

**cassøe®**



## ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025 / ISO 21930

NEWFORM XTREND faucet range 63420 / 63421

CASSØE



**EPD HUB, HUB-1287**

Published on 08.04.2024, last updated on 08.04.2024, valid until 08.04.2029.

## GENERAL INFORMATION

### MANUFACTURER

Manufacturer	CASSØE
Address	Orebygaardvej 9, 7400 Herning. Denmark
Contact details	mail@cassoe.dk
Website	www.cassoe.dk

### EPD STANDARDS, SCOPE, AND VERIFICATION

Program operator	EPD Hub, hub@epdhub.com
Reference standard	EN 15804+A2:2019 and ISO 14025
PCR	EPD Hub Core PCR version 1.0, 1 Feb 2022
Sector	Construction product
Category of EPD	Third party verified EPD
Scope of the EPD	Cradle to gate with options, A4-A5, and modules C1-C4, D
EPD author	Erik Tang, CASSØE
EPD verification	Independent verification of this EPD and data, according to ISO 14025: <input type="checkbox"/> Internal certification <input checked="" type="checkbox"/> External verification
EPD verifier	Haiha Nguyen, as an authorized verifier acting for EPD Hub Limited

The manufacturer has the sole ownership, liability, and responsibility for the EPD. EPDs within the same product category but from different programs may not be comparable. EPDs of construction products may not be comparable if they do not comply with EN 15804 and if they are not compared in a building context.

### PRODUCT

Product name	Newform Xtrend faucet range 63420 / 63421
Additional labels	-
Product reference	63420,21 63420,31 63420,43,238 63421,21 63421,31 63421,43,238
Place of production	Italy
Period for data	2022
Averaging in EPD	Multiple products
Variation in GWP-fossil for A1-A3	+10 %

### ENVIRONMENTAL DATA SUMMARY

Declared unit	1 kg
Declared unit mass	1 kg
GWP-fossil, A1-A3 (kgCO <sub>2</sub> e)	9,90E+00
GWP-total, A1-A3 (kgCO <sub>2</sub> e)	9,74E+00
Secondary material, inputs (%)	31.6
Secondary material, outputs (%)	53.8
Total energy use, A1-A3 (kWh)	43.7
Total water use, A1-A3 (m <sup>3</sup> e)	2,32E-01

## PRODUCT AND MANUFACTURER

### ABOUT THE MANUFACTURER

Since 1997 Cassøe has sold a wide range innovative products for bathrooms & kitchens. Quality, service & product development are paramount, which is why we work every day to expand our range based on future trends & tendencies. Quality & customer service goes hand in hand. Our showroom, office & storage facilities is in Herning in DK, from where our skilled and always hardworking employees service & help our customers from all over Scandinavia.

### PRODUCT DESCRIPTION

Newform Xtrend kitchen faucet. Single lever sink mixer for warm and cold water comes with approved flexible connection hoses with 3/8 union nuts & mounting kit for the kitchen countertop is also included. Water flow at 3 bars pressure is estimated at 14,08 L/min.

All NEWFORM XTREND taps are approved by KIWA, Approval 1471.

More information can be found at: [www.cassoe.dk](http://www.cassoe.dk)

### PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass- %	Material origin
Metals	91.237	EU
Minerals	1.832	EU
Fossil materials	6.67	EU
Bio-based materials	0	EU

### BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

Biogenic carbon content in product, kg C	0
Biogenic carbon content in packaging, kg C	0.0492

### FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 kg
Mass per declared unit	1 kg
Functional unit	-
Reference service life	-

### SUBSTANCES, REACH - VERY HIGH CONCERN

The product does not contain any REACH SVHC substances in amounts greater than 0,1 % (1000 ppm).



# PRODUCT LIFE-CYCLE

## SYSTEM BOUNDARY

This EPD covers the life-cycle modules listed in the following table.

