ENVIRONMENTAL PRODUCT DECLARATION

as per ISO 14025 and EN 15804

Owner of the Declaration	**DORMA Beschlagtechnik GmbH**
Programme holder	Institut Bauen und Umwelt e.V. (IBU)
Publisher	Institut Bauen und Umwelt e.V. (IBU)
Declaration number	EPD-DOR-2012421-IBC21-EN
Issue date	18.12.2012
Valid to	17.12.2017

Door Handles stainless steel - OGRO and CORE Series

DORMA Beschlagtechnik GmbH

Institut Bauen und Umwelt e.V.

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

1. General Information

DORMA Beschlagtechnik GmbH

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

Declaration number
EPD-DOR-2012421-IBC21-EN

This Declaration is based on the Product Category Rules:
Locks and fittings , 07.2014
(PCR tested and approved by the SVR)

Issue date
18.12.2012

Valid to
17.12.2017

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

Dr. Burkhart Lehmann
(Managing Director IBU)

Door Handles stainless steel - OGRO and CORE Series

Owner of the Declaration
DORMA Beschlagtechnik GmbH
Donnenberger Straße 2
42553 Velbert

Declared product / Declared unit
This Declaration refers to an average fitting (arithmetical average) from the OGRO/ CORE* Series made of stainless steel:

OGRO/ CORE building fitting for full-leaf doors
- Door handle model 8100
- Door handle rosette model 6501
- Key rosette model 6612 with profile cylinder hole

OGRO/ CORE building fitting for full-leaf doors
- Door handle model 8350 V
- Key rosette model 6621 with profile cylinder hole

incl. packaging material and weighs on average 672.1 g (stainless steel) and 722.3 g (aluminium).

** the CORE Series isn't considered in the averaging of the OGRO Series but both series are identical on the hardware side.*

Scope:
The Life Cycle Assessment is based on data recorded at the production facility in Velbert, Germany during the period January to June 2012. 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 Norm /EN 15804/ serves as the core PCR
Independent verification of the declaration according to /ISO 14025/
☐ internally ☒ externally

Dr.-Ing. Wolfram Trinius
(Independent verifier appointed by SVR)

2. Product

2.1 Product description
DORMA Beschlagtechnik GmbH manufactures door and window fittings made of stainless steel for the OGRO/ CORE segment.

DORMA OGRO/ CORE product features:
Compatibility
The modular system permits flexible combinations of the individual components.

DORMA OGRO/ CORE door handles in long-term tests
OGRO/ CORE stainless steel door handles are subjected to long-term tests with up to 2,000,000 test cycles and confirmed by the MPA. They therefore far exceed the requisite 200,000 test cycles in accordance with DIN EN 1906 Class 4.

Bases

The bases enable reliable introduction of high forces to the door panel thereby relieving the fitting and lock.

Slide bearing
The maintenance-free slide bearing safely absorbs tilting pressure and traction relieving the strain on the lock follower.

Click & go assembly
Four click elements facilitate fast assembly of the door handle. The door handles are firmly fixed / rotatable.

Retaining springs
Four retaining springs ensure that the door handles remain horizontal in everyday use. The fittings can be used on the left or right.

Extended supporting cams
The extended supporting cams on the thread side of full-leaf rosettes and doorplates enable door thickness intervals of 15 mm to be covered using a screw/pin combination.

Continuous screw connections
The slack-protected continuous (M5) screws create a stable connection between the rosette or doorplate pairs on full-leaf doors.

2.2 Application
DORMA OGRO/ CORE door handles are suitable for practically all applications:

- For use on doors subject to frequent use of force, e.g. football stadiums, military barracks, schools, public toilets
- For extremely high public traffic and maximum strains on the building
- For use in public buildings, e.g. hospitals or administrative buildings
- Versatile, barrier-free applications
- Use in glass doors
- Use in mechanically high-strength apartment entrance doors subject to DIN 18257
- Use in panic, escape, rescue route and fire protection doors
- Use in doors with electronic access control

