14E+09 .00E+00 .00E+00 .14E+09 .00E+00 .00E+00 .14E+09 .00E+00 .00E+00 .00E+00 .14E+09 .00E+00 .00E+00 .00E+00 .14E+09 .00E+000 .00E+000 .00E+000E+0</td> <td>4 2 5 5 5 5 1 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 4 3.33E-(1.84E-(1.92E-(</td> <td>A4 75E+01 46E+03 00E+00 00E+00 00E+00 00E+00 005E-02 orimary e orgy resc ovable p newable p newable ovable p newable p n</td> <td>2.0 2.0 2.4 0.0 0.0 2.3 energy e uurces u rimary e primary Jse of se enewab VS AN A5 1.69E-0 1.35E+ 1.49E-0</td> <td>A5 - - - - - - - - - - - - -</td> <td>e of 1.: 1.: 1.: 1.: 1.: 1.: 0.: 0.: 0.: 0.: 0.: 0.: 0.: 0</td> <td>ASSA / B6 - - 28E+04 - - 02E+04 00E+00 00E+00 00E+00 17E+01 wable prim aterial; PE ng non ren rrces used orial; RSF = fuels; FW = CATEG 5 +00 +01 +01 +01</td> <td>ABLOY C2 - - 3.44E- - - 8.76E- 0.00E- 0.00E- 0.00E- 2.43E ary energent calored the second seco</td> <td>+01 +02 +00 +00 +00 -02 gy resou al use o rimary e aterials; renewab het fresh : One 2. 2. 6. 2.</td> <td>C3 - - 3.79E-0 - 2.07E+C 0.00E+C 0.00E+C 0.00E+C 0.00E+C 9.34E-0 rces use f renewa nergy re PENRT le secon water piece C3 87E-04 98E-04 98E-04</td> <td>1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0</td> <td>C4 - - 3.90E+0 - 7.04E+02 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 2.42E-01 w materia mary ene s used as use of n els; NRS SA AE C4 .84E-02 .92E+02 .74E-02</td> <td>2 0 0 1 als; 1 rgy s rav ion r F =</td> <td>- -1.97E+04 - - -6.64E+04 0.00E+00 0.00E+00 0.00E+00 0.00E+00 -5.21E+01 PERM = Use resources; w materials; renewable Use of non D -1.16E+00</td>	nit 3 AJ] 3 AJ] 3 AJ] 3 AJ] 1 AJ] 1 AJ] 1 AJ] 1 AJ] 1 AJ] 0 AJ] 1 (g] 6 AJ] 0 CRE = US 0 PENRE = PENRM PENRE = PENRM PENRE = PENRM PAI-3 1.01E+ 9.00E+ 6.28E+	A1-3 .99E+04 .00E+00 .99E+04 .14E+09 .00E+00 .14E+09 .81E+02 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .00E+00 .14E+09 .00E+00 .00E+00 .14E+09 .00E+00 .00E+00 .14E+09 .00E+00 .00E+00 .14E+09 .00E+00 .00E+00 .14E+09 .00E+00 .00E+00 .14E+09 .00E+00 .00E+00 .14E+09 .00E+00 .00E+00 .00E+00 .14E+09 .00E+00 .00E+00 .00E+00 .14E+09 .00E+000 .00E+000 .00E+000E+0	4 2 5 5 5 5 1 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 4 3.33E-(1.84E-(1.92E-(A4 75E+01 46E+03 00E+00 00E+00 00E+00 00E+00 005E-02 orimary e orgy resc ovable p newable p newable ovable p newable p n	2.0 2.0 2.4 0.0 0.0 2.3 energy e uurces u rimary e primary Jse of se enewab VS AN A5 1.69E-0 1.35E+ 1.49E-0	A5 - - - - - - - - - - - - -	e of 1.: 1.: 1.: 1.: 1.: 1.: 0.: 0.: 0.: 0.: 0.: 0.: 0.: 0	ASSA / B6 - - 28E+04 - - 02E+04 00E+00 00E+00 00E+00 17E+01 wable prim aterial; PE ng non ren rrces used orial; RSF = fuels; FW = CATEG 5 +00 +01 +01 +01	ABLOY C2 - - 3.44E- - - 8.76E- 0.00E- 0.00E- 0.00E- 2.43E ary energent calored the second seco	+01 +02 +00 +00 +00 -02 gy resou al use o rimary e aterials; renewab het fresh : One 2. 2. 6. 2.	C3 - - 3.79E-0 - 2.07E+C 0.00E+C 0.00E+C 0.00E+C 0.00E+C 9.34E-0 rces use f renewa nergy re PENRT le secon water piece C3 87E-04 98E-04 98E-04	1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	C4 - - 3.90E+0 - 7.04E+02 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 2.42E-01 w materia mary ene s used as use of n els; NRS SA AE C4 .84E-02 .92E+02 .74E-02	2 0 0 1 als; 1 rgy s rav ion r F =	- -1.97E+04 - - -6.64E+04 0.00E+00 0.00E+00 0.00E+00 0.00E+00 -5.21E+01 PERM = Use resources; w materials; renewable Use of non D -1.16E+00
