

# ENVIRONMENTAL PRODUCT DECLARATION

as per ISO 14025 and EN 15804+A2




Owner of the Declaration	dormakaba International Holding GmbH
Programme holder	Institut Bauen und Umwelt e.V. (IBU)
Publisher	Institut Bauen und Umwelt e.V. (IBU)
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Valid to	18.01.2027

## Ladder Pull TG138 Series dormakaba

[www.ibu-epd.com](http://www.ibu-epd.com) | <https://epd-online.com>



## General Information

<b>dormakaba</b> <b>Programme holder</b> IBU – Institut Bauen und Umwelt e.V. Panoramastr. 1 10178 Berlin Germany	<b>Ladder Pull TG138 Series</b> <b>Owner of the declaration</b> dormakaba International Holding GmbH DORMA Platz 1 58256 Ennepetal Germany
<b>Declaration number</b> EPD-DOR-20210203-CBC1-EN	<b>Declared product / declared unit</b> 1 piece of the product: Ladder Pull TG138
<b>This declaration is based on the product category rules:</b> Building Hardware products, 11.2017 (PCR checked and approved by the SVR)	<b>Scope:</b> This EPD refers to a specific product manufactured by dormakaba. The production site is located in Reamstown (USA).
<b>Issue date</b> 19.01.2022	The data represents the dormakaba financial year 2020/21.
<b>Valid to</b> 18.01.2027	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 <i>EN 15804+A2</i> . In the following, the standard will be simplified as <i>EN 15804</i> .
 Dipl. Ing. Hans Peters (chairman of Institut Bauen und Umwelt e.V.)	<b>Verification</b> The standard <i>EN 15804</i> serves as the core PCR Independent verification of the declaration and data according to <i>ISO 14025:2010</i> <input type="checkbox"/> internally <input checked="" type="checkbox"/> externally
 Dr. Alexander Röder (Managing Director Institut Bauen und Umwelt e.V.)	 Dr.-Ing. Wolfram Trinius (Independent verifier)

## Product

### Product description/Product definition

dormakaba offers a wide selection of pulls and handles for both tempered glass doors and solid material doors made of aluminum, wood, or mixed material: Locking and non-locking ladder pulls, back-to-back pulls, customized handle solutions, and a variety of finished materials. This EPD refers to the locking and non-locking ladder pull TG138 series.

For elegant and secure glass entrances, dormakaba offers the locking and non-locking ladder pulls — a pair of tubular lockable pull handles with a small format interchangeable (SFIC) cylinder on the secure side and a thumbturn on the non-secure side of the door. Made from stainless steel, locking ladder pulls are perfect for the toughest interior/exterior environments. Four stocked lengths are available: 49" (1245), 60" (1524), 72" (1829), and 84" (2134) with custom sizes available for quote upon request.

The default cylinder is a Small Format Interchangeable Core (SFIC). Other cylinder and keying options are available. A dust proof strike is included.

For the use and application of the product, the respective national provisions at the place of use apply:

- *ANSI/BHMA A156.3-2014*

### Application

The architectural pulls and handles can be used for:

- Entrances
- Secure areas

and following verticals:

- Commercial
- Retail
- Hospitality
- Entertainment
- Education

## Technical Data

- Available in numerous designs and sizes
- Made of 316 stainless steel
- Door thicknesses up to 2-1/4" thick

The product with respect to its characteristics are in accordance with the relevant technical provisions (no CE-marking):

- *Americans with Disabilities Act (ADA)*

## Base materials/Ancillary materials

The composition of the product is the following:

Name	Value	Unit
Stainless Steel	97.8	%
Steel	2.1	%
Plastics	0.1	%

The product/s include/s partial articles which contain substances listed in the Candidate List of REACH Regulation 1907/2006/EC (date: 19.01.2021) exceeding 0.1 percentage by mass: No.

## Reference service life

The reference service life of the declared product is 10 years. This corresponds to approx. 7,500 closing cycles per year, depending on the traffic pattern and frequency of usage.

## LCA: Calculation rules

### Declared Unit

The declared unit is 1 piece of the product: Ladder Pull TG138

### Declared unit

Name	Value	Unit
Declared unit	1	piece/product
Weight of declared unit	6.97	kg
Conversion factor to 1 kg (kg per declared unit)	0.143	-

### System boundary

The type of EPD is according to EN 15804: "cradle to gate with options, modules C1–C4, and module D". The following modules are declared: A1-A3, C, D and additional modules: A4 + A5

### Production - Module A1-A3

The product stage includes:

- A1, raw material extraction, processing of secondary material input (e.g. recycling processes),
- A2, transport to the manufacturer,
- A3, manufacturing and assembly, processing and mechanical treatments, 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, treatment of waste packaging materials arising during installation into the building.