2.3 Technical Data
The following test standards are of relevance for the product:

- DIN 17440: Steel and Steel Alloys
- DIN EN 179: Building hardware – Emergency exit devices operated by a lever handle or push pad, for use on escape routes
- DIN EN 1125: Building hardware – Panic exit devices operated by a horizontal bar, for use on escape routes – Requirements and test methods
- DIN EN 1634: Fire resistance of door and locking equipment
- DIN EN 1906: Requirements and test methods for door handles and knob furniture in the classification key
- DIN 18 082 Part 1: Fire protection closures for steel doors T 30-1
- DIN 18 095 Parts 1 + 2: Doors and smoke control doors
- DIN 18 255: Building hardware
- DIN 18 257: Protective fittings
- DIN 18 273: Lever handle units for fire doors and smoke control doors
- DIN 4102 Parts 5 + 18: Fire Performance of Building Materials and Components
- DIN 18040: Construction of accessible buildings

2.4 Placing on the market / Application rules
The following regulations are of relevance for the product:

- German Institut of Building Technology Building Rules List: DIN 18273: Lever handle units for fire doors
- Conformity with European standards CE DIN EN 179: Building Hardware

2.5 Delivery status
One representative fitting including the packaging materials weighs:

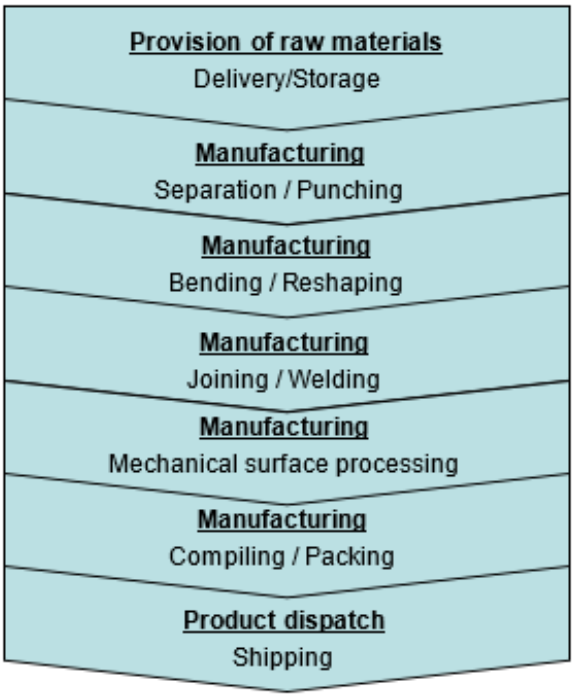
- Stainless steel = 672 g

2.6 Base materials / Ancillary materials
The following table lists the components of one fitting (excl. packaging materials) as mass percentages on delivery.

Stainless steel

Components	Percentage [M-%]
Stainless steel	66%
Steel	27%
Plastic	7%
TOTAL	**100%**

2.7 Manufacture
Stainless steel
The stainless steel handles are generally manufactured from tubular material. The requisite shapes are achieved by bending or welding. A sheet metal / turned part is welded to one end and a turned and/or investment-cast part is welded to the other end. The doorplates and rosettes are manufactured from stainless steel sheeting in a punching and reshaping process.
The surface of the stainless steel handles, doorplates and rosettes is generated in various grinding processes.
Grinding is followed by packing the stainless steel handles in accordance with the customer requirements along with the doorplates/rosettes and accessories individually or in groups.



2.8 Environment and health during manufacturing

DORMA Beschlagtechnik GmbH is certified in accordance with DIN ISO 9001 / DIN EN ISO 14001, by the DQS in Germany, with international confirmation in the form of a certificate issued by Gesellschaft IQNet.

Air
Waste air generated during production is cleaned in accordance with statutory specifications. Emissions are significantly lower than the limit values specified by the TA Luft.

Noise
Sound protection analyses have established that all values communicated inside and outside the production facilities comply with statutory guidelines.

2.9 Product processing/Installation

The general rules of technology are maintained and permanently improved in the areas of health and safety and environment protection.

2.10 Packaging

To provide protection during transport, the fittings are packed in PE bags and packaged individually or in groups in modular corrugated board packaging.

2.11 Condition of use

No material impact relationships are known during use and can therefore be excluded.

2.12 Environment and health during use

There are no impact relationships between the product, the environment and health. The product does not contain any harmful substances. Accordingly, emissions can be excluded.

2.13 Reference service life

In accordance with DIN EN 1906, a long-term test with up to 2,000,000 test cycles was carried out with DORMA OGRO/ CORE stainless steel fittings and confirmed by the MPA.