Product stage			Assembly stage		Use stage							End of life stage				Beyond the system boundaries		
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	x	x	x	x	x		
Raw materials	Transport	Manufacturing	Transport	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstr./demol.	Transport	Waste processing	Disposal	Reuse	Recovery	Recycling

Modules not declared = MND. Modules not relevant = MNR.

## MANUFACTURING AND PACKAGING (A1-A3)

The environmental impacts considered for the product stage cover the manufacturing of raw materials used in the production as well as packaging materials and other ancillary materials. Also, fuels used by machines, and handling of waste formed in the production processes at the manufacturing facilities are included in this stage. The study also considers the material losses occurring during the manufacturing processes as well as losses during electricity transmission. Production loss includes only metal scraps, which is sent to a waste facility located 50 km from the factory to be recycled. Incoming packaging of raw materials are mostly disposed, except for PE which is recycled. Wastewater is assumed to be treated at a local wastewater treatment facility.

The sand core for the base body is made. The body of the faucet is cast from brass using the sand core. After casting, the brass body is grinded and

polished. To protect the product and make it durable, the body has a coating applied (chrome, brushed chrome, or anthracite). Meanwhile, the individual parts of the cartridge are assembled. The product parts, including finished brass body, cartridge, chrome-plated outlet bow with soldered sleeve, chrome plated handle and others, are assembled. The preassembled product is packed together with the remaining components (like fastening parts). For product protection the kitchen faucets are individually packed in a plastic bag, in a cardboard box & on pallets.

## TRANSPORT AND INSTALLATION (A4-A5)

Transportation impacts occurred from final products delivery to construction site (A4) cover fuel direct exhaust emissions, environmental impacts of fuel production, as well as related infrastructure emissions.

Transportation impacts occurred from final products delivery to construction site (A4) cover fuel direct exhaust emissions, environmental impacts of fuel production, as well as related infrastructure emissions. Distribution distance was calculated as a sales volume-based weighted average in Denmark, which accounts for ~99% of sales. For installation (A5) the fitting is screwed to the kitchen sink or countertop (tools: wrench or screwdriver) by using the supplied mounting kit which is considered as an additional installation resource in the LCA. The supply hoses are connected to the angle valve. Energy consumption during installation is assumed to be negligible. There are no installation losses.

## PRODUCT USE AND MAINTENANCE (B1-B7)

This EPD does not cover the use phase.

