ENVIRONMENTAL PRODUCT DECLARATION

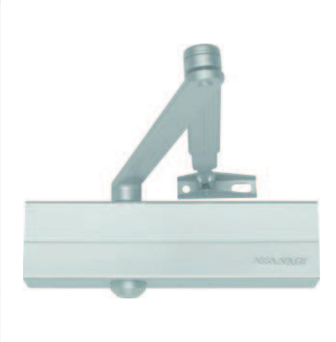
as per ISO 14025 and EN 15804

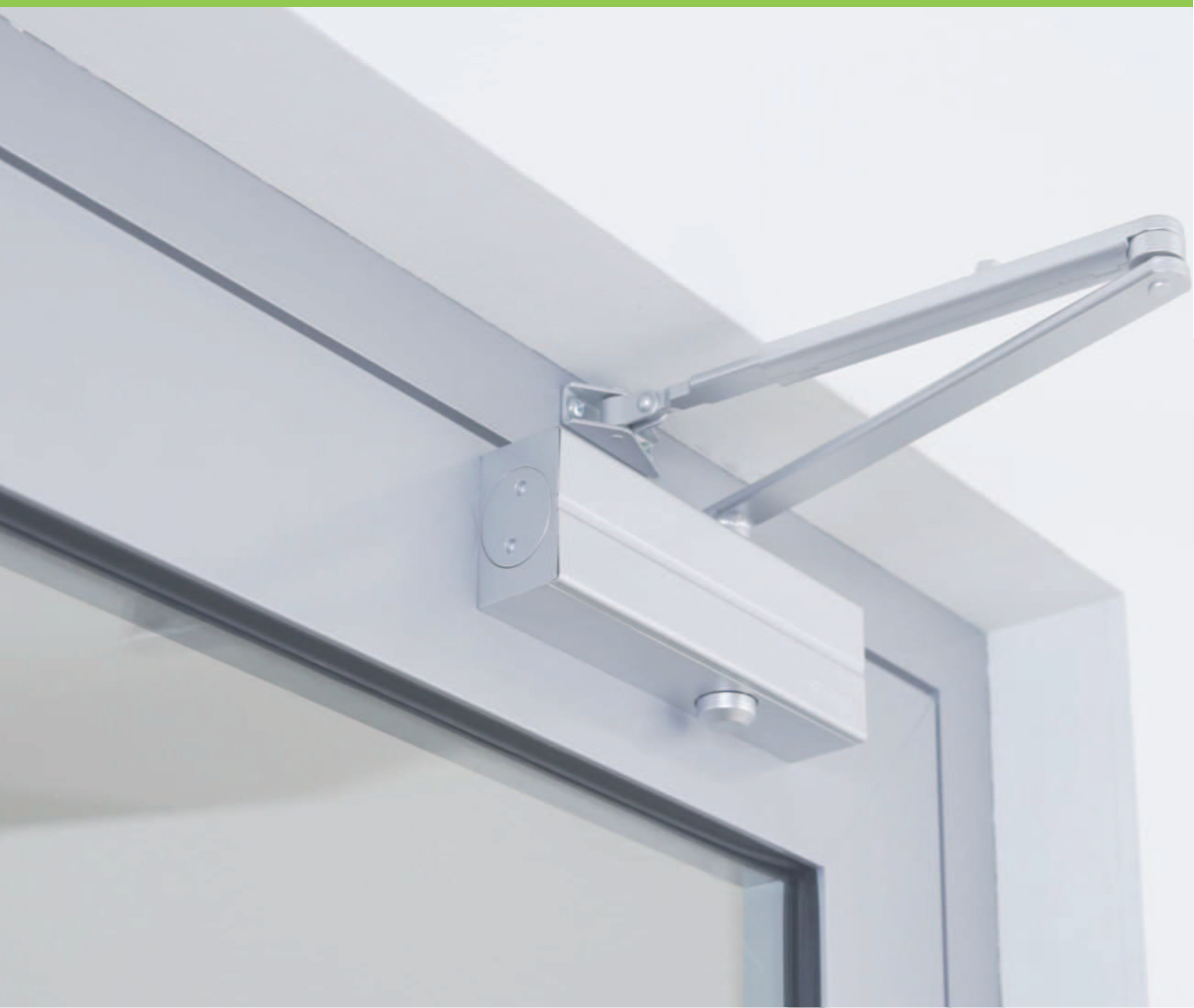
Owner of the Declaration	ASSA ABLOY
Programme holder	Institut Bauen und Umwelt e.V. (IBU)
Publisher	Institut Bauen und Umwelt e.V. (IBU)
Declaration number	EPD-ASA-20160044-IBA1-EN
Issue date	07.03.2016
Valid to	06.03.2021

