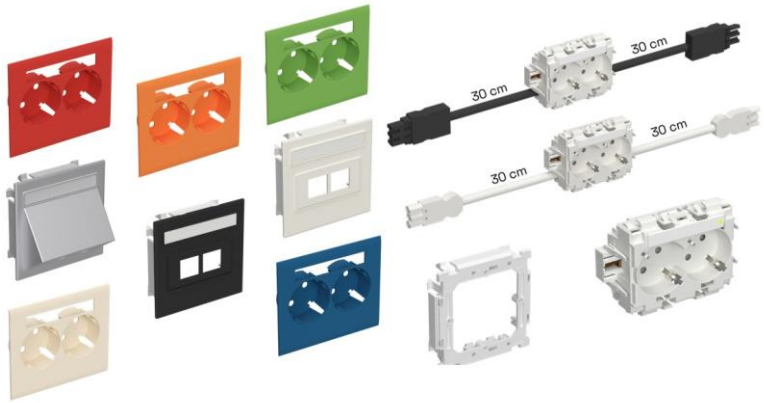
ENVIRONMENTAL PRODUCT DECLARATION

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

Wiring Devices
AB Wibe



EPD HUB, HUB-3332
Publishing date 25 May 2025, last updated on 25 May 2025, valid until 25 May 2030.

Life Cycle Assessment study has been performed in accordance with the requirements of EN 15804, EPD Hub PCR version 1.1 (5 Dec 2023) and JRC characterization factors EF 3.1.

Created with One Click LCA

GENERAL INFORMATION

MANUFACTURER

Manufacturer	AB Wibe
Address	Wibevägen 1 BOX 401 792 36 Mora Sweden
Contact details	inquiry-INT@wibe-group.com
Website	https://wibe-group.com/

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 1.1, 5 Dec 2023
Sector	Construction product
Category of EPD	Third party verified EPD
Parent EPD number	-
Scope of the EPD	Cradle to gate with options A4-A5 and modules C1-C4, D
EPD author	Manjunatha BC , Sustainability Leader, Wibe Group
EPD verification	Independent verification of this EPD and data, according to ISO 14025: ☐ Internal verification ☑ External verification
EPD verifier	Magaly González Vázquez, as an authorized verifier acting for EPD Hub Limited

This EPD is intended for business-to-business and/or business-to-consumer communication. 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	Wiring Devices
Additional labels	-
Product reference	-
Place(s) of raw material origin	-
Place of production	Changzhou City, China
Place(s) of installation and use	-
Period for data	01/01/2024-31/12/2024
Averaging in EPD	No averaging
Variation in GWP-fossil for A1-A3 (%)	-
GTIN (Global Trade Item Number)	-
NOBB (Norwegian Building Product Database)	-

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 Unit of Wiring Device
Declared unit mass	0.166 kg
GWP-fossil, A1-A3 ($kgCO_2e$)	2.13E+00
GWP-total, A1-A3 ($kgCO_2e$)	2.08E+00
Secondary material, inputs (%)	13
Secondary material, outputs (%)	77.5
Total energy use, A1-A3 (kWh)	7.87
Net freshwater use, A1-A3 (m^3)	0.02

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Wibe Group has nearly a 100-year-long history of continuous development. It started in Mora with Anders Wikstrand's invention of the hexagon shaped ladder. Today we are in a new and exciting development phase with renewed vigor and a desire to show what we can do together with our customers. With our four strong brands Wibe, Stago, Mita and Defem, we offer a complete, innovative range of cable supports and installation systems – for applications ranging from commercial buildings to extreme demanding industrial environments.