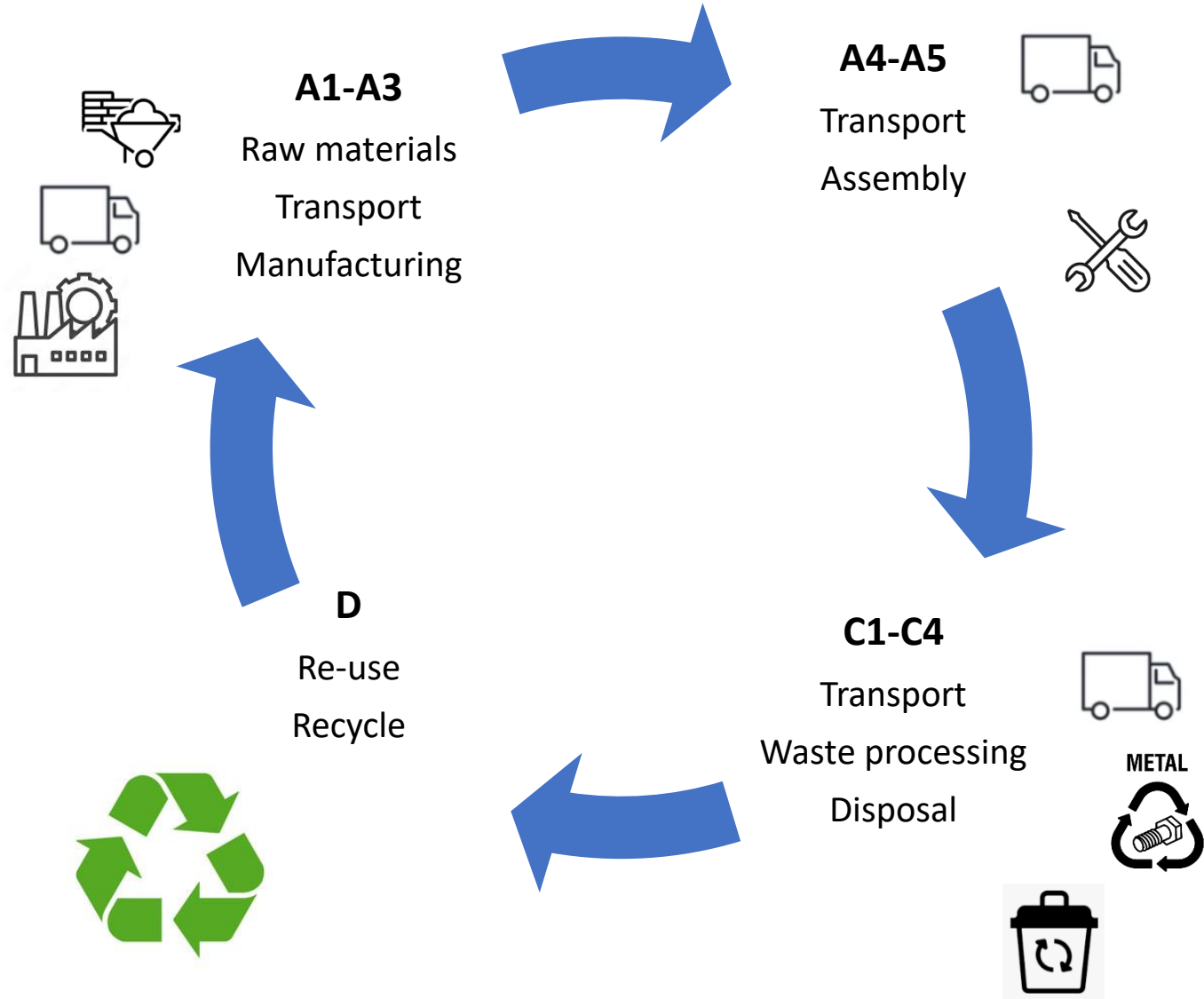
Air, soil, and water impacts during the use phase have not been studied.

## PRODUCT END OF LIFE (C1-C4, D)

It is determined that materials end of life disposal/demolition materials are transported an average 50 km to waste treatment. Transportation is covered by a European average 32 mt lorry with a diesel engine. The end-of-life stage represents the waste scenario after the use stage. Referring to

World Steel Association (2020), all metals (stainless steel, zinc) are assumed to be 85% recycled, except brass which is conservatively assumed to be 60% recycled, as per EN 50693. Plastics and rubber are assumed to be 75% incinerated with >60% energy efficiency, as per Eurostat (updated 2024) where the recycling share is instead conservatively assumed as incineration. The remaining percentages are assumed to be landfilled in C4.

# MANUFACTURING PROCESS AND SYSTEM BOUNDARY



## LIFE-CYCLE ASSESSMENT

### CUT-OFF CRITERIA

The study does not exclude any modules or processes which are stated mandatory in the reference standard and the applied PCR. The study does not exclude any hazardous materials or substances. The study includes all major raw material and energy consumption. All inputs and outputs of the unit processes, for which data is available for, are included in the calculation. There is no neglected unit process more than 1% of total mass or energy flows. The module specific total neglected input and output flows also do not exceed 5% of energy usage or mass.

