

ENVIRONMENTAL PRODUCT DECLARATION

as per ISO 14025 and EN 15804+A2

Owner of the Declaration	dormakaba International Holding GmbH
Publisher	Institut Bauen und Umwelt e.V. (IBU)
Programme holder	Institut Bauen und Umwelt e.V. (IBU)
Declaration number	EPD-DOR-20240262-CBA1-EN
Issue date	12.11.2024
Valid to	11.11.2029

Lever handles Serie 8 dormakaba

www.ibu-epd.com | <https://epd-online.com>



General Information

dormakaba

Programme holder
IBU – Institut Bauen und Umwelt e.V.
Hegelplatz 1
10117 Berlin
Germany


Declaration number
EPD-DOR-20240262-CBA1-EN

This declaration is based on the product category rules:
Building Hardware products, 01.08.2021
(PCR checked and approved by the SVR)

Issue date
12.11.2024

Valid to
11.11.2029


Dipl.-Ing. Hans Peters
(Chairman of Institut Bauen und Umwelt e.V.)


Florian Pronold
(Managing Director Institut Bauen und Umwelt e.V.)

Lever handles Serie 8

Owner of the declaration
dormakaba International Holding GmbH
DORMA Platz 1
58256 Ennepetal
Germany

Declared product / declared unit
1 set of the product: Lever handles Serie 8 consisting of the following items:


- 1 set of handle roses
- 1 set of handle
- Product packaging

Scope:
This Environmental Product Declaration refers to a specific lever handle manufactured for dormakaba. The production site is located in China.

The data represents the year 2024.
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.

The EPD was created according to the specifications of EN 15804+A2. In the following, the standard will be simplified as *EN 15804*.

The standard EN 15804 serves as the core PCR		
Independent verification of the declaration and data according to ISO 14025:2011		
<input type="checkbox"/>	internally	<input checked="" type="checkbox"/> externally


Matthias Klingler,
(Independent verifier)

Product

Product description/Product definition

The lever handles Serie 8, includes a double acting return spring for long life use. The series is ideal for doors with high opening frequency. The series is suitable for door thicknesses between 35 and 95 mm. The lever handle set fits to the dormakaba lock cases of the DL 7 and 9 range.

For the lever handle Serie 8 the standards which can be applied are the following:

- EN 1906

Application

The lever handles are suitable for practically all applications:

- High frequency of use on doors which are subject to frequent usage. Examples are football stadiums, offshore installations (oil rigs), barracks and public toilets.
- For use on smoke-control and fire-resistant doors.
- Use on doors where high corrosion resistance is required.

Technical Data

The stainless-steel lever handles comply with following standards:

- EN 1906 - Requirements and test methods for lever handles and knob furniture.

Performance data of the product with respect to its characteristics in accordance with the relevant technical provision which can be applied are mentioned above.

Base materials/Ancillary materials

The major material composition including the packaging of the product is listed below:

Name	Value	Unit
Stainless steel	67	%
Steel	18	%
Brass	3	%
Paper	12	%

The product includes partial articles which contain substances listed in the *Candidate List of REACH Regulation 1907/2006/EC* (date: 23.01.2024) exceeding 0.1 percentage by mass: no

The *Candidate List* can be found on the *ECHA* website address: <https://echa.europa.eu/de/home>.

Reference service life

The reference service life of the lever handles Serie 8 is about 10 years, depending on the application and frequency of use. For repairs and renewals, suitable spare parts are available. The lever handle are tested and certified to *EN 1906*, meaning they are designed to withstand a minimum of 200.000 cycles.

LCA: Calculation rules

Declared Unit

The declared unit is 1 set of the product including packaging: Lever handles Serie 8

Name	Value	Unit
Declared unit	1	piece/product
Mass of declared product without packaging	0.76	kg
Mass of packaging	0,1	kg

System boundary

The type of EPD is: cradle to gate with options, modules C1–C4, and module D (A1–A3 + C + D and additional modules: A4+ A5)

Production - Module A1-A3

The product stage includes: — A1, raw material extraction, processing and mechanical treatments, processing of secondary material input (e.g. recycling processes), — A2, transport to the manufacturer, — A3, manufacturing and assembly including provision of all materials, products and energy, as well as waste processing up to the end-of-waste state.