Door closer – DC140

ASSA ABLOY

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





1. General Information

ASSA ABLOY

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

Declaration number
EPD-ASA-20160044-IBA1-EN

This Declaration is based on the Product Category Rules:
Locks and fittings, 07.2014

(PCR tested and approved by the independent expert committee (SVR))

Issue date
07.03.2016

Valid to
06.03.2021

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

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

DC 140 Rack and Pinion door closer

Owner of the Declaration
ASSA ABLOY Sicherheitstechnik GmbH
Bildstockstraße 20,
72458 Albstadt, Germany

Declared product / Declared unit
The declaration represents the Rack and Pinion door closer DC140, consisting of the following items:

- A closer body
- A link arm
- Accessories

Scope:
This declaration and its LCA study are relevant to ASSA ABLOY DC140 door closer.

The primary manufacturing processes are made by external suppliers and the final manufacturing processes and assembly for all door closer components occur at our ASSA ABLOY manufacturing factory in Wenzhou, China. 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 ☒ externally

Dr. Wolfram Trinius
(Independent verifier appointed by SVR)

2. Product

2.1 Product description

Product name: DC140 Rack and Pinion door closer

Product characteristic: ASSA ABLOY's door closers are ideal for a wide range of situations – from private homes to the commercial or public sector and for heavy or lightweight doors. The door closer range is a joint development between companies in the ASSA ABLOY Group.

- CE marked
- Rack and Pinion mechanism - highly versatile and durable drive from a compact design
- Flexible installation on both left and right hand doors, door mounted or transom mounted
- Template adjustable closing force
- Thermodynamic valves for consistent performance
- Wide range of accessories
- Standard colours: silver EV1; white, similar to RAL9016; brown, similar to RAL8014; black, similar to RAL9005

2.2 Application

The ASSA ABLOY rack and pinion overhead door closer DC140 can be used in private, commercial and public sectors, in both light and medium duty applications.

- Fire & smoke protection and standard doors
- For interior doors
- For exterior doors.

2.3 Technical Data

The declared door closer has following technical specifications:

Technical data

Name	Value
Adjustable closing force	EN 2-5
Door width up to	1250 mm
Fire and smoke protections	Yes
DIN door swing directions	Left/right handed
Closing speed	180°-15°

Latching speed	Variable between 15°-0°
Backcheck	Yes, variable above 75°
Weight	1.08 kg
Height	55 mm
Depth	40 mm
Length	206 mm
Hold-open mode (with hold open link arm L141)	Adjustable 75°-150°, can be enabled and disabled
Certified in compliance with	EN1154
CE marking for building products	Yes

2.4 Placing on the market / Application rules
For the placing on the market in the EU/EFTA (with the exception of Switzerland) the Regulation (EU) No 305/2011 applies. The products need a Declaration of performance taking into consideration /EN 1154:1996/A1:2002/AC:2006 Building hardware – Controlled door closing devices – Requirements and test methods/ and the CE-marking.

For the application and use the respective national provisions apply.

DC140 and accessories are certified according to these standards.

2.5 Delivery status
Door closer body and link arm are delivered ready for installation in separate packages. The door closer unit including the packaging has the following dimensions: 274 x 105 x 56 mm. The link arm has the following dimensions: 314x 40 x 35 mm.

2.6 Base materials / Ancillary materials
The primary product components and/or materials must be indicated as a percentage mass to enable the user of the EPD to understand the composition of the product in delivery status.
The average composition for ASSA ABLOY DC140, including the link arm is as following:

Component	Percentage in mass (%)
Aluminium	44.40
Plastics	0.25
Zinc	4.19
Stainless steel	17.00
Steel	25.52
Other	8.64
Total	100.0

2.7 Manufacture
The product is manufactured by our Tier 1 suppliers, and the final manufacturing and assembly processes occur at Shenfei Liyi Security Products Co. Ltd, our ASSA ABLOY factory in China. The components are manufactured from processes such as stamped steel, CNC machining and zinc and steel castings.