PRODUCT DESCRIPTION

An effective installation system in office spaces is crucial for maintaining efficiency and functionality.
Wibe Group proudly offers one of the most advanced and user-friendly wiring device ranges on the market. The WGX-W series —featuring power and data outlets, along with versatile installation boxes— is designed to make installation faster, easier, and more flexible than ever.
Every detail is meticulously engineered for a flawless fit, enabling seamless setup and effortless reconfiguration. Our signature click-to-install socket outlets redefine convenience—mount or dismantle them in seconds. Extension sockets can be connected from either side of the base socket, adding unmatched adaptability for any space.
And with double-insulated technology, there's no need for protective earth, ensuring safer, faster, and more reliable performance from day one.
The wiring devices are designed as part of a modular system, offering flexible installation options through ganged boxes and a wide range of compatible accessories. They are primarily composed of a polycarbonate (PC) compound (approximately 67%), along with bronze alloy (30%), brass alloy (2%), and small amounts of polybutylene terephthalate (PBT) and steel (around 1%). However, the exact material composition may vary depending on specific design requirements, technical specifications, environmental conditions, and application needs. Engineered for durability and safety, the devices carry an IP20 protection rating and have successfully passed the 850°C glow-wire fire hazard test in accordance with IEC 60695-2-11. The product complies with relevant safety and environmental directives, including LVD, RoHS, and WEEE, and is certified with both CE and Semko marks. It also conforms to the requirements of IEC 60670-1 standards.

Further information can be found at https://wibe-group.com/cable-support-systems/installation-systems/wiring-devices

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	32.73	Asia
Minerals	-	-
Fossil materials	67.27	Asia
Bio-based materials	-	-

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	0.0149

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 Unit of Wiring Device
Mass per declared unit	0.166 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	Deconstruction/ demolition	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.

The products are made from polycarbonate compound, bronze alloy, brass alloy, PBT compound, and steel. Various plastic granulates are used to manufacture different parts for the wiring devices through injection molding. The metal parts and screws are sourced directly from suppliers. The manufacturing process at the factory primarily involves drying, mixing, and injection molding. Once the parts are prepared, the factory assembles them into the main body of the wiring socket or uses a stamping method to join the components, with no additional manufacturing steps required.
The final product is then cooled and packaged. During the production of each unit (which weighs 0.166 kg), a manufacturing loss of 0.0007413 kg per unit is accounted for. The completed wiring devices are packed in cardboard boxes. The finished products are then shipped to the WIBE distribution center and directly to consumers as needed. The transportation distance between the manufacturing site and the factory has been taken into account, with raw materials being delivered by truck. Majority of all major production waste is sent to various recycling facilities.

The use of green energy in manufacturing is demonstrated through contractual instruments (GOs, RECs, etc.), and its use is ensured throughout the validity period of this EPD.

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.

The average transportation distance from the production plant to the building site is assumed to be 567 km by lorry, based on one year of delivery data and The distance is calculated based on the kilo meter(km) between the distribution center in Sweden to the retailer/building site. The vehicle capacity utilization factor is assumed to be 100%, meaning a full load. While this may vary in reality, the impact of transportation emissions on the total results is small, so the variation in load is considered negligible. To be conservative, empty returns are included in this study as implemented through an average load factor in the Ecoinvent transport datapoints. Transportation does not cause losses as product is packaged properly. The environmental impacts of product installation loss from installation into the building is not counted in this case because finished products like wiring sockets can hardly have any installation loss. There is environmental impact of 0.039 kg of waste packaging materials (A5). The impacts of material production, its processing and its disposal as installation waste are also included (in this case none). Installation resources are considered negligible.

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.

