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-20170150-IBA1-EN
Issue date	27.09.2017
Valid to	26.09.2022

ASSA ABLOY CY110 cylinder

ASSA ABLOY

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ASSA ABLOY

1. General Information

ASSA ABLOY	ASSA ABLOY CY110 cylinder
Programme holder IBU - Institut Bauen und Umwelt e.V. Panoramastr. 1 10178 Berlin Germany	**Owner of the Declaration** ASSA ABLOY Czech & Slovakia s.r.o. Strojnická 633 516 01 Rychnov nad Kněžnou Czech Republic
Declaration number EPD-ASA-20170150-IBA1-EN	**Declared product / Declared unit** The declaration represents 1 piece of key to differ cylinder with 3 nickel silver keys of the following type: euro profile, double cylinder, 60mm overall length (ED3030). It includes the following components of the cylinder: housing, plugs, pinning components and 3 nickel silver keys delivered with a security card.
This Declaration is based on the Product Category Rules -PCR: Building Hardware products, 02.2016 (PCR tested and approved by the SVR) **Issue date** 27.09.2017 **Valid to** 26.09.2022	**Scope:** This declaration and the corresponding LCA study are relevant to ASSA ABLOY CY110. The primary manufacturing processes are performed by factory in Czech Republic and the final manufacturing processes and assembly for the cylinder components occur at the manufacturing factory in Czech Republic. The owner of the declaration shall be liable for the underlying information and evidence; IBU shall not be liable with respect to manufacturer information, life cycle assessment data and evidences.
Prof. Dr.-Ing. Horst J. Bossenmayer (President of Institut Bauen und Umwelt e.V.)	**Verification** The CEN Standard EN 15804 serves as the core PCR Independent verification of the declaration according to ISO 14025 ☐ internally ☒ externally
Dr.-Ing. Burkhart Lehmann (Managing Director IBU)	Dr. Wolfram Trinius (Independent verifier appointed by SVA)

2. Product

2.1 Product description

Product name: ASSA ABLOY CY110 cylinder
Product characteristic:

ASSA ABLOY CY110 is a patented key to differ euro double cylinder with 3 keys. It is a reversible, dimple key cylinder with 6 pins. The product is delivered with a security card to enable only the owner of it to have spare keys from the authorised key cutting partners.

For the use and application of the product the respective national provisions at the place of use apply, in Germany for example the Building Codes of the countries and the corresponding national specifications.

2.2 Application

These cylinders are designed for various applications. The cylinders are typically installed in both commercial and residential buildings, such as:

- Schools, universities
- Hospitals, small practices
- Hotels, leisure centres
- Small private homes, residential block houses etc.
- Psychiatric wards
- Any high abuse applications

2.3 Technical Data

The table presents the technical properties of CY110 cylinders according to the classification in EN 1303:2015:

Classes	Required technical characteristics	Defined grades
1	Category of use	1
2	Durability	6
3	door mass	-
4	Suitability for use in fire resisting and/or smoke control doors	B
5	Safety	-
6	Corrosion resistance and temperature	C
7	Key related security	5
8	Attack resistance	D*

ASSA ABLOY CY110 is a patented key to differ euro double cylinder with 3 keys. It is a reversible, dimple key cylinder with 6 pins.
The cylinder offers the following features:
(patent protected, expected extension of new patent application till 2036)

- EN 1303:2015 1 6 - B - C 5 D *when used with security escutcheon
- Includes 5 minutes drill resistance, anti-pick and anti-bump features:
  * delivered with security card that authorizes additional keys to be cut only by ASSA ABLOY preferred dealers
  * large, robust, reversible nickel silver key that is convenient to use and has no sharp edges

2.4 Delivery status
Delivered as a complete unit, inclusive of fully assembled cylinder, keys and security card. Delivered in a box size 100 x 30 x 45 mm.

2.5 Base materials / Ancillary materials
The composition of the CY110 cylinder in percentage (%) of total mass per unit is, as follows:

Component	Percentage in mass (%)
Plastics	0.3
Stainless steel	1.0
Steel	20.8
Brass	77.9
Total	**100**

2.6 Manufacture
The primary manufacturing processes are made by Tier 1 suppliers. The components have origin in processes such as machining, sintering and pressing. The final manufacturing processes for cylinder occur at ASSA ABLOY Rychnov factory in Czech Republic.

The factory of Rychnov has a Quality Management system certified according to ISO 9001:2008.