Para PE PE PE PE PE R R R Ca R EVO Parame HWU	ERE ERM ERT ERT NRR NRM SNRT SM SSF RSF RSF TW ption	U [N] [N] <t< td=""><td>nit 3 AJ] 3 AJ] 3 AJ] 3 AJ] 1 AJ] 1 AJ] 1 AJ] 1 AJ] 1 AJ] 1 AJ] 0 AJ] 1 (g] 6 AJ] 0 GRE US PENRM 0 Drimary e 1 1.01E+ 9.00E+</td><td>A1-3 .99E+04 .00E+00 .99E+04 .14E+09 .00E+00 .14E+09 .00E+00</td><td>4 2 5 5 5 5 1 4 5 0 5 1 4 3.33E-(1.84E-(</td><td>A4 - - 75E+01 - 46E+03 00E+00 00E+00 00E+00 00E+00 05E-02 primary e prima</td><td>2.4 2.4 0.0 0.0 2.3 energy e purces u rimary e primary Jse of s enewab VS AN A5 1.69E-0 1.35E+</td><td>A5 - - - - - - - - - - - - -</td><td>re of 1.1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1</td><td>ASSA / B6 - - 28E+04 - - 28E+04 - 00E+00 00E+00 00E+00 17E+01 wable prim aterials; PE ng non ren irrces used print aterials; FW = CATEG 5 +00 +01 +01 +00 0 0 0 0 0 0 0 0 0 0 0 0</td><td>ABLOY C2 - - 3.44E- - - 8.76E- 0.00E- 0.00E- 0.00E- 2.43E ary energy cr ary energy as raw m = Use of r ORIES C2 2.00E-03 1.10E-01</td><td>+01 +02 +00 +00 +00 +00 -02 gy resou al use o rimary e aterials; enewab iet fresh : One 2. 6. 2. 0. 0.</td><td>C3 - - - - - - - - 2.07E+C 0.00E+C 0.00E+C 0.00E+C 0.00E+C 9.34E-0 rces use f renewa nergy re PENRT le secon water piece C3 87E-04 69E-04</td><td>1 1 1 0 0 0 0 0 4 4 a ran b e prin source: Total day fu of AS 2 6 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0</td><td>C4 - - 3.90E+0 - 7.04E+02 0.00E+00 0.00</td><td>2 0 0 1 als; 1 rgy s rav ion r F =</td><td>- -1.97E+04 - - -6.64E+04 0.00E+00 0.00E+00 0.00E+00 -5.21E+01 PERM = Use resources; w materials; renewable Use of non D -1.16E+00 -7.50E+02</td></t<>	nit 3 AJ] 3 AJ] 3 AJ] 3 AJ] 1 AJ] 1 AJ] 1 AJ] 1 AJ] 1 AJ] 1 AJ] 0 AJ] 1 (g] 6 AJ] 0 GRE US PENRM 0 Drimary e 1 1.01E+ 9.00E+	A1-3 .99E+04 .00E+00 .99E+04 .14E+09 .00E+00 .14E+09 .00E+00	4 2 5 5 5 5 1 4 5 0 5 1 4 3.33E-(1.84E-(A4 - - 75E+01 - 46E+03 00E+00 00E+00 00E+00 00E+00 05E-02 primary e prima	2.4 2.4 0.0 0.0 2.3 energy e purces u rimary e primary Jse of s enewab VS AN A5 1.69E-0 1.35E+	A5 - - - - - - - - - - - - -	re of 1.1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1	ASSA / B6 - - 28E+04 - - 28E+04 - 00E+00 00E+00 00E+00 17E+01 wable prim aterials; PE ng non ren irrces used print aterials; FW = CATEG 5 +00 +01 +01 +00 0 0 0 0 0 0 0 0 0 0 0 0	ABLOY C2 - - 3.44E- - - 8.76E- 0.00E- 0.00E- 0.00E- 2.43E ary energy cr ary energy as raw m = Use of r ORIES C2 2.00E-03 1.10E-01	+01 +02 +00 +00 +00 +00 -02 gy resou al use o rimary e aterials; enewab iet fresh : One 2. 6. 2. 0. 0.	C3 - - - - - - - - 2.07E+C 0.00E+C 0.00E+C 0.00E+C 0.00E+C 9.34E-0 rces use f renewa nergy re PENRT le secon water piece C3 87E-04 69E-04	1 1 1 0 0 0 0 0 4 4 a ran b e prin source: Total day fu of AS 2 6 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	C4 - - 3.90E+0 - 7.04E+02 0.00E+00 0.00	2 0 0 1 als; 1 rgy s rav ion r F =	- -1.97E+04 - - -6.64E+04 0.00E+00 0.00E+00 0.00E+00 -5.21E+01 PERM = Use resources; w materials; renewable Use of non D -1.16E+00 -7.50E+02