Construction stage - Modules A4-A5

The construction process stage includes:

— A4, transport to the building site; — A5, installation into the building; including provision of all materials, products and energy, as well as waste processing up to the end-of-waste state or disposal of final residues during the construction process stage.

End-of-life stage– Modules C1-C4 and D

The end-of-life stage includes: — C1, de-construction, demolition; — C2, transport to waste processing; — C3, waste processing for reuse, recovery and/or recycling; — C4, disposal; including provision and all transport, provision of all materials, products and related energy and water use. Module D (Benefits and loads beyond the system boundary) includes: — D, recycling potentials, expressed as net impacts and benefits.

Geographic Representativeness

Land or region, in which the declared product system is manufactured, used or handled at the end of the product's lifespan: Global

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. Background database: GaBi, SP40.

LCA: Scenarios and additional technical information

Characteristic product properties of biogenic carbon

Name	Value	Unit
Biogenic carbon content in product	-	kg C
Biogenic carbon content in accompanying packaging	0.04	kg C

Note: 1 kg of biogenic carbon is equivalent to 44/12 kg of CO₂.

Transport to the building site (A4)

Name	Value	Unit
Litres of fuel	0.00276	l/100km
Capacity utilisation (including empty runs)	55	%
Transport distance from harbor to the logistic center	600	km
Transport distance by ship to the logistic center	21000	km
Transport distance by truck to the building site (for scaling)	100	km

The product is transported via ship and truck. The product is stored in the dormakaba logistic center in Sweden. The main distribution region is Scandinavia and the Baltic States with the calculated transport distances. In order to allow scaling to a specific point of installation 100 km are declared as well.

Installation into the building (A5)

Name	Value	Unit
Waste packaging (paper)	0,1	kg

Reference service life

Name	Value	Unit
Life Span according to the manufacturer	10	a

End of life (C1-C4)

C1: The product dismantling from the building is done manually without environmental burden.

C2: Transport to waste management is 50 km.

Name	Value	Unit
Collected separately waste type	0.758	kg
Recycling	0.756	kg
Energy recovery	0.002	kg

The product is disassembled in a recycling process. Material recycling is then assumed for metals. The plastic components are assumed to be incinerated with energy recovery. Region for the End of Life is: Europe.

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

Name	Value	Unit
Recycling	100	%

The collection rate is 100 %.

LCA: Results

DESCRIPTION OF THE SYSTEM BOUNDARY (X = INCLUDED IN LCA; MND = MODULE OR INDICATOR NOT DECLARED; MNR = MODULE NOT RELEVANT)

Product stage			Construction process stage		Use stage							End of life stage				Benefits and loads beyond the system boundaries
Raw material supply	Transport	Manufacturing	Transport from the gate to the site	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	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	MNR	MNR	MNR	MND	MND	X	X	X	X	X

RESULTS OF THE LCA - ENVIRONMENTAL IMPACT according to EN 15804+A2: 1 set Lever handles Serie 8

Parameter	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
GWP-total	kg CO ₂ eq	4.38E+00	1.11E-01	1.42E-01	0	3E-03	5E-03	0	-2.62E+00
GWP-fossil	kg CO ₂ eq	4.55E+00	1.09E-01	4E-03	0	3E-03	5E-03	0	-2.63E+00
GWP-biogenic	kg CO ₂ eq	-1.7E-01	2E-03	1.38E-01	0	1.47E-04	1.18E-07	0	1.3E-02
GWP-luluc	kg CO ₂ eq	7.82E-03	2.41E-06	2.33E-06	0	7.54E-08	2.87E-07	0	-5E-03
ODP	kg CFC11 eq	1.41E-12	1.09E-17	2.56E-17	0	3.35E-19	2.56E-18	0	-6.07E-15
AP	mol H ⁺ eq	2.3E-02	2E-03	3.97E-05	0	3.17E-06	9.05E-07	0	-1.2E-02
EP-freshwater	kg P eq	8.07E-06	2.4E-08	5E-09	0	6.78E-10	4.09E-10	0	-2.36E-06
EP-marine	kg N eq	3.63E-03	5.89E-04	1.43E-05	0	1.01E-06	2.04E-07	0	-2E-03
EP-terrestrial	mol N eq	3.5E-02	6E-03	1.79E-04	0	1.12E-05	4.12E-06	0	-1.9E-02
POCP	kg NMVOC eq	1E-02	2E-03	3.8E-05	0	2.85E-06	5.65E-07	0	-5E-03
ADPE	kg Sb eq	1.62E-04	3.02E-09	4.04E-10	0	9.5E-11	3.52E-11	0	-7.84E-05
ADPF	MJ	5.48E+01	1.42E+00	4.8E-02	0	4.49E-02	2.36E-03	0	-3.22E+01
WDP	m ³ world eq deprived	1.65E+00	2.04E-04	1.76E-02	0	6.21E-06	5.2E-04	0	-1.08E+00