### ALLOCATION, ESTIMATES AND ASSUMPTIONS

Allocation is required if some material, energy, and waste data cannot be measured separately for the product under investigation. All allocations are done as per the reference standards and the applied PCR. In this study, allocation has been done in the following ways:

Data type	Allocation
Raw materials	No allocation
Packaging materials	Allocated by mass or volume
Ancillary materials	Allocated by mass or volume
Manufacturing energy and waste	Allocated by mass or volume

### AVERAGES AND VARIABILITY

Type of average	Multiple products
Averaging method	Representative product
Variation in GWP-fossil for A1-A3	+10 %

Primary data represents the manufacturing of products 63420,43,238 (representative and min. case) and 63420,21 (max. case). The data was used to calculate average impacts for the products. The representative case was chosen as the highest sales volume in 2022 (min. case). The variability of the primary data or the emissions between the products did not amount to more than +10% of the relevant data (the representative case compared to the highest).

### LCA SOFTWARE AND BIBLIOGRAPHY

This EPD has been created using One Click LCA EPD Generator. The LCA and EPD have been prepared according to the reference standards and ISO 14040/14044. Ecoinvent v3.8 and One Click LCA databases were used as sources of environmental data.

# ENVIRONMENTAL IMPACT DATA

## CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, PEF

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP – total <sup>1)</sup>	kg CO <sub>2</sub> e	8,32E+00	0,00E+00	1,42E+00	9,74E+00	1,83E-02	8,54E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	5,57E-03	1,56E-01	4,19E-03	-3,39E+00
GWP – fossil	kg CO <sub>2</sub> e	8,30E+00	0,00E+00	1,61E+00	9,90E+00	1,83E-02	6,69E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	5,57E-03	1,56E-01	4,18E-03	-3,21E+00
GWP – biogenic	kg CO <sub>2</sub> e	6,15E-03	0,00E+00	-1,89E-01	-1,83E-01	0,00E+00	1,83E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-1,75E-01
GWP – LULUC	kg CO <sub>2</sub> e	1,65E-02	0,00E+00	1,13E-03	1,76E-02	6,75E-06	1,90E-03	MND	MND	MND	MND	MND	MND	MND	0,00E+00	2,05E-06	2,21E-05	2,04E-06	-6,38E-03
Ozone depletion pot.	kg CFC <sub>11</sub> e	5,09E-07	0,00E+00	1,98E-07	7,08E-07	4,21E-09	2,56E-08	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,28E-09	2,26E-09	8,20E-10	-1,75E-07
Acidification potential	mol H <sup>+</sup> e	4,49E-01	0,00E+00	6,23E-03	4,56E-01	7,74E-05	2,14E-03	MND	MND	MND	MND	MND	MND	MND	0,00E+00	2,36E-05	2,30E-04	1,96E-05	-1,93E-01
EP-freshwater <sup>2)</sup>	kg Pe	2,04E-03	0,00E+00	4,32E-05	2,09E-03	1,50E-07	3,01E-05	MND	MND	MND	MND	MND	MND	MND	0,00E+00	4,56E-08	8,95E-07	2,44E-08	-8,77E-04
EP-marine	kg Ne	2,38E-02	0,00E+00	1,34E-03	2,52E-02	2,30E-05	4,82E-04	MND	MND	MND	MND	MND	MND	MND	0,00E+00	7,01E-06	5,46E-05	7,90E-06	-1,01E-02
EP-terrestrial	mol Ne	3,32E-01	0,00E+00	1,28E-02	3,45E-01	2,54E-04	4,87E-03	MND	MND	MND	MND	MND	MND	MND	0,00E+00	7,73E-05	6,21E-04	7,45E-05	-1,43E-01
POCP (“smog”) <sup>3)</sup>	kg NMVOCe	9,14E-02	0,00E+00	4,87E-03	9,63E-02	8,12E-05	2,10E-03	MND	MND	MND	MND	MND	MND	MND	0,00E+00	2,47E-05	1,67E-04	2,21E-05	-3,96E-02
ADP-minerals & metals <sup>4)</sup>	kg Sbe	1,09E-02	0,00E+00	4,15E-06	1,09E-02	4,29E-08	5,53E-06	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,31E-08	2,19E-06	5,29E-09	-4,82E-03
ADP-fossil resources	MJ	1,07E+02	0,00E+00	2,74E+01	1,34E+02	2,75E-01	5,10E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	8,36E-02	2,42E-01	5,66E-02	-3,85E+01
Water use <sup>5)</sup>	m <sup>3</sup> e depr.	6,68E+00	0,00E+00	7,54E-01	7,43E+00	1,23E-03	3,41E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	3,74E-04	8,79E-03	2,04E-04	-2,77E+00