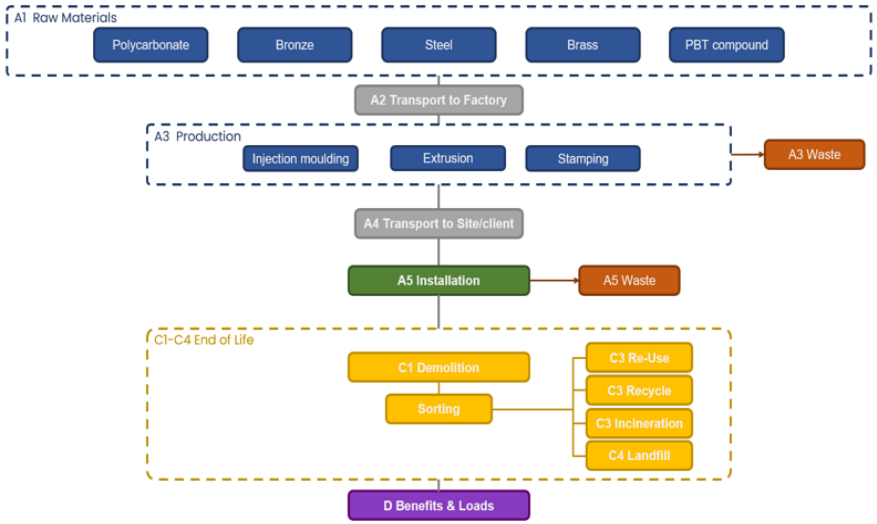
PRODUCT END OF LIFE (C1-C4, D)

Since the consumption of energy and natural resources is negligible for disassembling of the end-of-life product, the impacts of demolition are assumed zero (C1). It is assumed that the waste product is collected separately and transported to a waste treatment facility. Transportation distance to waste treatment plant is assumed to be 50 km and the transportation method is assumed to be lorry (C2). Module C3 accounts for energy and resource inputs for sorting and treating of materials for recycling. Landfilled materials are included in module C4. Due to the material recovery potential of the product, and material and energy recovery potential of its packaging, recycled raw materials lead to avoided virgin material production and the energy recovered from incineration replaces electricity and heat from primary sources. Benefits and loads from incineration and recycling are included in Module D.

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.

VALIDATION OF DATA

Data collection for production, transport, and packaging was conducted using time and site-specific information, as defined in the general information section on page 1 and 2. Upstream process calculations rely on generic data as defined in the Bibliography section. Manufacturer-provided specific and generic data were used for the product's manufacturing stage. The analysis was performed in One Click LCA EPD Generator, with the 'Cut-Off, EN 15804+A2' allocation method, and characterization factors according to EN 15804:2012+A2:2019/AC2021 and JRC EF 3.1.

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	Allocated by mass or volume
Packaging material	No allocation
Ancillary materials	Allocated by mass or volume
Manufacturing energy and waste	Allocated by mass or volume

AVERAGES AND VARIABILITY

Type of average	No averaging
Averaging method	Not applicable
Variation in GWP-fossil for A1-A3 (%)	-

This EPD is product and factory specific and does not contain average calculations.

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. The EPD Generator uses Ecoinvent v3.10.1 and One Click LCA databases as sources of environmental data. Allocation used in Ecoinvent 3.10.1 environmental data sources follow the methodology 'allocation, Cut-off, EN 15804+A2'.