ASSA ABLOY

MER	[kg]	0.00E+00	-						
EEE	[MJ]	0.00E+00	0.00E+00	1.07E+03	0.00E+00	0.00E+00	0.00E+00	9.59E+02	-
EET	[MJ]	0.00E+00	0.00E+00	3.01E+03	0.00E+00	0.00E+00	0.00E+00	2.66E+03	-
Caption	HWD = Hazardous waste disposed; NHWD = Non hazardous waste disposed; RWD = Radioactive waste disposed; CRU = aption Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy								

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 56% and 99% to the overall results for all the environmental impact assessment categories hereby considered, except for the depletion potential of the stratospheric ozone layer (ODP), for which the contribution from the production phase accounts for app. 25%. Glass, aluminum and steel accounts in total with app. 90% 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.

To reflect the use phase (module B6), the energy consumption was included and it has a major contribution for all the impact assessment categories considered - between 0.1% and 30%, with the exception of ODP (75%). In calculating the ozone

depletion potential, the anthropogenically released halogenated hydrocarbons, which can destroy many ozone molecules, are recorded first, therefore, as expected, the impact is higher during the use phase of the product (B6). This is a result of long operation hours in on mode almost every day in a year.

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) stated in this EPD, energy consumption was considered and has a major contribution for each impact assessment category between 22% and 75%, with exception of ADPE (less than 1%).

In module D the benefits (negative values) and loads beyond the system boundary are declared for the recycling potential of the metals and for the credits from the incineration process (energy substitution) within A5.

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

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. <u>www.bau-umwelt.de</u>

2004/108/EC Electromagnetic Compatibility Directive (EMCD) Relating to electromagnetic compatibility and repealing Directive 89/336/EEC

2006/42/EC Machinery Directive (MD)

Directive 2006/42/EC on machinery

DIN 18650-1

DIN 18650-1: 2005: Powered pedestrian doors - Part 1: Product requirements and test methods.

DIN 18650-2

DIN 18650-2: 2005: Powered pedestrian doors - Part 2: Safety at powered pedestrian doors.

ISO 14025

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

EN 16005

EN 16005:2012: Power operated pedestrian door sets - Safety in use - Requirements and test methods

ASSA ABLOY

EN 60335-1

EN 60335-1:2012: Household and similar electrical appliances -Safety - Part 1: General requirements

EN 60335-2

EN 60335-2-103:2003: Household and similar electrical appliances - Safety - Part 2-103: Particular requirements for drives for gates, doors and windows

EN 61000-6-2

EN 61000-6-2:2005: Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity for industrial environments

EN 61000-6-3

EN 61000-6-3:2001: Quality management systems - Requirements (EN ISO 9001:2008)

EN ISO 13849-1

EN ISO 13849-1:2008: Safety of machinery — Safetyrelated parts of control systems — Part 1: General principles for design

EN 12600

Glass in building - Pendulum tests - Impact test method and classification for flat glass

EN ISO 9001

EN ISO 9001:2008: Quality management systems - Requirements (ISO 9001:2008)

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/

WEEE

Directive 2012/19/EU of the European Parliament and of the Council of 4 July 2012 on waste electrical and electronic equipment (WEEE)

EWC

European Waste Catalog



9. Annex

Results shown below were calculated using TRACI Methodology.