1) GWP = Global Warming Potential; 2) EP = Eutrophication potential. Required characterisation method and data are in kg P-eq. Multiply by 3,07 to get PO4e; 3) POCP = Photochemical ozone formation; 4) ADP = Abiotic depletion potential; 5) EN 15804+A2 disclaimer for Abiotic depletion and Water use and optional indicators except Particulate matter and Ionizing radiation, human health. The results of these environmental impact indicators shall be used with care as the uncertainties on these results are high or as there is limited experience with the indicator.



### USE OF NATURAL RESOURCES

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Renew. PER as energy <sup>8)</sup>	MJ	2,35E+01	0,00E+00	4,62E+00	2,81E+01	3,09E-03	4,82E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	9,42E-04	3,96E-02	5,75E-04	-1,16E+01
Renew. PER as material	MJ	0,00E+00	0,00E+00	1,58E+00	1,58E+00	0,00E+00	-1,58E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,53E+00
Total use of renew. PER	MJ	2,35E+01	0,00E+00	6,20E+00	2,97E+01	3,09E-03	-1,09E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	9,42E-04	3,96E-02	5,75E-04	-1,01E+01
Non-re. PER as energy	MJ	1,05E+02	0,00E+00	2,42E+01	1,29E+02	2,75E-01	5,10E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	8,36E-02	2,42E-01	5,66E-02	-3,85E+01
Non-re. PER as material	MJ	1,95E+00	0,00E+00	1,54E-02	1,97E+00	0,00E+00	-1,54E-02	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	-1,46E+00	-4,88E-01	0,00E+00
Total use of non-re. PER	MJ	1,07E+02	0,00E+00	2,42E+01	1,31E+02	2,75E-01	5,08E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	8,36E-02	-1,22E+00	-4,32E-01	-3,85E+01
Secondary materials	kg	3,16E-01	0,00E+00	1,22E-01	4,38E-01	7,63E-05	7,35E-02	MND	MND	MND	MND	MND	MND	MND	0,00E+00	2,32E-05	2,67E-04	1,32E-05	6,63E-01
Renew. secondary fuels	MJ	7,90E-03	0,00E+00	1,25E-02	2,04E-02	7,70E-07	4,73E-05	MND	MND	MND	MND	MND	MND	MND	0,00E+00	2,34E-07	1,31E-05	3,81E-07	1,44E-03
Non-ren. secondary fuels	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of net fresh water	m <sup>3</sup>	2,11E-01	0,00E+00	2,11E-02	2,32E-01	3,56E-05	6,08E-03	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,08E-05	2,21E-04	6,17E-05	-9,10E-02

8) PER = Primary energy resources.

### END OF LIFE – WASTE

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste	kg	2,19E+00	0,00E+00	8,96E-02	2,28E+00	3,64E-04	1,90E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,11E-04	1,49E-03	0,00E+00	-7,07E-01
Non-hazardous waste	kg	1,29E+02	0,00E+00	1,60E+00	1,31E+02	5,98E-03	8,98E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,82E-03	1,26E-01	3,67E-01	-5,58E+01
Radioactive waste	kg	3,85E-04	0,00E+00	5,46E-05	4,40E-04	1,84E-06	1,09E-05	MND	MND	MND	MND	MND	MND	MND	0,00E+00	5,59E-07	1,29E-06	0,00E+00	-1,27E-04