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[1)]	kg CO_2e	1.32E+00	6.26E-02	6.97E-01	2.08E+00	1.25E-02	1.11E-01	MND	MND	MND	MND	MND	MND	MND	0.00E+00	8.96E-04	3.16E-03	3.61E-03	-2.49E-01
GWP – fossil	kg CO_2e	1.31E+00	6.25E-02	7.52E-01	2.13E+00	1.25E-02	1.39E-03	MND	MND	MND	MND	MND	MND	MND	0.00E+00	8.96E-04	3.59E-03	3.61E-03	-1.96E-01
GWP – biogenic	kg CO_2e	1.87E-03	8.54E-06	-5.63E-02	-5.45E-02	2.83E-06	1.10E-01	MND	MND	MND	MND	MND	MND	MND	0.00E+00	2.03E-07	-4.36E-04	-1.89E-06	-5.35E-02
GWP – LULUC	kg CO_2e	1.55E-03	3.32E-05	1.30E-03	2.88E-03	5.60E-06	7.65E-07	MND	MND	MND	MND	MND	MND	MND	0.00E+00	4.01E-07	5.26E-06	2.46E-07	1.12E-04
Ozone depletion pot.	kg $CFC\text{-}_{11}e$	2.85E-08	9.01E-10	2.22E-09	3.16E-08	1.85E-10	1.41E-11	MND	MND	MND	MND	MND	MND	MND	0.00E+00	1.32E-11	3.62E-11	1.01E-11	-3.58E-10
Acidification potential	mol H^+e	3.23E-02	1.67E-03	4.05E-03	3.80E-02	4.27E-05	5.63E-06	MND	MND	MND	MND	MND	MND	MND	0.00E+00	3.05E-06	2.49E-05	2.72E-06	-1.50E-03
EP-freshwater[2)]	kg Pe	2.53E-03	2.26E-06	1.54E-04	2.68E-03	9.74E-07	3.11E-07	MND	MND	MND	MND	MND	MND	MND	0.00E+00	6.97E-08	1.25E-06	3.92E-08	-8.71E-05
EP-marine	kg Ne	2.20E-03	4.17E-04	9.25E-04	3.54E-03	1.40E-05	9.13E-06	MND	MND	MND	MND	MND	MND	MND	0.00E+00	1.00E-06	2.54E-04	8.00E-06	-2.32E-04
EP-terrestrial	mol Ne	2.80E-02	4.63E-03	9.27E-03	4.19E-02	1.53E-04	1.78E-05	MND	MND	MND	MND	MND	MND	MND	0.00E+00	1.09E-05	7.08E-05	1.11E-05	-2.40E-03
POCP ("smog")[3)]	kg NMVOCe	9.29E-03	1.27E-03	2.51E-03	1.31E-02	6.29E-05	6.82E-06	MND	MND	MND	MND	MND	MND	MND	0.00E+00	4.50E-06	2.23E-05	4.73E-06	-7.02E-04
ADP-minerals & metals[4)]	kg Sbe	4.40E-04	7.27E-08	6.42E-07	4.41E-04	3.49E-08	9.00E-09	MND	MND	MND	MND	MND	MND	MND	0.00E+00	2.50E-09	9.21E-08	8.29E-10	-2.89E-08
ADP-fossil resources	MJ	2.14E+01	7.80E-01	6.79E+00	2.89E+01	1.82E-01	1.27E-02	MND	MND	MND	MND	MND	MND	MND	0.00E+00	1.30E-02	3.95E-02	8.63E-03	-1.69E+00
Water use[5)]	m^3e depr.	5.49E-01	2.38E-03	9.13E-02	6.43E-01	8.97E-04	3.49E-04	MND	MND	MND	MND	MND	MND	MND	0.00E+00	6.42E-05	7.28E-04	3.98E-05	8.15E-03

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.

ADDITIONAL (OPTIONAL) 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
Particulate matter	Incidence	1.11E-07	2.31E-09	5.76E-08	1.71E-07	1.25E-09	7.56E-11	MND	MND	MND	MND	MND	MND	MND	0.00E+00	8.97E-11	5.65E-10	6.17E-11	-2.59E-08
Ionizing radiation[6]	kBq U235e	8.80E-02	3.90E-04	4.11E-03	9.25E-02	1.58E-04	8.34E-05	MND	MND	MND	MND	MND	MND	MND	0.00E+00	1.13E-05	1.08E-04	8.12E-06	-1.05E-03
Ecotoxicity (freshwater)	CTUe	6.34E+01	6.38E-02	2.16E+00	6.57E+01	2.57E-02	4.56E-02	MND	MND	MND	MND	MND	MND	MND	0.00E+00	1.84E-03	1.74E-01	1.11E-02	-4.35E-01
Human toxicity, cancer	CTUh	3.77E-09	1.30E-11	8.74E-11	3.87E-09	2.07E-12	1.01E-12	MND	MND	MND	MND	MND	MND	MND	0.00E+00	1.48E-13	5.79E-12	1.83E-13	-3.54E-11
Human tox. non-cancer	CTUh	3.04E-07	2.28E-10	4.55E-09	3.09E-07	1.18E-10	5.39E-11	MND	MND	MND	MND	MND	MND	MND	0.00E+00	8.42E-12	1.41E-10	3.45E-11	-1.19E-09
SQP[7]	-	1.24E+01	1.48E-01	4.25E+00	1.68E+01	1.83E-01	9.40E-03	MND	MND	MND	MND	MND	MND	MND	0.00E+00	1.31E-02	7.49E-02	1.97E-02	-5.10E+00

6) EN 15804+A2 disclaimer for Ionizing radiation, human health. 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 due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator; 7) SQP = Land use related impacts/soil quality.