The factory of Shenfei has a certification of Quality Management system in accordance with /ISO 9001:2008/.

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

- Environmental operations, GHG, energy, water, waste, VOC, surface treatment and H&S are being routinely monitored. Inspections, audits, and reviews are conducted periodically to ensure that applicable standards are met and Environmental Management program effectiveness is evaluated.
- Code of Conduct covers human rights, labour practices and decent work. Management of ASSA ABLOY is aware of their environmental roles and responsibilities, providing appropriate training, supporting accountability and recognizing outstanding performance.
- The factory of Shenfei Liyi has certification of Environmental Management to /ISO 14001:2004/ and Occupational Health and Safety to /OHSAS 18001:2007/.
- Any waste metals during machining are separated and recycled. The waste from the water-based painting process is delivered to waste treatment plant.

2.9 Product processing/installation
ASSA ABLOY DC140 door closer is distributed through and installed by trained installation technicians, such as locksmiths, carpenters etc. adhering to local/national standards and requirements.

Door and frame preparations are made in door manufacturer's production sites or on site.

2.10 Packaging
ASSA ABLOY DC140 door closers are packed in cardboard packaging. Packaging includes cardboard packaging and plastic bag.

Component	Percentage in mass (%)
Cardboard/paper	99.16
Plastics	0.84
Total	100.0

2.11 Condition of use
Annual inspection is recommended in order to guarantee correct functionality of the product and the door leaf. The inspection includes; checking, fixing screws to ensure they are properly tight, correct adjustments (closing speeds, force), compliance with local legal inspection standards and greasing all the moving parts of the arm.

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
Door closer units are normally installed by trained technicians. In any case the installation must be done in line with instructions provided by the manufacturer.

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ASSA ABLOY DC140 was developed to comply with EN1154 standard and quality requirements, including durability testing to 500,000 cycles. The typical life time of a DC140 is 15-20 years, dependent on frequency of cycles.

2.14 Extraordinary effects

Fire

ASSA ABLOY DC140 is tested for use in fire and smoke protection doors according to /EN1634-1/.

Water

Door closers include hydraulic oil and are designed for conventional use and are not intended for flood protection. Unforeseeable flooding conditions will increase the potential for developing surface rust.

Mechanical destruction

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

2.15 Re-use stage

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

2.16 Disposal

The majority of components are made from aluminium and steel, which can be recycled. The door closers can be mechanically dissembled to separate the different materials. The 91% of the materials used are recyclable. The remaining content (e.g. hydraulic oil) is assumed to have no recycling potential.

2.17 Further information

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Bildstockstraße 20,
72458 Albstadt, Germany
Tel: +49 7431 1230
www.assabloy.de

3. LCA: Calculation rules

3.1 Declared Unit
The declaration refers to the functional unit of 1 piece of door closer DC140 Cam-Motion floor spring as specified in Part B requirements on the EPD PCR – Product category rules for Locks and fittings.

Declared unit

Name	Value	Unit
Declared unit	1.08 kg	one piece of door closer
Conversion factor to 1 kg	0.928	-

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

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

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

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

This includes provision of all materials, products and energy, packaging processing and its transport, as well as waste processing up to the end-of waste state or disposal of final residues.
- D – Declaration of all benefits or recycling potential from EOL and A5.

3.3 Estimates and assumptions
In the End-of-Life stage, a scenario with collection rate of 100% for all the recyclable materials 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 AG 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:
- Waste incineration of plastic
- Waste incineration of paper.

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

3.9 Comparability
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 (A1-A5)

Name	Value	Unit
Output substances following waste treatment on site (Paper packaging)	0.2365	kg
Output substances following waste treatment on site (Plastics packaging)	0.002	kg

Reference service life

Name	Value	Unit
Reference service life	15-20	a

End of life (C2-C4)

Name	Value	Unit
Collected separately Aluminium, plastics, stainless steel, zinc and steel	0.983	kg
Collected as mixed construction waste	0.093	kg
Reuse plastics parts	0.002	kg
Recycling aluminium, plastics, steel, stainless steel, zinc	1	kg
Construction waste for landfilling	0.093	kg

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

Name	Value	Unit
Collected separately waste type Door closer (including packaging)	1.315	kg
Recycling Aluminium	36.35	%
Recycling Stainless steel	13.92	%
Recycling Steel	20.89	%
Recycling Zinc	3.43	%
Thermal Treatment (plastics)	0.35	%
Loss Construction waste for landfilling (no recycling potential)	7.08	%
Reuse Packaging (paper) (from A5)	17.98	%