2.14 Extraordinary effects

Fire
In accordance with DIN 18273, DORMA OGRO/ CORE fittings made of stainless steel are classified as follows:

· OGRO/ CORE building fittings in accordance with construction materials class B2 to DIN 4102-1 are regarded as being of "normal flammability".
· OGRO/ CORE fire protection fittings in accordance with construction materials class A to DIN 4102-1 are regarded as being "non-flammable".
At temperatures in excess of 300 °C, small volumes of gas can be released.

Water
No contamination of water or soil. Production-related waste water is treated in-house.

Mechanical destruction
There are no impacts on the environment in the event of unforeseen mechanical destruction.

2.15 Re-use phase

The product system displays the following possibilities of reuse:

Reuse
It is possible to replace individual components as required.

Material recycling
The fitting components can be redirected to the raw materials cycle by means of separate recycling.

Energy recovery
The plastic components and packaging materials can be directed to the MVA route taking consideration of national guidelines.

Landfilling
As the product does not contain any substances which are hazardous to the environment or human health, the entire system can be landfilled without reservation where no other waste recovery technologies are in place.

2.16 Disposal

Packaging
The packaging materials must be disposed of in accordance with the national packaging directive:
· EWC 15 01 01 Paper and cardboard packaging
· EWC 15 01 02 Plastic packaging

Disposal phase
All materials are directed to energy or metallurgical recovery in line with any waste technology available:
· EWC 17 02 03 Plastic
· EWC 17 04 02 Aluminium
· EWC 17 04 05 Iron and steel

2.17 Further information

More information on technical data and other product variants is available from the following contacts:

DORMA Beschlagtechnik GmbH
Donnenberger Straße 2
D-42553 Velbert

E-mail: info@dorma.de
Web: www.dorma-beschlagtechnik.de

3. LCA: Calculation rules

3.1 Declared Unit

The declared unit is 1 (one) decorative fitting of the OGRO/ CORE stainless steel variant with average weights (incl. packaging materials) of 672.1 g (stainless steel).
The Declaration is based on an average value obtained as an arithmetical average of the following building fittings:

OGRO/ CORE building fitting for full-leaf doors
- Door handle model 8100
- Door handle rosette model 6501
- Key rosette model 6612 with profile cylinder hole

OGRO/ CORE building fitting for full-leaf doors
- Door handle model 8350 V
- Key rosette model 6621 with profile cylinder hole

The LCA results (section 5) can therefore be regarded as representative for full-leaf and profile doors. Deviations from this average are ± 0.4% for stainless steel.

3.2 System boundary

Type of EPD: cradle to gate with options
In accordance with EN 15804, the following modules are taken into consideration:

Product stage: A1 – A3
The extraction and preparation of raw materials including all of the corresponding upstream chains as well as the provision of electricity, steam and heat from primary energy resources including the extraction, refinement and transport thereof, and the requisite procurement transport to the plant gate and the manufacturing of packaging are considered in this module.

Construction stage: A4 – A5
This module comprises the average distribution routes as well as energy recovery associated with the packaging materials.

Disposal stage: C2 – C3
This module takes consideration of transport to the recycling plant as well as the expenses incurred by collection, preparation and recycling.

Credits: D
The value streams incurred for a downstream product system based on material recycling processes as well as energy recovery are indicated in this module.
The Life Cycle Assessment was drawn up for Germany as a reference area. This means that apart from the production processes under these marginal conditions, the pre-stages also of relevance for Germany such as provision of electricity or energy carriers were used.

3.3 Estimates and assumptions

The most realistic data records were selected.
The distribution countries were recorded proportionately (A4). The collective loss of packaging materials (A5) and the product system at the End of Life (C3) is considered as 5%. The distance from the demolition site to the disposal site (C2) is estimated at 75 km.

3.4 Cut-off criteria

All of the data from the operational data survey and all emission measurements available for the period referred to in section 3.7 were taken into consideration. Furthermore, the data pertaining to transport expenses was recorded and modelled for all inputs considered. The infrastructure (especially machines and production plants) used in the manufacturing processes were not taken into consideration in the analysis. Nor were the transport expenses incurred for packaging taken into consideration. Furthermore, varnishes were not taken into consideration on account of their low mass percentage of < 1%.
It can be assumed that the total of all neglected percentage shares does not exceed 5% in the impact categories and is therefore of subordinate significance.