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[8]	MJ	2.16E+00	6.52E-03	7.24E-01	2.89E+00	2.49E-03	-5.55E-01	MND	MND	MND	MND	MND	MND	MND	0.00E+00	1.78E-04	4.01E-03	1.28E-04	-9.41E-01
Renew. PER as material	MJ	0.00E+00	0.00E+00	4.98E-01	4.98E-01	0.00E+00	-4.98E-01	MND	MND	MND	MND	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.42E-01
Total use of renew. PER	MJ	2.16E+00	6.52E-03	1.22E+00	3.39E+00	2.49E-03	-1.05E+00	MND	MND	MND	MND	MND	MND	MND	0.00E+00	1.78E-04	4.01E-03	1.28E-04	-4.99E-01
Non-re. PER as energy	MJ	1.81E+01	7.80E-01	6.59E+00	2.54E+01	1.82E-01	1.27E-02	MND	MND	MND	MND	MND	MND	MND	0.00E+00	1.30E-02	-1.20E+00	-1.15E+00	-1.69E+00
Non-re. PER as material	MJ	0.00E+00	0.00E+00	4.04E-03	4.04E-03	0.00E+00	-4.04E-03	MND	MND	MND	MND	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E+00
Total use of non-re. PER	MJ	1.81E+01	7.80E-01	6.59E+00	2.54E+01	1.82E-01	8.69E-03	MND	MND	MND	MND	MND	MND	MND	0.00E+00	1.30E-02	-1.20E+00	-1.15E+00	-4.47E-01
Secondary materials	kg	2.15E-02	3.67E-04	3.01E-02	5.20E-02	7.73E-05	2.10E-05	MND	MND	MND	MND	MND	MND	MND	0.00E+00	5.53E-06	1.11E-04	2.98E-06	2.36E-02
Renew. secondary fuels	MJ	1.58E-03	1.22E-06	4.28E-03	5.87E-03	9.82E-07	1.18E-07	MND	MND	MND	MND	MND	MND	MND	0.00E+00	7.03E-08	2.01E-06	5.66E-08	-1.14E-04
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^3	1.70E-02	6.05E-05	2.12E-03	1.91E-02	2.68E-05	-7.26E-06	MND	MND	MND	MND	MND	MND	MND	0.00E+00	1.92E-06	2.60E-05	-1.09E-04	1.88E-04

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	1.98E-01	1.07E-03	9.06E-02	2.89E-01	3.08E-04	2.16E-04	MND	MND	MND	MND	MND	MND	MND	0.00E+00	2.20E-05	3.95E-04	1.44E-05	-1.47E-02
Non-hazardous waste	kg	1.07E+01	1.52E-02	7.23E-01	1.15E+01	5.69E-03	2.45E-02	MND	MND	MND	MND	MND	MND	MND	0.00E+00	4.08E-04	7.84E-02	1.48E-01	-3.11E-01
Radioactive waste	kg	2.23E-05	9.52E-08	9.29E-07	2.34E-05	3.87E-08	2.12E-08	MND	MND	MND	MND	MND	MND	MND	0.00E+00	2.77E-09	2.68E-08	1.99E-09	-1.73E-07