GWP = Global warming potential; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential of land and water; EP = Eutrophication potential; POCP = Formation potential of tropospheric ozone photochemical oxidants; ADPE = Abiotic depletion potential for non-fossil resources; ADPF = Abiotic depletion potential for fossil resources; WDP = Water (user) deprivation potential

RESULTS OF THE LCA - INDICATORS TO DESCRIBE RESOURCE USE according to EN 15804+A2: 1 set Lever handles Serie 8

Parameter	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
PERE	MJ	1.43E+01	4.58E-03	1.21E+00	0	1.42E-04	6.13E-04	0	-6.76E+00
PERM	MJ	1.2E+00	0	-1.2E+00	0	0	0	0	0
PERT	MJ	1.55E+01	4.58E-03	8.13E-03	0	1.43E-04	6.14E-04	0	-6.76E+00
PENRE	MJ	5.51E+01	1.43E+00	4.8E-02	0	4.5E-02	3.6E-02	0	-3.23E+01
PENRM	MJ	3.36E-02	0	0	0	0	-3.36E-02	0	0
PENRT	MJ	5.51E+01	1.43E+00	4.48E-02	0	4.5E-02	2.36E-03	0	-3.23E+01
SM	kg	4.23E-01	0	0	0	0	0	0	0
RSF	MJ	0	0	0	0	0	0	0	0
NRSF	MJ	0	0	0	0	0	0	0	0
FW	m ³	5.9E-02	8.28E-06	4.15E-04	0	2.54E-07	1.24E-05	0	-4.18E-02

PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water

RESULTS OF THE LCA - WASTE CATEGORIES AND OUTPUT FLOWS according to EN 15804+A2: 1 set Lever handles Serie 8

Parameter	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
HWD	kg	2.94E-07	1.39E-10	6.6E-11	0	4.36E-12	8.98E-12	0	-2.01E-07
NHWD	kg	3.55E-01	1.46E-04	4E-03	0	4.6E-06	5.28E-04	0	-2.32E-01
RWD	kg	9.32E-04	1.56E-06	2.35E-06	0	4.83E-08	8.75E-08	0	-2.18E-04
CRU	kg	0	0	0	0	0	0	0	0
MFR	kg	0	0	0	0	0	7.56E-01	0	0
MER	kg	0	0	0	0	0	0	0	0
EEE	MJ	0	0	2.14E-01	0	0	9.41E-03	0	0
EET	MJ	0	0	3.89E-01	0	0	2.16E-02	0	0

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

RESULTS OF THE LCA – additional impact categories according to EN 15804+A2:optional: 1 set Lever handles Serie 8

Parameter	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
PM	Disease incidence	3.77E-07	3.73E-08	2.2E-10	0	1.67E-11	1.16E-11	0	-2.33E-07
IR	kBq U235 eq	9.3E-02	2.24E-04	3.64E-04	0	6.9E-06	7.88E-06	0	-2.6E-02
ETP-fw	CTUe	2.48E+01	1.01E+00	2.1E-02	0	3.2E-02	8.85E-04	0	-1.65E+01
HTP-c	CTUh	8.23E-07	1.9E-11	1.12E-12	0	5.99E-13	7.66E-14	0	-5.1E-09
HTP-nc	CTUh	7.53E-08	8.57E-10	4.87E-11	0	2.56E-11	7.75E-12	0	-1.38E-08
SQP	SQP	2.82E+01	4E-03	1.2E-02	0	1.16E-04	7.06E-04	0	-4.71E+00