3.5 Background data

The current version 5 of the GaBi software system for life cycle engineering was used for modelling the life cycle. All of the background data used was taken from the current versions of various GaBi data bases and the ecoinvent data base (version 2.2). The data items contained in the data bases are documented online.
The Life Cycle Assessment was drawn up for Germany as a reference area. This means that apart from the production processes under these marginal conditions, the pre-stages also of relevance for Germany such as provision of electricity or energy carriers were used.
The secondary and recycling percentages can only be taken into consideration via the generic data records.

3.6 Data quality

Data was collated on the basis of evaluations of internal production and environmental data, recording LCA-relevant data within the supplier chain and by measuring the relevant data for the provision of energy. The data collated from operating data records and measurements has been examined for plausibility. Very good data representativity can be assumed after detailed examination.
The data records used for the LCA are generally no more than 10 years old.

3.7 Period under review

The data on which the LCA is based was collated representatively for the period from January to June 2012.

3.8 Allocation

There are no co-products in place. An individual product is manufactured within the framework of the production process.

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.

4. LCA: Scenarios and additional technical information

Transport to the site (A4)

Litres of fuel	GLO: Truck PE
Transport distance	949.89 km
Use of capacity (including empty runs)	85%

All of the distribution countries were recorded proportionately when establishing the transport distance. Transport to the site is depicted with the corresponding fuel data records.

Installation in the building (A5)

Output materials incurred by waste treatment on site:

Plus aluminium: Packaging materials	87.2 g

Details as waste potential: A collective loss of 5% is considered in the LCA results. Transport is allocated to Module C2.

Reference service life

Reference service life	80 years

End of Life (C1-C4)

OGRO/ CORE stainless steel:

For recycling	544.9 g
For energy recovery	46.9 g

Details as waste potential: A collective loss of 5% is considered in the LCA results.

Disposal transport (C2)

Means of transport:	Truck, 17.3 t useful load Euro 3, freight
Transport distance:	75 km
Use of capacity (including empty runs)	50%

Reuse, recovery and recycling potential (D)

Metal is directed to materials recycling while plastic and packaging materials are directed to energy recovery. The ensuing credits are allocated to Module D.

5. LCA: Results

In Table 1 "Description of the system boundary", all declared modules shall be indicated with an "X"; all modules that are not declared shall be indicated with "MND". In the following tables 2, 3 and 4, columns may be deleted for modules that are not declared. Indicator values should be declared with three valid digits (eventually exponential form (e.g. 1,23E-5 = 0,0000123). A uniform format should be used for all values of one indicator. If several modules are not declared and therefore have been deleted from the table, the abbreviations for the indicators can be replaced by the complete names, while the readability and clear arrangement should be preserved; the legends can then be deleted.
If no reference service life is declared (see chapter 2.13 "Reference Service Life"), the LCA results of the modules B1-B2 and B6-B7 must refer to a period of one year. This must be indicated as an explanatory text in Chapter 5, "LCA: Results". Also in this case, the calculation formula for the total life cycle results is to be specified.

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 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	MND	MND	MND	MND	MND	MND	X	X	MND	X

RESULTS OF THE LCA - ENVIRONMENTAL IMPACT: 1 OGRO/ CORE stainless steel door handle, accessories

Parameter	Unit	A1-A3	A4	A5	C2	C3	D
Global warming potential	[kg CO_2-Eq.]	2.47E+0	3.81E-2	7.73E-2	3.90E-3	6.65E-2	-2.43E+0
Depletion potential of the stratospheric ozone layer	[kg CFC11-Eq.]	-2.10E-9	1.41E-11	5.18E-11	1.45E-12	1.13E-11	7.44E-11
Acidification potential of land and water	[kg SO_2-Eq.]	1.33E-2	2.46E-4	-3.30E-5	2.53E-5	6.64E-5	-2.21E-2
Eutrophication potential	[kg $(PO_4)^{3-}$-Eq.]	9.24E-4	5.91E-5	-3.76E-6	6.10E-6	1.70E-5	-1.27E-3
Formation potential of tropospheric ozone photochemical oxidants	[kg ethene-Eq.]	1.14E-3	-9.98E-5	-8.70E-6	-1.02E-5	4.06E-6	-1.29E-3
Abiotic depletion potential for non-fossil resources	[kg Sb-Eq.]	9.87E-4	1.51E-9	-1.82E-9	1.54E-10	1.40E-9	-1.80E-4
Abiotic depletion potential for fossil resources	[MJ]	3.12E+1	5.27E-1	-1.22E+0	5.39E-2	2.79E-2	-3.20E+1