### 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.

### 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 Information on biogenic Carbon

#### Information on describing the biogenic Carbon Content at factory gate

Name	Value	Unit
Biogenic Carbon Content in product	0	kg C
Biogenic Carbon Content in accompanying packaging	0.18	kg C

The following technical scenario information is required for the declared modules and optional for non-declared modules.

#### Transport to the building site (A4)

Name	Value	Unit
Litres of fuel	0.0206	l/100km
Transport distance	100	km
Capacity utilisation (including empty runs)	55	%

Truck transport to the construction site declared for 100 km. If necessary, the transport distance can be adjusted at building level.

#### Installation into the building (A5)

Name	Value	Unit
Waste packaging	0.5	kg

#### Reference service life

Name	Value	Unit
Life Span according to the manufacturer	10	a

#### End of life (C1-C4)

Name	Value	Unit
Recycling	6.96	kg
Energy recovery	0.01	kg
Transportation to waste management	50	km

The product is disassembled in a recycling process. Material recycling is then assumed for the metals. The plastic components are assumed to be incinerated with energy recovery. Minor proportions of residues arising from the recycling process are landfilled (1%). Region for the End of Life is: Global.

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

Collection rate is 100%

## LCA: Results

Disclaimer:

EP-freshwater: This indicator has been calculated as "kg P eq" as required in the characterization model (EUTREND model, Struijs et al., 2009b, as implemented in ReCiPe; <http://eplca.jrc.ec.europa.eu/LCDN/developerEF.xhtml>).

**DESCRIPTION OF THE SYSTEM BOUNDARY (X = INCLUDED IN LCA; ND = 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	ND	ND	MNR	MNR	MNR	ND	ND	X	X	X	X	X

### RESULTS OF THE LCA - ENVIRONMENTAL IMPACT according to EN 15804+A2: 1 piece ladder pull TG138

Core Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
GWP-total	[kg CO <sub>2</sub> -Eq.]	4.22E+1	6.53E-2	8.13E-1	0.00E+0	3.09E-2	2.29E-2	1.53E-3	-3.01E+1
GWP-fossil	[kg CO <sub>2</sub> -Eq.]	4.29E+1	6.24E-2	1.51E-2	0.00E+0	2.95E-2	2.29E-2	1.52E-3	-3.02E+1
GWP-biogenic	[kg CO <sub>2</sub> -Eq.]	-7.91E-1	2.88E-3	7.98E-1	0.00E+0	1.37E-3	5.33E-7	5.18E-6	1.55E-1
GWP-luluc	[kg CO <sub>2</sub> -Eq.]	8.44E-2	1.49E-6	1.04E-5	0.00E+0	7.03E-7	1.29E-6	4.37E-6	-6.00E-2
ODP	[kg CFC11-Eq.]	1.89E-11	6.59E-18	1.19E-16	0.00E+0	3.12E-18	1.15E-17	5.62E-18	-6.54E-14
AP	[mol H <sup>+</sup> -Eq.]	2.30E-1	6.25E-5	1.37E-4	0.00E+0	2.96E-5	4.07E-6	1.09E-5	-1.36E-1
EP-freshwater	[kg P-Eq.]	5.61E-5	1.34E-8	2.08E-8	0.00E+0	6.32E-9	1.84E-9	2.61E-9	-2.65E-5
EP-marine	[kg N-Eq.]	3.02E-2	1.99E-5	3.88E-5	0.00E+0	9.41E-6	9.18E-7	2.80E-6	-2.12E-2
EP-terrestrial	[mol N-Eq.]	3.28E-1	2.21E-4	5.58E-4	0.00E+0	1.05E-4	1.85E-5	3.08E-5	-2.31E-1
POCP	[kg NMVOC-Eq.]	9.12E-2	5.62E-5	1.07E-4	0.00E+0	2.66E-5	2.54E-6	8.48E-6	-6.26E-2
ADPE	[kg Sb-Eq.]	1.62E-3	1.87E-9	1.88E-9	0.00E+0	8.86E-10	1.58E-10	1.36E-10	-9.31E-4
ADPF	[MJ]	5.40E+2	8.85E-1	2.05E-1	0.00E+0	4.19E-1	1.06E-2	1.99E-2	-3.68E+2
WDP	[m <sup>3</sup> world-Eq deprived]	1.66E+1	1.22E-4	8.95E-2	0.00E+0	5.79E-5	2.34E-3	1.59E-4	-1.25E+1

Caption: 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 piece ladder pull TG138

Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
PERE	[MJ]	1.25E+2	2.79E-3	6.54E+0	0.00E+0	1.32E-3	2.76E-3	2.61E-3	-7.87E+1
PERM	[MJ]	6.50E+0	0.00E+0	-6.50E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
PERT	[MJ]	1.31E+2	2.79E-3	3.85E-2	0.00E+0	1.32E-3	2.76E-3	2.61E-3	-7.87E+1
PENRE	[MJ]	5.40E+2	8.86E-1	2.05E-1	0.00E+0	4.19E-1	2.54E-1	1.99E-2	-3.69E+2
PENRM	[MJ]	2.43E-1	0.00E+0	0.00E+0	0.00E+0	0.00E+0	-2.43E-1	0.00E+0	0.00E+0
PENRT	[MJ]	5.41E+2	8.86E-1	2.05E-1	0.00E+0	4.19E-1	1.06E-2	1.99E-2	-3.69E+2
SM	[kg]	3.30E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
RSF	[MJ]	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
NRSF	[MJ]	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
FW	[m <sup>3</sup> ]	6.18E-1	5.01E-6	2.10E-3	0.00E+0	2.37E-6	5.60E-5	5.02E-6	-4.90E-1

Caption: 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 piece ladder pull TG138

Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
HWD	[kg]	2.91E-6	8.59E-11	2.48E-10	0.00E+0	4.07E-11	4.04E-11	3.03E-10	8.10E-8
NHWD	[kg]	3.99E+0	9.06E-5	1.60E-2	0.00E+0	4.29E-5	2.38E-3	1.00E-1	-2.99E+0
RWD	[kg]	8.03E-3	9.51E-7	1.15E-5	0.00E+0	4.50E-7	3.94E-7	2.27E-7	-1.93E-3
CRU	[kg]	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
MFR	[kg]	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	6.96E+0	0.00E+0	0.00E+0
MER	[kg]	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
EEE	[MJ]	0.00E+0	0.00E+0	1.13E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
EET	[MJ]	0.00E+0	0.00E+0	2.04E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0

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; EEE = Exported

thermal energy									
RESULTS OF THE LCA – additional impact categories according to EN 15804+A2-optional: 1 piece ladder pull TG138									
Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
PM	[Disease Incidence]	4.01E-6	3.28E-10	9.25E-10	0.00E+0	1.55E-10	5.20E-11	1.35E-10	-2.74E-6
IRP	[kBq U235-Eq.]	7.49E-1	1.36E-4	1.79E-3	0.00E+0	6.43E-5	3.55E-5	2.33E-5	-2.52E-1
ETP-fw	[CTUe]	2.68E+2	6.27E-1	9.73E-2	0.00E+0	2.97E-1	3.98E-3	1.14E-2	-1.97E+2
HTP-c	[CTUh]	9.70E-6	1.18E-11	7.46E-12	0.00E+0	5.59E-12	3.45E-13	1.69E-12	-6.37E-8
HTP-nc	[CTUh]	7.93E-7	5.05E-10	4.66E-10	0.00E+0	2.39E-10	3.49E-11	1.86E-10	-1.50E-7
SQP	[-]	1.79E+2	2.27E-3	5.70E-2	0.00E+0	1.08E-3	3.18E-3	4.15E-3	-5.44E+1
Caption	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 nor 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 fossil resources”, “abiotic depletion potential for non-fossil resources”, “water (user) deprivation potential”, “deprivation-weighted water consumption”, “potential comparative toxic unit for ecosystems”, “potential comparative toxic unit for humans - cancer effects”, “potential comparative toxic unit for humans – non-cancer effects”, “potential soil quality index”.  
The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experience with the indicator.

## References

### Standards

#### ANSI/BHMA A156.3-2014

Revision of ANSI/BHMA A156.3 – 2008  
AMERICAN NATIONAL STANDARD FOR EXIT DEVICES.

#### EN 15804

EN 15804:2019+A2, Sustainability of construction works — Environmental Product Declarations — Core rules for the product category of construction products.ISO 14025DIN EN ISO 14025:2011-10, Environmental labels and declarations — Type III environmental declarations — Principles and procedures.

#### ISO 14025

DIN EN ISO 14025:2011-10, Environmental labels and declarations — Type III environmental declarations — Principles and procedures.

#### Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

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

### Further References

#### Americans with Disabilities Act

<https://www.ada.gov/>.

#### IBU 2021

Institut Bauen und Umwelt e.V.: General Instructions for the EPDs programme of Institut Bauen und Umwelt e.V. Version 2.0., Berlin: Institut Bauen und Umwelt e.V., 2021. [www.ibu-epd.com](http://www.ibu-epd.com).

#### GaBi ts software

Sphera Solutions GmbH  
Gabi Software System and Database for Life Cycle Engineering 1992-2020 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-lci-documentation/>).

#### 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, Institut Bauen und Umwelt e.V., [www.ibu-epd.com](http://www.ibu-epd.com).

#### PCR Part B

PCR – Part B: Requirements on the EPD for Building Hardware product, version 1.2, Institut Bauen und Umwelt e.V., [www.ibu-epd.com](http://www.ibu-epd.com), 2017.

#### Underwriters Laboratories

<https://ulstandards.ul.com/>.

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