2.7 Environment and health during manufacturing
ASSA ABLOY is committed to producing and distributing door opening solutions with minimal environmental impact, where health & safety is the primary focus for all employees and associates.

- Environmental operations, 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 to evaluate the effectiveness of the environmental management program.
- Code of Conduct covers human rights, labour practices and decent work. The management of ASSA ABLOY is aware of their environmental roles and responsibilities, providing appropriate training, supporting accountability and recognizing outstanding performance.
- The factory of Rychnov is certified according to ISO 14001:2004 Environmental Management system and is certified according to OHSAS 18001:2007 Occupational Health and Safety.
- Any waste metals during machining are separated and recycled. Waste water from water-based painting processes is delivered to waste treatment plant.

2.8 Product processing/Installation
ASSA ABLOY CY110 is distributed through and installed, by trained technicians, such as; locksmiths or security technicians. Preparation of doors and frames are conducted at the door manufacturer's production site.

2.9 Packaging
These cylinders are packed in cardboard packaging. Packaging includes one box – all of which are fully recyclable.

Material	Percentage in mass (%)
Cardboard/Paper	100
Total	**100**

2.10 Condition of use
Annual lubrication is recommended to guarantee quality operation of the cylinder.

2.11 Environment and health during use
There is no harmful emissive potential. No damage to health or impairment is expected under normal use corresponding to the intended use of the product.

2.12 Reference service life
Approved for 100.000 cycles under normal working conditions and 15 years depending on cycle frequency and use of the door.
The product has successfully passed accelerated durability test of 500 000 cycles.

2.13 Extraordinary effects
Fire
Suitable for use in fire and smoke doors and is tested in accordance with EN 1634-1:2014 by Cambridge Fire Research.

Water
The product does not contain any substances that could be released and have an additional environmental impact on water in case of flood.

Mechanical destruction
No danger to the environment can be anticipated during mechanical destruction.

2.14 Re-use stage
It is possible to re-use the product during the reference service life and it can be moved from one application to another.

2.15 Disposal
The product can be mechanically dissembled to separate the different materials. The majority, by weight, of components are steel and brass, which can be recycled. The cylinder can be sent to a professional recycling service provider. No disposal is foreseen for the product nor for the corresponding packaging.

2.16 Further information
ASSA ABLOY Czech & Slovakia s.r.o.
Strojnická 633
516 01 Rychnov nad Kněžnou
Czech Republic
www.assabloy.com

3. LCA: Calculation rules

3.1 Declared Unit
The declaration refers to the functional unit of 1 piece of CY110 cylinder as specified in Part B requirements on the EPD for Building Hardware products.

Declared unit

Name	Value	Unit
Mass of declared Product	0.37	kg
Declared unit	-	1 piece of CY110 cylinder
Conversion factor to 1 kg	2.70	

3.2 System boundary
Type of the EPD: cradle to gate - with options
The following life cycle stages were considered:

Production stage:
- A1 – Raw material extraction and processing
- A2 – Transport to the manufacturer and
- A3 – Manufacturing

Construction stage:
- A4 – Transport from the gate to the site
- A5 – Packaging waste processing

The use stage:
- B2 – Maintenance

End-of-life stage:
- C2 – Transport to waste processing
- C3 – Waste processing
- C4 – Disposal (landfill)

This includes provision of all materials, products and energy, packaging processing and its transport, as well as waste processing up to the end-of waste state or disposal of final residues.

- D - Declaration of all benefits and loads

3.3 Estimates and assumptions
Transportation: Data on mode of transport and distances, as reported by suppliers were used for those materials and parts contributing more than 2% of total product mass. In case of unknown transport distances for parts and materials, contributing less than 2% to the total product mass, transport by road over an average distance of 500 km was assumed.

EoL: In the End-of-Life stage, for all the materials, which can be recycled, a recycling scenario with 100% collection rate was assumed

3.4 Cut-off criteria
In the assessment, all available data from the production process are considered, i.e. all raw materials used, auxiliary materials (e.g. lubricants), thermal energy consumption and electric power consumption - including material and energy flows contributing less than 1% of mass or energy (if available). In case a specific flow contributing less than 1% in mass or energy is not available, worst-case assumption proxies are selected to represent the respective environmental impacts.

Impacts relating to the production of machines and facilities required during production are out of the scope of this assessment.