RESULTS OF THE LCA - RESOURCE USE: 1 OGRO/ CORE stainless steel door handle, accessories

Parameter	Unit	A1-A3	A4	A5	C2	C3	D
Renewable primary energy as energy carrier	[MJ]	2.51E+0	2.06E-2	2.47E-3	2.11E-3	1.20E-3	2.62E-2
Renewable primary energy resources as material utilization	[MJ]	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Total use of renewable primary energy resources	[MJ]	2.51E+0	2.06E-2	2.47E-3	2.11E-3	1.20E-3	2.62E-2
Non-renewable primary energy as energy carrier	[MJ]	3.28E+1	5.29E-1	-1.22E+0	5.41E-2	3.03E-2	-3.18E+1
Non-renewable primary energy as material utilization	[MJ]	2.00E-8	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Total use of non-renewable primary energy resources	[MJ]	3.28E+1	5.29E-1	-1.22E+0	5.41E-2	3.03E-2	-3.18E+1
Use of secondary material	[kg]	3.88E-1	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Use of renewable secondary fuels	[MJ]	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Use of non-renewable secondary fuels	[MJ]	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Use of net fresh water	[m^3]	-	-	-	-	-	-

RESULTS OF THE LCA – OUTPUT FLOWS AND WASTE CATEGORIES: 1 OGRO/ CORE stainless steel door handle, accessories

Parameter	Unit	A1-A3	A4	A5	C2	C3	D
Hazardous waste disposed	[kg]	-	-	-	-	-	-
Non-hazardous waste disposed	[kg]	-	-	-	-	-	-
Radioactive waste disposed	[kg]	-	-	-	-	-	-
Components for re-use	[kg]	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Materials for recycling	[kg]	0.00E+0	0.00E+0	0.00E+0	0.00E+0	5.45E-1	0.00E+0
Materials for energy recovery	[kg]	0.00E+0	0.00E+0	8.74E-2	0.00E+0	3.99E-2	0.00E+0
Exported electrical energy	[MJ]	0.00E+0	0.00E+0	2.36E-1	0.00E+0	9.65E-2	0.00E+0
Exported thermal energy	[MJ]	0.00E+0	0.00E+0	6.57E-1	0.00E+0	2.53E-1	0.00E+0

6. LCA: Interpretation

The analysis was evaluated using relative values for the dominance analysis and the minimum threshold value specified as 10%.

OGRO/ CORE stainless steel

In all of the impact categories to CML 2001 Nov. 2010, the extraction of raw materials is considered to be the most dominant phase in the entire life cycle of the product system. Analogue to the Life Cycle Inventory Analysis (93 percentage mass of steel components),

this can be attributed to the extraction of raw materials and upstream chains in steel production.
Accounting for a mass percentage of 7%, the plastic components and transport processes are of subordinate significance in terms of their environmental impact. The same applies to the use of green electricity during manufacturing.
One positive outcome is represented by the high credits in the raw materials extraction phase in terms of the Ozone Depletion Potential (ODP). This is attributable to the recycling share accounted for by the steel components.
The steel components and/or their upstream chains dominate primary energy requirements.
Stainless steel is the main factor for the environmental indicators. Only in the case of ODP, corrugated board (packaging) is the main factor followed by stainless steel. The difference in stainless steel mass and the product variants depicted as averages is ±1%; ±2% for corrugated board. The ensuing influence on the LCA indicators does not tend to be of significance.

7. Requisite evidence

This Environmental Product Declaration does not require any evidence in relation to the material composition in the product and its area of application.