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	2.63E-02	2.63E-02	0.00E+00	3.20E-02	MND	MND	MND	MND	MND	MND	MND	0.00E+00	0.00E+00	7.54E-02	0.00E+00	0.00E+00
Materials for energy rec	kg	0.00E+00	0.00E+00	3.19E-03	3.19E-03	0.00E+00	0.00E+00	MND	MND	MND	MND	MND	MND	MND	0.00E+00	0.00E+00	5.32E-02	0.00E+00	0.00E+00
Exported energy	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.68E-02	MND	MND	MND	MND	MND	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy – Electricity	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.00E-03	MND	MND	MND	MND	MND	MND	MND	0.00E+00	0.00E+00	2.48E-01	0.00E+00	0.00E+00
Exported energy – Heat	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.80E-03	MND	MND	MND	MND	MND	MND	MND	0.00E+00	0.00E+00	1.41E+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_2e	1.31E+00	6.22E-02	7.51E-01	2.12E+00	1.24E-02	5.31E-03	MND	MND	MND	MND	MND	MND	MND	0.00E+00	8.91E-04	4.00E-03	3.45E-03	-1.95E-01
Ozone depletion Pot.	kg CFC_{-11}e	2.54E-08	7.15E-10	2.40E-09	2.86E-08	1.47E-10	1.15E-11	MND	MND	MND	MND	MND	MND	MND	0.00E+00	1.06E-11	2.99E-11	8.04E-12	-3.04E-10
Acidification	kg SO_2e	2.81E-02	1.33E-03	3.28E-03	3.28E-02	3.26E-05	4.30E-06	MND	MND	MND	MND	MND	MND	MND	0.00E+00	2.33E-06	1.97E-05	2.02E-06	-1.27E-03
Eutrophication	kg PO_4^3e	4.34E-03	1.49E-04	4.61E-04	4.95E-03	7.94E-06	6.48E-06	MND	MND	MND	MND	MND	MND	MND	0.00E+00	5.68E-07	2.61E-05	1.23E-06	-1.54E-04
POCP (“smog”)	kg C_2H_4e	1.45E-03	6.67E-05	1.91E-04	1.71E-03	2.90E-06	1.28E-06	MND	MND	MND	MND	MND	MND	MND	0.00E+00	2.08E-07	1.89E-06	6.83E-07	-7.69E-05
ADP-elements	kg Sbe	4.39E-04	7.16E-08	6.34E-07	4.40E-04	3.40E-08	8.82E-09	MND	MND	MND	MND	MND	MND	MND	0.00E+00	2.44E-09	9.17E-08	8.06E-10	-3.17E-08
ADP-fossil	MJ	2.01E+01	7.74E-01	6.72E+00	2.76E+01	1.79E-01	1.13E-02	MND	MND	MND	MND	MND	MND	MND	0.00E+00	1.28E-02	3.78E-02	8.50E-03	-1.68E+00

ENVIRONMENTAL IMPACTS – GWP-GHG - THE INTERNATIONAL EPD SYSTEM

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-GHG[9)]	kg CO_2e	1.31E+00	6.26E-02	7.54E-01	2.13E+00	1.25E-02	1.40E-03	MND	MND	MND	MND	MND	MND	MND	0.00E+00	8.96E-04	3.59E-03	3.61E-03	-1.95E-01

9) This indicator includes all greenhouse gases excluding biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product as defined by IPCC AR 5 (IPCC 2013). In addition, the characterisation factors for the flows - CH4 fossil, CH4 biogenic and Dinitrogen monoxide - were updated in line with the guidance of IES PCR 1.2.5 Annex 1. This indicator is identical to the GWP-total of EN 15804:2012+A2:2019 except that the characterization factor for biogenic CO2 is set to zero.

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

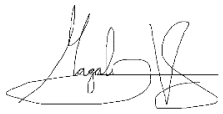
I hereby confirm that, following detailed examination, I have not established any relevant deviations by the studied Environmental Product Declaration (EPD), its LCA and project report, in terms of the data collected and used in the LCA calculations, the way the LCA-based calculations have been carried 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.

Magaly González Vázquez, as an authorized verifier acting for EPD Hub Limited
25.05.2025



VERIFIED ISO 14025