3.5 Background data
For life cycle modelling of the considered products, the GaBi 6 Software System for Life Cycle Engineering, developed by thinkstep AG, is used /GaBi 6 2013/. The GaBi-database contains consistent and documented datasets which are documented in the online GaBi-documentation /GaBi 6 2013D/.
To ensure comparability of results in the LCA, the basic data of GaBi database were used for energy, transportation and auxiliary materials.

3.6 Data quality
The requirements for data quality and background data correspond to the specifications of the /IBU PCR PART A/.
thinkstep performed a variety of tests and checks during the entire project to ensure high quality of the completed project. This obviously includes an extensive review of project-specific LCA models as well as the background data used.
The technological background of the collected data reflects the physical reality of the declared products. The datasets are complete and conform to the system boundaries and the criteria for the exclusion of inputs and outputs.
All relevant background datasets are taken from the GaBi 6 software database.

3.7 Period under review
The period under review is 2015/16 (12-month average).

3.8 Allocation

Regarding incineration, the software model for the waste incineration plant (WIP) is adapted according to the material composition and heating value of the combusted material. In this EPD, the following specific life cycle inventories for the WIP are considered for:

- Waste incineration of paper

Regarding the recycling material of metals, the metal parts in the EoL are declared as end-of-waste status. Thus, these materials are considered in module D. Specific information on allocation within the background data is given in the GaBi dataset documentation.

3.9 Comparability

A comparison or an evaluation of EPD data is only possible if all the data sets to be compared were created according to /EN 15804/ and the building context, respectively the product-specific characteristics of performance, are taken into account.

4. LCA: Scenarios and additional technical information

The following technical information is a basis for the declared modules or can be used for developing specific scenarios in the context of a building assessment if modules are not declared (MND).

Installation into the building (A5)

Name	Value	Unit
Output substances following waste treatment on site (Paper packaging)	0.0022	kg

Reference service life

Name	Value	Unit
Reference service life	15	a

Maintenance (B2)

Annual oiling of the cylinder is considered in this stage of the life cycle.

Name	Value	Unit
Oil	0.0005	kg/a

End of life (C2-C4)

Name	Value	Unit
Collected separately Plastics, Stainless Steel, Steel, Brass	0.372	kg
Recycling Stainless Steel	0.003	kg
Incineration of Plastic Parts	0.001	kg
Recycling Steel	0.076	kg
Recycling Brass	0.288	kg

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

Name	Value	Unit
Collected separately waste type (including packaging)	0.370	kg
Recycling Stainless Steel	1	%
Recycling Steel	20.6	%
Reuse Paper	0.7	%
Incineration of Plastics	0.3	%
Recycling Brass	77.4	%

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	X	MND	MND	MND	MND	MND	MND	X	X	X	X

RESULTS OF THE LCA - ENVIRONMENTAL IMPACT: One piece of CY110 cylinder

Parameter	Parameter	Unit	A1 - A3	A4	A5	B2	C2	C3	C4	D
GWP	Global warming potential	[kg CO_2-Eq.]	2.36E+00	8.85E-03	3.12E-03	7.91E-03	8.80E-03	0.00E+00	2.75E-03	-2.47E-01
ODP	Depletion potential of the stratospheric ozone layer	[kg CFC11-Eq.]	3.63E-11	4.24E-14	1.43E-14	4.79E-13	4.21E-14	0.00E+00	8.27E-15	-1.09E-11
AP	Acidification potential of land and water	[kg SO_2-Eq.]	1.36E-02	4.05E-05	7.10E-07	4.70E-05	4.03E-05	0.00E+00	7.00E-07	-1.42E-03
EP	Eutrophication potential	[kg $(PO_4)^{3-}$-Eq.]	8.42E-04	9.25E-06	1.24E-07	2.23E-06	9.20E-06	0.00E+00	5.30E-08	-9.93E-05
POCP	Formation potential of tropospheric ozone photochemical oxidants	[kg Ethen Eq.]	8.47E-04	-1.31E-05	5.04E-08	6.50E-06	-1.30E-05	0.00E+00	3.40E-08	-1.24E-04
ADPE	Abiotic depletion potential for non-fossil resources	[kg Sb Eq.]	3.15E-04	3.33E-10	5.62E-11	8.88E-10	3.32E-10	0.00E+00	1.81E-10	-1.73E-04
ADPF	Abiotic depletion potential for fossil resources	[MJ]	2.03E+01	1.22E-01	8.73E-04	3.87E-01	1.21E-01	0.00E+00	1.16E-03	-2.69E+00