8. References

Institute Construction and Environment e.V., Berlin (pub.):

Product Category Rules for Construction Products Part A: Calculation Rules for the Life Cycle Assessment and Requirements on the Background Report. 2011-07

Product Category Rules for Construction Products Part B: Requirements on the EPD for locks and fittings. 2012-07

www.bau-umwelt.de

2001/118/EC: European Waste Catalogue (EWC) – Decision by the Commission on 16 January 2001 amending the 2000/532/EC decision on a waste index

CEN/TR 15941:2010-03: Sustainability of construction works – Environmental product declarations – Methodology for selection and use of generic data; German version CEN/TR 15941:2010

DIN EN ISO 9001:2008-12: Quality management systems – Requirements (ISO 9001:2008); Tri-lingual version EN ISO 9001:2008

DIN EN ISO 14001:2009-11: Environmental management systems - Requirements with guidance for use (ISO 14001:2004 + Cor. 1:2009); German and English version EN ISO 14001:2004 + AC:2009

DIN EN ISO 14044:2006-10: Environmental management – Life cycle assessment – Requirements and guidelines (ISO 14044:2006); German and English version EN ISO 14044:2006

DIN 18257:2003-03: Building hardware – Security plates – Definitions, measurements, requirements, marking

DIN EN 1906:2012-12: Building hardware – Lever handles and knob furniture – Requirements and test methods; German version EN 1906:2012

DIN EN 179:2008-04: Building hardware – Emergency exit devices operated by a lever handle or push pad, for use on escape routes – Requirements and test methods; German version EN 179:2008

DIN EN 1125:2008-04: Building hardware – Panic exit devices operated by a horizontal bar, for use on escape routes – Requirements and test methods; German version EN 1125:2008

DIN EN 1634-1:2009-01: Fire resistance and smoke control tests for door, shutter and openable window assemblies and elements of building hardware - Part 1: Fire resistance tests for doors, shutters and openable windows; German version EN 1634-1:2008

DIN EN 1634-2:2009-05: Fire resistance and smoke control tests for door, shutter and openable window assemblies and elements of building hardware – Part 2: Fire resistance characterisation test for elements of building hardware; German version EN 1634-2:2008

DIN EN 1906:2012-12: Building hardware – Lever handles and knob furniture – Requirements and test methods; German version EN 1906:2012

DIN 18082 Teil 1: Feuerschutzabschlüsse Stahltüren T 30-1; Bauart A

DIN 18095-1:1988-10: Smoke control doors; concepts and requirements

DIN 18095-2:1991-03: Smoke control doors; type testing for durability and leakage

DIN 18255:2002-05: Building hardware - Door lever handles, backplates and escutcheons - Definitions, dimensions, requirements and marking

DIN 18257:2003-03: Building hardware - Security plates – Definitions, measurements, requirements, marking

DIN 18273:1997-12: Building hardware - Lever handle units for fire doors and smoke control doors - Concepts and definitions, dimensions, requirements and testing

DIN 4102-5:1977-09: Fire Behaviour of Building Materials and Building Components; Fire Barriers, Barriers in Lift Wells and Glazings Resistant against Fire; Definitions, Requirements and Tests

DIN 4102-18:1991-03: Fire behaviour of building materials and components; fire barriers, verification of automatic closure (continuous performance test)

DIN 18040-1:2010-10: Construction of accessible buildings – Design principles – Part 1: Publicly accessible buildings

DIN 18040-2:2011-09: Construction of accessible buildings - Design principles - Part 2: Dwellings

DIN 18273:1997-1: Building hardware - Lever handle units for fire doors and smoke control doors - Concepts and definitions, dimensions, requirements and testing

Ecoinvent: Data base for life cycle assessment (life cycle inventory analysis data), version 2.2 Swiss Centre for Life Cycle Inventories, St. Gallen

GaBi 5: Software and databasis for Life Cycle Engineering. LBP, University of Stuttgart and PE International, 2011.

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

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

EN 15804
EN 15804:2012-04+A1 2013: Sustainability of construction works — Environmental Product Declarations — Core rules for the product category of construction products

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

Tel +49 (0)30 3087748- 0
Fax +49 (0)30 3087748- 29
Mail info@bau-umwelt.com
Web **www.bau-umwelt.com**

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

Tel +49 (0)30 - 3087748- 0
Fax +49 (0)30 – 3087748 - 29
Mail info@bau-umwelt.com
Web **www.bau-umwelt.com**

Author of the Life Cycle Assessment
brands & values GmbH
Konsul-Smidt-Straße 24
28217 Bremen
Germany

Tel 0421 9609630
Fax 0421 9609610
Mail info@brandsandvalues.com
Web **www.brandsandvalues.com**

Owner of the Declaration
DORMA Beschlagtechnik GmbH
Donnenberger Straße 2
42553 Velbert
Germany

Tel 02333 7932590
Fax 02333 79521158
Mail lea.kullmann@dorma.com
Web **www.dorma.com**