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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 BOUNDARYS
Raw material supply	Transport	Manufacturing	Transport from the gate to the site	Assembly	Use	Maintenance	Repair	Replacement[1)]	Refurbishment[1)]	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling-potential
A1	**A2**	**A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
X	X	X	X	X	MND	MND	MND	MND	MND	MND	MND	MND	X	MND	X	X

RESULTS OF THE LCA - ENVIRONMENTAL IMPACT: 1 piece of DC 140

Parameter	Unit	A1 - A3	A4	A5	C2	C4	D
Global warming potential	[kg CO_2-Eq.]	5.03E+00	4.34E-01	3.35E-01	3.75E-02	6.71E-03	-1.41E+00
Depletion potential of the stratospheric ozone layer	[kg CFC11-Eq.]	3.45E-10	1.61E-12	1.53E-12	1.80E-13	2.02E-14	3.88E-10
Acidification potential of land and water	[kg SO_2-Eq.]	3.19E-02	1.15E-02	7.64E-05	1.72E-04	1.71E-06	-5.91E-03
Eutrophication potential	[kg $(PO_4)^{3-}$- Eq.]	2.49E-03	1.20E-03	1.33E-05	3.92E-05	1.29E-07	-3.46E-04
Formation potential of tropospheric ozone photochemical oxidants	[kg Ethen Eq.]	2.19E-03	5.76E-04	5.42E-06	-5.54E-05	8.31E-08	-4.91E-04
Abiotic depletion potential for non fossil resources	[kg Sb Eq.]	8.37E-04	1.19E-08	6.05E-09	1.41E-09	4.43E-10	-2.03E-04
Abiotic depletion potential for fossil resources	[MJ]	6.70E+01	5.41E+00	9.38E-02	5.18E-01	2.84E-03	-1.41E+01

RESULTS OF THE LCA - RESOURCE USE: 1 piece of DC 140

Parameter	Unit	A1 - A3	A4	A5	C2	C4	D
Renewable primary energy as energy carrier	[MJ]	1.62E+01	-	-	-	-	-
Renewable primary energy resources as material utilization	[MJ]	0.00E+00	-	-	-	-	-
Total use of renewable primary energy resources	[MJ]	1.62E+01	4.22E-02	8.75E-03	2.04E-02	2.08E-04	-4.66E+00
Non renewable primary energy as energy carrier	[MJ]	7.27E+01	-	-	-	-	-
Non renewable primary energy as material utilization	[MJ]	0.00E+00	-	-	-	-	-
Total use of non renewable primary energy resources	[MJ]	7.27E+01	5.43E+00	1.10E-01	5.19E-01	3.16E-03	-1.74E+01
Use of secondary material	[kg]	4.60E-01	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
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
Use of net fresh water	[m³]	3.68E-02	5.16E-05	9.75E-04	1.44E-05	1.64E-05	-1.27E-02

RESULTS OF THE LCA – OUTPUT FLOWS AND WASTE CATEGORIES: 1 piece of DC 140

Parameter	Unit	A1 - A3	A4	A5	C2	C4	D
Hazardous waste disposed	[kg]	3.25E-03	7.11E-06	7.56E-06	1.18E-06	2.20E-07	-2.27E-04
Non hazardous waste disposed	[kg]	1.26E+00	1.25E-04	8.41E-03	6.53E-05	6.25E-04	-2.02E-02
Radioactive waste disposed	[kg]	2.26E-03	6.74E-06	6.43E-06	6.80E-07	1.26E-07	-1.30E-03
Components for re-use	[kg]	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	2.37E-01	0.00E+00	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
Exported electrical energy	[MJ]	0.00E+00	0.00E+00	4.24E-01	0.00E+00	1.28E-02	0.00E+00
Exported thermal energy	[MJ]	0.00E+00	0.00E+00	1.20E+00	0.00E+00	3.52E-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 67% 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 aluminium, stainless steel and steel mainly due to the energy consumption on this process. Aluminium, Steel and Stainless steel account with almost 87% to the overall mass of the product, therefore, the impacts are in line with the mass composition of the product. The environmental impacts for the transport (A2) have a negligible impact within this stage.