DESC		TION	OF THE	SYST	EM BO	OUND	ARY (X = IN	CLUE	DED IN	LCA:	MND =	MOD		NOT DE	CL	ARED)
PRODUCT STAGE		CONS ⁻ ON PR	TRUCTI OCESS AGE	USE STAGE										BEN BE`	EFITS AND LOADS YOND THE SYSTEM UNDARYS		
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	B A4	A5	B1	B2	B3	B4	B5	B 6	B7	C1	C2	C3	C4		D
Х	Х	Х	Х	Х	MND	MND	MND	MND	MND	X	MND	MND	Х	Х	Х		Х
RESU	JLTS	OF	THE LC	- EN	VIRON	MENT		IPACT	: One	e piece	of AS	SA ABI		D3L,	Revolv	ving	door
Para	amete	r	Unit	A1-3		A4		A5	A5		C2		C	:3	C4		D
G	WP		[kg CO ₂ - eq.] 7.37		E+03	3 1.06E+02		9.17E+02		3.95E+0	03 6	.33E+01	1.16E-01		6.96E+02		-5.20E+03
C	DP	[kg CFC11- eq.]	C11- 971E-07		5.38E-10		3.86E-	3.86E-09 2.87		6 3.22E-10		8.47	E-11	3.17E-09		2.03E-06
1	AP	[kg SO ₂ -eq.	5.02	5.02E+01		6.32E-01		1.49E-01 1.		01 ;	8.78E-01	1 5.20E-04		2.89E-01		-2.58E+01
E	EP		[kg N-eq.]	2.39E+00		4.47E-02		8.12E-	8.12E-03 7.5		01 2.67E-02		2.21E-05		2.60E-02		-6.62E-01
Sr	Smog [kg O ₃ -eq.]		5.64	E+02 1.30E+01		+01	2.82E+00		1.59E+0	+02 7.79E+00		4.70	4.70E-03		4.57E+00		
Res	ources	;	[MJ]	8.60	60E+03 2.10		+02	2.35E+	·01	3.19E+0	.19E+03 1.26E+		9.41E-02		8.10E+01		-4.87E+03
Ca	ption	(GWP = Glo	oal warmi	ing poten	tial; ODF				ential; AP = ces = Reso			ntial; EP	= Eutro	phication p	ooten	tial; Smog =
RESU	JLTS	OF ⁻	THE LC	- RE	SOUR	CE US							Revo	olvino	door		
	amete		Unit	A1-3		A4		A5 B6		B6	C2		C3		C4		D
PE	ERE		[MJ]	3.99E+0)4	-		-		-	1	-	-		-		-
PE	ERM		[MJ]	0.00E+0	00	-		-		-		-	-		-		
	PERT [MJ]										1					-	
PE	ERT		[MJ]	3.99E+0	04 5	.75E+0′	1 2.	00E+01	1.	28E+04	3.44	E+01	3.79E	-01	3.90E+0)1	- -1.97E+04
	ERT		[MJ] [MJ]	3.99E+0		.75E+0′ -	1 2.	00E+01 -	1.	28E+04 -		E+01 -	3.79E	-01	3.90E+0 -)1	- -1.97E+04 -
PE)5		1 2.		1.:					-01)1	- -1.97E+04 - -
PE PE	NRE		[MJ]	1.14E+(05												-1.97E+04 - - -6.64E+04
PE PE PE	NRE NRM		[MJ] [MJ]	1.14E+0	05 00 05 1	-	3 2.	-	7.	-	8.76	-	-	+00	-)2	-
PE PE PE	NRE NRM		[MJ] [MJ]	1.14E+0 0.00E+0 1.14E+0	05 00 05 1. 02 0.	- - .46E+03	3 2. 0 0.	- - 41E+02	7.	- - 02E+04	8.76	- - E+02	- - 2.07E-	+00	- - 7.04E+0)2)0	- - -6.64E+04
PE PE PE	NRE NRM NRT SM		[MJ] [MJ] [MJ] [Kg]	1.14E+0 0.00E+0 1.14E+0 6.81E+0	05 00 05 1 02 0 00 0	- - .46E+03 .00E+00	3 2. 3 0. 0 0.	- 41E+02 00E+00	7. 0.	- - 02E+04 00E+00	8.76 0.00 0.00	- - E+02 E+00	- 2.07E- 0.00E-	+00 +00 +00	- 7.04E+0 0.00E+0)2)0)0	- -6.64E+04 0.00E+00
PE PE PE S R NI	NRE NRM NRT SM		[MJ] [MJ] [MJ] [Kg] [MJ]	1.14E+0 0.00E+0 1.14E+0 6.81E+0 0.00E+0	05 05 05 05 05 02 00 00 00 00	- .46E+03 .00E+00	3 2. 3 0. 0 0. 0 0. 0 0.	- 41E+02 00E+00 00E+00	7. 0. 0.	- - 02E+04 00E+00 00E+00	8.76 0.00 0.00 0.00	- E+02 E+00 E+00	- 2.07E- 0.00E- 0.00E-	+00 +00 +00	- 7.04E+0 0.00E+0 0.00E+0)2)0)0	- -6.64E+04 0.00E+00 0.00E+00
PE PE PE R R	NRE NRM NRT SM RSF RSF	on	[MJ] [MJ] [MJ] [MJ] [MJ] [MJ] [MJ] [m ³] PERE US US US resouraw r	1.14E+(0.00E+(1.14E+(6.81E+(0.00E+(6.03E+(6.03E+(= Use o e of rene irrces; PE naterials	05 00 05 05 05 02 00 00 00 00 00 00 00 01 4 f renewal wable pr NRE = L ; PENRM ole prima:	- .46E+00 .00E+00 .00E+00 .00E+00 .05E-02 ble prim rimary e Jse of n 1 = Use	3 2. 3 0. 0 0.	- 41E+02 00E+00 00E+00 00E+00 37E+00 rgy exclu ssources wable pri enewables rces; SM	7. 0. 0. 