PM = Potential incidence of disease due to PM emissions; IR = Potential Human exposure efficiency relative to U235; ETP-fw = Potential comparative Toxic Unit for ecosystems; HTP-c = Potential comparative Toxic Unit for humans (cancerogenic); HTP-nc = Potential comparative Toxic Unit for humans (not cancerogenic); SQP = Potential soil quality index

Disclaimer 1 – for the indicator “Potential Human exposure efficiency relative to U235”. This impact category deals mainly with the eventual impact of low-dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure or radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, radon and from some construction materials is also not measured by this indicator.

Disclaimer 2 – for the indicators “abiotic depletion potential for non-fossil resources”, “abiotic depletion potential for fossil resources”, “water (user) deprivation potential, deprivation-weighted water consumption”, “potential comparative toxic unit for ecosystems”, “potential comparative toxic unit for humans – cancerogenic”, “Potential comparative toxic unit for humans - not cancerogenic”, “potential soil quality index”. The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high as there is limited experience with the indicator.

This EPD was created using a software tool.

References

EN 1906

EN 1906/A1: 2017-02,
Building hardware - Lever handles and knob furniture -
Requirements and test methods

EN 15804

EN 15804+A2:2019+AC:2021,
Sustainability of construction works — Environmental Product
Declarations — Core rules for the product category of
construction products

ECHA

European Chemical Agency

ISO 14025

DIN EN ISO 14025:201110, Environmental labels and
declarations — Type III environmental declarations —
Principles and procedures

REACH

Regulation (EC) No 1907/2006 of the European Parliament and
of the Council on the Registration, Evaluation, Authorisation
and Restriction of Chemicals (REACH)

RoHS

2011/65/EU, Directive on the restriction of the use of certain
hazardous substances in electrical and electronic equipment

IBU 2021

General Instructions for the EPD programme of Institut Bauen
und Umwelt e.V. Version 2.0, Berlin: Institut Bauen und Umwelt
e.V., 2021. www.ibu-epd.com

GaBi

Sphera Solutions GmbH
Gabi Software System and Database for Life Cycle Engineering
19922020
Version 10.0.0.71
University of Stuttgart
Leinfelden-Echterdingen

GaBi ts documentation

GaBi life cycle inventory data documentation
(<https://www.gabisoftware.com/support/gabi/gabidatabase-2020-lcidocumentation/>).

LCA-tool dormakaba

Tool No.: IBU-DOR-202104-LT1_EN, version 1.0, 2021.
Developed by Sphera Solutions GmbH

PCR Part A

PCR – Part A: Calculation Rules for the Life Cycle Assessment
and Requirements on the Project Report according to EN
15804+A2:2019,
Version 1.0, 2020, Institut Bauen und Umwelt e.V., www.ibu-epd.com.

PCR Part B

PCR – Part B: Requirements on the EPD for Building Hardware
product, version 08/2021, Institut Bauen und Umwelt e.V.,
www.ibu-epd.com.



Publisher

Institut Bauen und Umwelt e.V.
Hegelplatz 1
10117 Berlin
Germany

+49 (0)30 3087748- 0
info@ibu-epd.com
www.ibu-epd.com



Programme holder

Institut Bauen und Umwelt e.V.
Hegelplatz 1
10117 Berlin
Germany

+49 (0)30 3087748- 0
info@ibu-epd.com
www.ibu-epd.com



Author of the Life Cycle Assessment

dormakaba International Holding GmbH
DORMA Platz 1
58256 Ennepetal
Germany

+49 2333 793-0
info.de@dormakaba.com
www.dormakaba.com



Owner of the Declaration

dormakaba International Holding GmbH
DORMA Platz 1
58256 Ennepetal
Germany

+49 2333 793-0
info.de@dormakaba.com
www.dormakaba.com