In the end-of-life 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., 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 Locks and fittings.
www.bau-umwelt.com

DIN EN 1154
EN 1154:1996/A1:2002/AC:2006: Building hardware — Controlled door closing devices — Requirements and test methods

OHSAS 18001: 2007
OHSAS 18001: 2007: Occupational health and safety management systems. Requirements.

EN 1634-1: 2014
EN 1634-1: 2014: Fire resistance and smoke control tests for door and shutter assemblies, openable windows and elements of building hardware - Part 1: Fire resistance test for door and shutter assemblies and openable windows; German version EN 1634-1:2014

DIN EN ISO 9001
DIN EN ISO 9001:2008: Quality management systems - Requirements; Trilingual version EN ISO 9001:2008

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

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+A1:2013: 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, 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	MND	MND	MND	MND	MND	MND	MND	X	MND	X	X

RESULTS OF THE LCA - ENVIRONMENTAL IMPACT: 1 piece of DC 140

Parameter	Parameter	Unit	A1-3	A4	A5	C2	C4	D
GWP	Global warming potential	[kg CO_2-Eq.]	5.03E+00	4.34E-01	3.35E-01	3.75E-02	6.71E-03	-1.41E+00
ODP	Depletion potential of the stratospheric ozone layer	[kg CFC11-Eq.]	3.66E-10	1.71E-12	1.63E-12	1.91E-13	2.15E-14	4.12E-10
AP	Acidification potential of land and water	[kg SO_2-Eq.]	3.15E-02	1.22E-02	9.25E-05	2.24E-04	2.01E-06	-5.65E-03
EP	Eutrophication potential	[kg N-eq.]	2.41E-03	4.16E-04	5.33E-06	1.59E-05	6.11E-08	-2.04E-04
Smog	Ground-level smog formation potential	[kg O_3-eq.]	4.06E-01	2.25E-01	2.16E-03	4.62E-03	1.58E-05	-6.03E-02
Resources	Resources – fossil resources	[MJ]	5.45E+00	7.79E-01	1.10E-02	7.45E-02	2.92E-04	-9.99E-01

RESULTS OF THE LCA - RESOURCE USE: 1 piece of DC 140

Parameter	Parameter	Unit	A1-3	A4	A5	C2	C4	D
PERE	Renewable primary energy as energy carrier	[MJ]	1.62E+01	-	-	-	-	-
PERM	Renewable primary energy resources as material utilization	[MJ]	0.00E+00	-	-	-	-	-
PERT	Total use of renewable primary energy resources	[MJ]	1.62E+01	4.22E-02	8.75E-03	2.04E-02	2.08E-04	-4.66E+00
PENRE	Non renewable primary energy as energy carrier	[MJ]	7.27E+01	-	-	-	-	-
PENRM	Non renewable primary energy as material utilization	[MJ]	0.00E+00	-	-	-	-	-
PENRT	Total use of non renewable primary energy resources	[MJ]	7.27E+01	5.43E+00	1.10E-01	5.19E-01	3.16E-03	-1.74E+01
SM	Use of secondary material	[kg]	4.60E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	Use of renewable secondary fuels	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	Use of non renewable secondary fuels	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	Use of net fresh water	[m^3]	3.68E-02	5.16E-05	9.75E-04	1.44E-05	1.64E-05	-1.27E-02

RESULTS OF THE LCA – OUTPUT FLOWS AND WASTE CATEGORIES: 1 piece of DC 140

Parameter	Parameter	Unit	A1-3	A4	A5	C2	C4	D
HWD	Hazardous waste disposed	[kg]	3.25E-03	7.11E-06	7.56E-06	1.18E-06	2.20E-07	-2.27E-04
NHWD	Non hazardous waste disposed	[kg]	1.26E+00	1.25E-04	8.41E-03	6.53E-05	6.25E-04	-2.02E-02
RWD	Radioactive waste disposed	[kg]	2.26E-03	6.74E-06	6.43E-06	6.80E-07	1.26E-07	-1.30E-03
CRU	Components for re-use	[kg]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-
MFR	Materials for recycling	[kg]	0.00E+00	0.00E+00	2.37E-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	-
EEE	Exported electrical energy	[MJ]	0.00E+00	0.00E+00	4.24E-01	0.00E+00	1.28E-02	-
EET	Exported thermal energy	[MJ]	0.00E+00	0.00E+00	1.20E+00	0.00E+00	3.52E-02	-

Publisher
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