3. used a mary e e prima I = Use	- 02E+04 00E+00 00E+00 00E+00 17E+01 17E+01 anergy exc ary energy	8.76 0.00 0.00 2.43 primary terials; I cluding I / resourd dary ma	- E+02 E+00 E+00 E+00 E-02 energy re PERT = T non renew ses used terial; RS	2.07E- 0.00E- 0.00E- 0.00E- 9.34E sources otal use vable pr as raw r F = Use	+00 +00 +00 +00 -04 e of reno imary e materia e of reno	7.04E+0 0.00E+0 0.00E+0 0.00E+0 2.42E-0 as raw ma ewable pri nergy ress ls; PENRT ewables server)2)0)0)0 00 11 ateria jimary ourccorr	-6.64E+04 0.00E+00 0.00E+00 0.00E+00 -5.21E+01 dls; PERM =
PE PE S R Ni	NRE NRM NRT SM SSF RSF TW Captic	OF T	[MJ] [MJ] [MJ] [MJ] [MJ] [MJ] [MJ] [m ³] PERE Us resou raw r non	1.14E+(0.00E+(1.14E+(6.81E+(0.00E+(6.03E+(6.03E+(= Use o e of rene irrces; PE naterials renewab	05 00 05 05 06 07 08 09 00 00 00 00 00 00 00 01 4 f renewale provember of the primary structure of the primary	- .46E+03 .00E+00 .00E+00 .00E+00 .05E-02 ble prim rimary e Jse of n 1 = Use ry energ NRSF =	3 2. 3 0. 0 0. 0 0. 2 2. 2 2. hary ene on rene of non r gy resou Use of	- 41E+02 00E+00 00E+00 00E+00 37E+00 37E+00 rgy excluses wable pri enewabl0 rces; SM non renewabl0	7. 0. 0. 0. 3. uding re used a mary e e prima I = Use wable s	- 02E+04 00E+00 00E+00 00E+00 17E+01 anewable as raw ma energy exc ary energy of second	8.76 0.00 0.00 2.43 primary terials; I cluding r / resour dary ma y fuels; I	- E+02 E+00 E+00 E+00 E-02 E-02 E-02 E-02 E-02 E-02 E-02 E-	2.07E- 0.00E- 0.00E- 9.34E 9.34E sources otal use vable pr vable pr ras raw r F = Use of net f	+00 +00 +00 -04 e of reno imary e materia e of reno resh wa	7.04E+C 0.00E+C 0.00E+C 2.42E-0 as raw ma ewable prin nergy ress is; PENRT ewable se ater	$\frac{1}{1000}$	-6.64E+04 0.00E+00 0.00E+00 0.00E+00 -5.21E+01 als; PERM = y energy se used as otal use of
PE PE S R NI F	NRE NRM SM SSF RSF -W Captic	OF T	[MJ] [MJ] [MJ] [MJ] [MJ] [MJ] [MJ] [m ³] PERE Us resou raw r non	1.14E+(0.00E+(1.14E+(6.81E+(0.00E+(0.00E+(6.03E+(= Use o rene urces; PE naterials renewat	05 00 05 05 06 07 08 09 00 00 00 00 00 00 00 01 4 f renewale provember of the primary structure of the primary	- .46E+03 .00E+00 .00E+00 .00E+00 .05E-02 ble prim rimary e Jse of n 1 = Use ry energ NRSF =	3 2. 3 0. 0 0. 0 0. 2 2. 2 2. hary ene on rene of non r gy resou Use of	- 41E+02 00E+00 00E+00 00E+00 37E+00 37E+00 rgy excluses wable pri enewabl0 rces; SM non renewabl0	7. 0. 0. 0. 3. uding re used a mary e e prima I = Use wable s	- 02E+04 00E+00 00E+00 00E+00 17E+01 anewable as raw ma energy exc ary energy of second	8.76 0.00 0.00 2.43 primary terials; I cluding r / resour dary ma y fuels; I	- E+02 E+00 E+00 E+00 E-02 E-02 E-02 E-02 E-02 E-02 E-02 E-	2.07E- 0.00E- 0.00E- 9.34E 9.34E sources otal use vable pr vable pr ras raw r F = Use of net f	+00 +00 +00 -04 e of reno imary e materia e of reno resh wa	7.04E+C 0.00E+C 0.00E+C 2.42E-0 as raw ma ewable prin nergy ress is; PENRT ewable se ater	$\frac{1}{1000}$	- -6.64E+04 0.00E+00 0.00E+00 0.00E+00 -5.21E+01 alls; PERM = / energy es used as otal use of lary fuels;