RESULTS OF THE LCA - RESOURCE USE: One piece of CY110 cylinder

Parameter	Parameter	Unit	A1 - A3	A4	A5	B2	C2	C3	C4	D
PERE	Renewable primary energy as energy carrier	[MJ]	1.98E+00	-	-	-	-	-	-	-
PERM	Renewable primary energy resources as material utilization	[MJ]	0.00E+00	-	-	-	-	-	-	-
PERT	Total use of renewable primary energy resources	[MJ]	1.98E+00	4.81E-03	8.14E-05	2.45E-03	4.78E-03	0.00E+00	8.51E-05	-1.41E-01
PENRE	Non-renewable primary energy as energy carrier	[MJ]	2.73E+01	-	-	-	-	-	-	-
PENRM	Non-renewable primary energy as material utilization	[MJ]	0.00E+00	-	-	-	-	-	-	-
PENRT	Total use of non-renewable primary energy resources	[MJ]	2.73E+01	1.22E-01	1.02E-03	3.92E-01	1.22E-01	0.00E+00	1.29E-03	-2.73E+00
SM	Use of secondary material	[kg]	4.49E-01	0.00E+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	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	0.00E+00
FW	Use of net fresh water	$[m^3]$	6.72E-03	3.39E-06	9.07E-06	-5.98E-06	3.38E-06	0.00E+00	6.71E-06	-1.45E-03

RESULTS OF THE LCA – OUTPUT FLOWS AND WASTE CATEGORIES: One piece of CY110 cylinder

Parameter	Parameter	Unit	A1 - A3	A4	A5	B2	C2	C3	C4	D
HWD	Hazardous waste disposed	[kg]	5.56E-04	2.79E-07	7.04E-08	1.77E-06	2.77E-07	0.00E+00	9.02E-08	3.35E-05
NHWD	Non-hazardous waste disposed	[kg]	1.79E-01	1.54E-05	7.83E-05	2.62E-05	1.53E-05	0.00E+00	2.56E-04	2.81E-03
RWD	Radioactive waste disposed	[kg]	2.71E-03	1.60E-07	5.98E-08	1.85E-06	1.59E-07	0.00E+00	5.14E-08	-1.72E-05
CRU	Components for re-use	[kg]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MFR	Materials for recycling	[kg]	0.00E+00	0.00E+00	2.20E-03	0.00E+00	0.00E+00	3.69E-01	0.00E+00	0.00E+00
MER	Materials for energy recovery	[kg]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EEE	Exported electrical energy	[MJ]	0.00E+00	0.00E+00	3.94E-03	0.00E+00	0.00E+00	0.00E+00	5.26E-03	0.00E+00
EET	Exported thermal energy	[MJ]	0.00E+00	0.00E+00	1.11E-02	0.00E+00	0.00E+00	0.00E+00	1.44E-02	0.00E+00

6. LCA: Interpretation

This chapter contains an interpretation of the Life Cycle Impact Assessment categories. Stated percentages in the whole interpretation are related to the overall life cycle, excluding credits (module D).

The production stage (modules A1-A3) contributes between 96% 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 brass and steel, with approx. 98%, mainly due to the energy consumption on this process. Stainless steel and steel account with the majority of the overall mass of the product, therefore, the impacts are in line with the mass composition of the product. The environmental impacts for the transport (A2) have a negligible impact within this stage.

In the end-of-life stage, there are loads and benefits (module D, negative values) considered. The benefits are considered beyond the system boundaries and are declared for the recycling potential of the metals and for the credits from the incineration process (energy substitution).

7. Requisite evidence

Not applicable in this EPD.

8. References

Institut Bauen und Umwelt
Institut Bauen und Umwelt e.V., Berlin (pub.): Generation of Environmental Product Declarations (EPDs);
www.ibu-epd.com

General principles
For the EPD range of Institut Bauen und Umwelt e.V. (IBU), 2013-04
www.ibu-epd.com

PCR Part B
IBU PCR Part B: PCR Guidance-Texts for Building-Related Products and Services. From the range of Environmental Product Declarations of Institute Construction and Environment e.V. (IBU). Part B: Requirements on the EPD for Building Hardware Products. www.ibu-epd.com

ISO 14025
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

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

ISO 9001
Quality management systems

OHSAS 18001:2007
Occupational Health and Safety Assessment Series

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

EN 1303:2015
Building hardware - Cylinders for locks - Requirements and test methods