### END OF LIFE – OUTPUT FLOWS

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Components for re-use	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	MND	MND	MND	MND	MND	MND	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	4,12E-02	4,12E-02	0,00E+00	1,20E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	7,41E-01	0,00E+00	0,00E+00
Materials for energy rec	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,58E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	0,00E+00	1,07E+00	0,00E+00	0,00E+00

### ENVIRONMENTAL IMPACTS – EN 15804+A1, CML / ISO 21930

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Global Warming Pot.	kg CO <sub>2</sub> e	8,22E+00	0,00E+00	1,58E+00	9,80E+00	1,81E-02	6,53E-01	MND	MND	MND	MND	MND	MND	MND	0,00E+00	5,51E-03	1,56E-01	3,73E-03	-3,14E+00
Ozone depletion Pot.	kg CFC <sub>11</sub> e	4,25E-07	0,00E+00	1,72E-07	5,97E-07	3,33E-09	2,45E-08	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,01E-09	1,84E-09	6,49E-10	-1,48E-07
Acidification	kg SO <sub>2</sub> e	3,94E-01	0,00E+00	5,08E-03	3,99E-01	6,02E-05	1,74E-03	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,83E-05	1,84E-04	1,49E-05	-1,69E-01
Eutrophication	kg PO <sub>4</sub> <sup>3</sup> e	1,22E-01	0,00E+00	2,37E-03	1,24E-01	1,37E-05	1,08E-03	MND	MND	MND	MND	MND	MND	MND	0,00E+00	4,17E-06	6,81E-05	1,03E-04	-5,21E-02
POCP ("smog")	kg C <sub>2</sub> H <sub>4</sub> e	1,51E-02	0,00E+00	3,34E-04	1,54E-02	2,35E-06	2,01E-04	MND	MND	MND	MND	MND	MND	MND	0,00E+00	7,15E-07	6,65E-06	9,04E-07	-6,53E-03
ADP-elements	kg Sbe	1,09E-02	0,00E+00	3,98E-06	1,09E-02	4,15E-08	5,45E-06	MND	MND	MND	MND	MND	MND	MND	0,00E+00	1,26E-08	2,19E-06	5,19E-09	-4,82E-03
ADP-fossil	MJ	1,07E+02	0,00E+00	2,74E+01	1,34E+02	2,75E-01	5,10E+00	MND	MND	MND	MND	MND	MND	MND	0,00E+00	8,36E-02	2,42E-01	5,66E-02	-3,85E+01

## VERIFICATION STATEMENT

### VERIFICATION PROCESS FOR THIS EPD

This EPD has been verified in accordance with ISO 14025 by an independent, third-party verifier by reviewing results, documents and compliancy with reference standard, ISO 14025 and ISO 14040/14044, following the process and checklists of the program operator for:

- This Environmental Product Declaration
- The Life-Cycle Assessment used in this EPD
- The digital background data for this EPD

Why does verification transparency matter? [Read more online](#)

This EPD has been generated by One Click LCA EPD generator, which has been verified and approved by the EPD Hub.

### THIRD-PARTY VERIFICATION STATEMENT

I hereby confirm that, following detailed examination, I have not established any relevant deviations by the studied Environmental Product Declaration (EPD), its LCA and project report, in terms of the data collected and used in the LCA calculations, the way the LCA-based calculations have been carried out, the presentation of environmental data in the EPD, and other additional environmental information, as present with respect to the procedural and methodological requirements in ISO 14025:2010 and reference standard.

I confirm that the company-specific data has been examined as regards plausibility and consistency; the declaration owner is responsible for its factual integrity and legal compliance.

I confirm that I have sufficient knowledge and experience of construction products, this specific product category, the construction industry, relevant standards, and the geographical area of the EPD to carry out this verification.

I confirm my independence in my role as verifier; I have not been involved in the execution of the LCA or in the development of the declaration and have no conflicts of interest regarding this verification.

HaiHa Nguyen, as an authorized verifier acting for EPD Hub Limited  
08.04.2024