PE PE R NI F RESU Revo	NRE NRM SNRT SM RSF W Captic Lying eter	OF ⁻ g doo	[MJ] [MJ] [MJ] [MJ] [MJ] [MJ] [MJ] [m ³] PERE Us resol raw r non	1.14E+(0.00E+(1.14E+(6.81E+(0.00E+(6.03E+(6.03E+(= Use o e of rene rrces; PE naterials renewab	05 00 05 02 00 00 00 00 00 00 00 00 00 00 00 00 00 01 4 f renewaa NRE = U NRE = U PENRM Nole primaa N TPUT	- .46E+03 .00E+00 .00E+00 .00E+00 .05E-02 ble prim rimary e Jse of n 1 = Use NRSF = FLOV	3 2. 0 0. 0 0. 0 0. 0 0. 0 0. 0 0. 2 2. nary ene nergy resound non rene of non r 0y resound Use of the second	- 41E+02 00E+00 00E+00 00E+00 37E+00 37E+00 rgy exclu esources wable pri enewable rces; SM non renewable	7 0 0 3. a. mary e e primae l = Use wable = STE (- 02E+04 00E+00 00E+00 00E+00 17E+01 17E+01 17E+01 as raw ma any energy of secondary secondary CATEG(8.76 0.00 0.00 2.43 primary tterials; I cluding i y resourd dary ma y fuels; I ORIES	- E+02 E+00 E+00 E+00 E-02 energy re PERT = T on renew ces used terial; RS W = Use S: One I	- 2.07E- 0.00E- 0.00E- 9.34E 9.34E 9.34E 9.34E 9.34E 9.34E 9.34E 9.34E 9.34E 9.34E 9.34E 9.34E 9.34E 9.34E 9.34E	+00 +00 +00 -04 s used a of rene imary e materia of rene resh wateria	7.04E+0 0.00E+0 0.00E+0 0.00E+0 2.42E-0 as raw ma swable pri nergy resi s; PENR swable se ater SA AB	$\frac{1}{100}$	- -6.64E+04 0.00E+00 0.00E+00 0.00E+00 -5.21E+01 lls; PERM = y energy es used as otal use of lary fuels; Y RD3L,
PE PE PE R NI F RESU Revo	NRE NRM SNRT SM SSF SSF SV Captic Uting eter D	OF doo Unit	[MJ] [M] [M] [M] [M] [M] [M] [M] [M	1.14E+(0.00E+(1.14E+(6.81E+(0.00E+(0.00E+(6.03E+(= Use o e of rene urces; PE naterials renewat	05 1 05 1 05 1 02 0 00 0 00 0 01 4 f renewase FRE = L NRE = L NRE = L PENRM N IPUT A4	- .46E+03 .00E+00 .00E+00 .00E+00 .00E+00 .005E-02 ble prim rimary e Jse of n 4 = Use ry energ NRSF = FLOW	3 2. 0 0. 0 0. 0 0. 0 0. 0 0. 0 0. 0 0. 0 0. 10 10 10 <td>- 41E+02 00E+00 00E+00 00E+00 37E+00 rgy exclu sources wable pri enewable prices; SM non rener D WAS</td> <td>7. 0. 0. 3. 3. 3. 3. 3. 4. 9. 5. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7.</td> <td>- 02E+04 00E+00 00E+00 00E+00 17E+01 enewable as raw ma energy exc ary energy of secondary CATEG(00 2</td> <td>8.76 0.00 0.00 2.43 primary terials; I cluding t resourd dary may fuels; I ORIES</td> <td>- E+02 E+00 E+00 E+00 E+00 E+00 E-02 energy re 2ERT = T hon renew res used terial; RS W = Use S: One I</td> <td>- 2.07E- 0.00E- 0.00E- 0.00E- 9.34E sources otal use vable pr as raw r F = Use of net f piece C3</td> <td>+00 +00 +00 -04 s used a e of rene resh wa of AS of AS</td> <td>7.04E+C 0.00E+C 0.00E+C 0.00E+C 2.42E-O as raw ma ewable prinergy ress is; PENRT ewable se ater SA AB</td> <td>22 00 00 11 12 13 14 16 16 10 10 10 10 10 10 10 10 10 10</td> <td>-6.64E+04 0.00E+00 0.00E+00 0.00E+00 -5.21E+01 dls; PERM = y energy se used as otal use of lary fuels; Y RD3L, D</td>	- 41E+02 00E+00 00E+00 00E+00 37E+00 rgy exclu sources wable pri enewable prices; SM non rener D WAS	7. 0. 0. 3. 3. 3. 3. 3. 4. 9. 5. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7.	- 02E+04 00E+00 00E+00 00E+00 17E+01 enewable as raw ma energy exc ary energy of secondary CATEG(00 2	8.76 0.00 0.00 2.43 primary terials; I cluding t resourd dary may fuels; I ORIES	- E+02 E+00 E+00 E+00 E+00 E+00 E-02 energy re 2ERT = T hon renew res used terial; RS W = Use S: One I	- 2.07E- 0.00E- 0.00E- 0.00E- 9.34E sources otal use vable pr as raw r F = Use of net f piece C3	+00 +00 +00 -04 s used a e of rene resh wa of AS of AS	7.04E+C 0.00E+C 0.00E+C 0.00E+C 2.42E-O as raw ma ewable prinergy ress is; PENRT ewable se ater SA AB	22 00 00 11 12 13 14 16 16 10 10 10 10 10 10 10 10 10 10	-6.64E+04 0.00E+00 0.00E+00 0.00E+00 -5.21E+01 dls; PERM = y energy se used as otal use of lary fuels; Y RD3L, D