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

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

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	X	MND	MND	MND	MND	MND	MND	X	X	X	X

RESULTS OF THE LCA - ENVIRONMENTAL IMPACT: One piece of CY110 cylinder

Parameter	Parameter	Unit	A1 - A3	A4	A5	B2	C2	C3	C4	D
GWP	Global warming potential	[kg CO_2-Eq.]	2.36E+00	8.85E-03	3.12E-03	7.91E-03	8.80E-03	0.00E+00	2.75E-03	-2.47E-01
ODP	Depletion potential of the stratospheric ozone layer	[kg CFC11-Eq.]	3.83E-11	4.50E-14	1.52E-14	5.10E-13	4.48E-14	0.00E+00	8.80E-15	-1.16E-11
AP	Acidification potential of land and water	[kg SO_2-Eq.]	1.28E-02	5.29E-05	8.61E-07	4.31E-05	5.26E-05	0.00E+00	8.21E-07	-1.38E-03
EP	Eutrophication potential	[kg N-eq.]	4.72E-04	3.74E-06	4.96E-08	1.50E-06	3.72E-06	0.00E+00	2.50E-08	-5.42E-05
Smog	Ground-level smog formation potential	[kg O_3-eq.]	1.19E-01	1.09E-03	2.01E-05	3.55E-04	1.08E-03	0.00E+00	6.45E-06	-1.62E-02
Resources	Resources – resources fossil	[MJ]	6.36E-01	1.76E-02	1.02E-04	5.54E-02	1.75E-02	0.00E+00	1.20E-04	-1.37E-01

RESULTS OF THE LCA - RESOURCE USE: One piece of CY110 cylinder

Parameter	Parameter	Unit	A1 - A3	A4	A5	B2	C2	C3	C4	D
PERE	Renewable primary energy as energy carrier	[MJ]	1.98E+00	-	-	-	-	-	-	-
PERM	Renewable primary energy resources as material utilization	[MJ]	0.00E+00	-	-	-	-	-	-	-
PERT	Total use of renewable primary energy resources	[MJ]	1.98E+00	4.81E-03	8.14E-05	2.45E-03	4.78E-03	0.00E+00	8.51E-05	-1.41E-01
PENRE	Non-renewable primary energy as energy carrier	[MJ]	2.73E+01	-	-	-	-	-	-	-
PENRM	Non-renewable primary energy as material utilization	[MJ]	0.00E+00	-	-	-	-	-	-	-
PENRT	Total use of non-renewable primary energy resources	[MJ]	2.73E+01	1.22E-01	1.02E-03	3.92E-01	1.22E-01	0.00E+00	1E-03	-2.73E+00
SM	Use of secondary material	[kg]	4.49E-01	0.00E+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	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	0.00E+00
FW	Use of net fresh water	[m^3]	6.72E-03	3.39E-06	9.07E-06	-5.98E-06	3.38E-06	0.00E+00	6.71E-06	-1.45E-03

RESULTS OF THE LCA – OUTPUT FLOWS AND WASTE CATEGORIES: One piece of CY110 cylinder

Parameter	Parameter	Unit	A1 - A3	A4	A5	B2	C2	C3	C4	D
HWD	Hazardous waste disposed	[kg]	5.56E-04	2.79E-07	7.04E-08	1.77E-06	2.77E-07	0.00E+00	9.02E-08	3.35E-05
NHWD	Non-hazardous waste disposed	[kg]	1.79E-01	1.54E-05	7.83E-05	2.62E-05	1.53E-05	0.00E+00	2.56E-04	2.81E-03
RWD	Radioactive waste disposed	[kg]	2.71E-03	1.60E-07	5.98E-08	1.85E-06	1.59E-07	0.00E+00	5.14E-08	-1.72E-05
CRU	Components for re-use	[kg]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-
MFR	Materials for recycling	[kg]	0.00E+00	0.00E+00	2.20E-03	0.00E+00	0.00E+00	3.69E-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	0.00E+00	-
EEE	Exported electrical energy	[MJ]	0.00E+00	0.00E+00	3.94E-03	0.00E+00	0.00E+00	0.00E+00	5.26E-03	-
EET	Exported thermal energy	[MJ]	0.00E+00	0.00E+00	1.11E-02	0.00E+00	0.00E+00	0.00E+00	1.44E-02	-

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