PE PE RESU Revo Paramo	NRE NRM SNRT SM RSF W Captic VITS Iving eter D	OF doo Unit [kg]	[MJ] [M] [M] [M] [M] [M] [M] [M] [M	1.14E+(0.00E+(1.14E+(6.81E+(0.00E+(0.00E+(6.03E+(e of rene irrces; PE materials renewate A - OU 3 -01	05 00 05 05 02 00 00 00 00 00 00 00 00 00 00 00 00 01 4 frenewal NRE = U NRE = U PENRM Nole primar N TPUT A4 3.33E-0	- .46E+03 .00E+00 .00E+00 .00E+00 .00E+00 .05E-02 ble prim rimary e Jse of n 1 = Use NRSF = FLOV	3 2. 0 0. 0 0. 0 0. 0 0. 0 0. 0 0. 0 0. 0 0. 0 0. 0 0. 2 2. nary energy resound Use of two renergy resound Use of two renergy resound Use of two renergy resound VS AN A5 1.69E-0 1.69E-0	- 41E+02 00E+00 00E+00 00E+00 37E+00 37E+00 37E+00 D WAS 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	7 0 0 3.	- 02E+04 00E+00 00E+00 00E+00 17E+01 17E+01 17E+01 17E+01 00E+00 17E+01 00E+00 00E+00 00 2 01 1 1	8.76 0.00 0.00 2.43 primary tterials; I cluding i y fuels; I ORIES C2 2.00E-03	- E+02 E+00 E+00 E+00 E-02 E+00 E-02 E+00 E-02 E-02 E-02 E-02 E-02 E-02 E-02 E-	- 2.07E- 0.00E- 0.00E- 9.34E 9.34E 9.34E otal use vable pr as raw r F = Use of net f piece C3 37E-04	+00 +00 +00 -04 s used a of reneriana of reneriana e of reneriana resh wateriana of AS	7.04E+C 0.00E+C 0.00E+C 0.00E+C 2.42E-O as raw ma swable pri nergy resi s; PENRT ewable se ater SA AB C4 .84E-O2	02 00 00 00 11 00 00 00 11 00 00 00 00 11 00 00	- -6.64E+04 0.00E+00 0.00E+00 0.00E+00 -5.21E+01 ils; PERM = / energy es used as otal use of lary fuels; / RD3L, D -1.16E+00
PE PE PE R R NI PE R R R R R R R R R R R R R R R R R R	NRE NRM SNRT SM SSF SSF SV Captic Uting eter D D D	OF doo Unit [kg] [kg]	[MJ] [M] [M] [M] [M] [M] [M] [M] [M	1.14E+(0.00E+(1.14E+(6.81E+(0.00E+(0.00E+(6.03E+(= Use o e of rene irces; PE naterials renewat	05 00 05 05 02 00 00 00 00 00 00 00 00 01 4 f renewa wable primar NRE = L Y PENRM Nole primar N TPUT A4 3.33E-0 1.84E-0	- .46E+03 .00E+00 .00E	3 2. 0 0. 0 0. 0 0. 0 0. 0 0. 0 0. 0 0. 0 0. 0 0. 0 0. 0 0. 0 0. 0 0. 0 0. 0 0. 1.35E+(- 41E+02 00E+00 00E+00 00E+00 37E+00 rgy exclu sources wable pri enewable rrces; SM non rener D WAS 02 2 5 0 1 2 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	7 0. 0. 3. 400 prima = Uses wable = 5TE (B6 B6 D.73E+	- 02E+04 00E+00 00E+00 00E+00 17E+01 enewable as raw ma energy exc ary energy e of secondary CATEG(00 2 00 1 1 1 0 1 1 1 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1	8.76 0.00 0.00 2.43 primary terials; l cluding i resourd dary ma y fuels; l ORIES 2.00E-03	- E+02 E+00 E+00 E+00 E+00 E+00 E-02 energy re PERT = T hon renew resused terial; RS W = Use S: One I S 2.8 6.0 5 2.9	- 2.07E 0.00E 0.00E 0.00E 9.34E sources otal use vable pr as raw r F = Use of net f piece C3 37E-04 69E-04	+00 +00 +00 -04 s used a e of rene imary e materia e of rene resh wa of AS of AS	7.04E+0 0.00E+0 0.00E+0 2.42E-0 as raw ma ewable prinergy ress is; PENRT ewable se ater SA AB SA AB 84E-02 92E+02	02 00 00 00 11 00 00 00 11 00 00 00 00 11 00 00	

0.00E+00

0.00E+00

0.00E+00

0.00E+00

2.53E+03

0.00E+00

0.00E+00

0.00E+00

-

MFR

MER

[kg]

[kg]

0.00E+00

0.00E+00

0.00E+00

0.00E+00

5.85E+00

0.00E+00



EEE	[MJ]	0.00E+00	0.00E+00	1.07E+03	0.00E+00	0.00E+00	0.00E+00	9.59E+02	-
EET	[MJ]	0.00E+00	0.00E+00	3.01E+03	0.00E+00	0.00E+00	0.00E+00	2.66E+03	-
Caption	HWD = Hazardous waste disposed; NHWD = Non hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy								

Institut Bauen und Umwelt e.V.	Publisher Institut Bauen und Umwelt e.V. Panoramastr. 1 10178 Berlin Germany	Tel Fax Mail Web	+49 (0)30 3087748-0 +49 (0)30 3087748-29 info@bau-umwelt.com www.bau-umwelt.com
Institut Bauen und Umwelt e.V.	Programme holder Institut Bauen und Umwelt e.V. Panoramastr 1 10178 Berlin Germany	Tel Fax Mail Web	+49 (0)30 3087748-0 +49 (0)30 3087748-29 info@bau-umwelt.com www.bau-umwelt.com
PE INTERNATIONAL SUSTAINABILITY PERFORMANCE	Author of the Life Cycle Assessment PE INTERNATIONAL AG Hauptstraße 111-113 70771 Leinfelden-Echterdingen Germany	Tel Fax Mail Web	+49 (0)711 341817-0 +49 (0)711 341817-25 info@pe-international.com www.pe-international.com
	Owner of the Declaration ASSA ABLOY Entrance Systems AB	Tel	+46 10 47 47 000



Owner of the Declaration ASSA ABLOY Entrance Systems Al Lodjursgatan 10 26144 Landskrona Sweden

 Tel
 +46 10 47 47 000

 Fax
 +46 418 284 12

 Mail
 info.aaes@assaabloy.com

 Web
 www.assaabloyentrance.com