ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025

Downlight IZO Switch 6,5W LED

Rexel Sverige AB

EPD HUB, HUB-3668

Published on 27.07.2025, last updated on 27.07.2025, valid until 26.07.2030

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

Created with One Click LCA

GENERAL INFORMATION

MANUFACTURER

Manufacturer	Rexel Sverige AB
Address	Prästgårdsgränd 4, 125 23 Älvsjö, Sweden
Contact details	info@rexel.se
Website	www.rexel.se

EPD STANDARDS, SCOPE AND VERIFICATION

Program operator	EPD Hub, hub@epdhub.com
Reference standard	EN 15804+A2 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	David Molander, West Coast Lighting WCL AB
EPD verification	Independent verification of this EPD and data, according to ISO 14025: ☐ Internal verification ☑ External verification
EPD verifier	Sarah Curpen, 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	Zebra Downlight IZO Switch 6,5W LED
Additional labels	N/A
Product reference	7477452, ZDLIZO1V, ZDLIZO1B, ZDLIZO1BS, ZDLIZO1D, ZDLIZO1DW, ZDLIZO1Z
Place(s) of raw material origin	China
Place of production	Shenzhen, China
Place(s) of installation and use	Sweden
Period for data	12/2023 - 12/2024
Averaging in EPD	No averaging
Variation in GWP-fossil for A1-A3	- %

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 unit of Downlight IZO Switch
Declared unit mass	0,2085 kg
GWP-fossil, A1-A3 ($kgCO_2e$)	6,91E+00
GWP-total, A1-A3 ($kgCO_2e$)	6,76E+00
Secondary material, inputs (%)	10.7
Secondary material, outputs (%)	56.7
Total energy use, A1-A3 (kWh)	20.8
Net freshwater use, A1-A3 (m^3)	0.03

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Zebra specializes in lighting solutions, drawing inspiration from the unique qualities from our Scandinavian light to create products that are both innovative and sustainable. With a vision rooted in energy efficiency and modern Scandinavian design, Zebra offers outdoor and indoor lighting that enhances living and working environments. The brand is distributed and sold by Rexel, a global distributor of products and services for the electrical industry. Being part of Rexel enables Zebra to provide tailored solutions that meet diverse customer needs while maintaining a strong commitment to environmental responsibility.

PRODUCT DESCRIPTION

Downlight IZO Switch is an easy-to-install and low-profile downlight. Selectable color temperature in two steps via DIP switch 2700K or 3000K. The luminaire is suitable for both new installations and renovations. Approved for installation directly in insulation. Supplied complete with driver for leading and trailing edge dimming. The luminaire is IP44 rated (the driver is rated IP20).

Further information can be found at www.rexel.se.

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	58	Asia
Minerals	-	
Fossil materials	42	Asia
Bio-based materials	-	

BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

Biogenic carbon content in product, kg C	-
Biogenic carbon content in packaging, kg C	0,044

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit VP-011	1 unit of Downlight IZO Switch
Mass per declared unit VP-012	0,2085 kg
Functional unit	1 unit; 2000 hours per year consuming 6,5 Watts for 25 years
Reference service life	25

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	x	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 product is made of metals, plastics and electronic components. Materials for the driver and Kelvin switch are included, as a part of the luminaire. The materials are transported to the factory where Rexel Sverige AB's product is manufactured and assembled. Ancillary materials needed within the manufacturing and assembly process are considered neglected. The finished product is packaged in cardboard before being sent to the distribution center in Sweden. There the packages are sorted on wooden pallets and wrapped in polyethylene before being sent to the installation site.

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 distance is defined according to the PCR. The average transportation distance from production facility to installation site is 422 km by lorry and 25 262 km by container ship. Vehicle capacity utilization volume factor is assumed to be 100% which means full load. In reality, it may vary but as role of transportation emissions in total results is small, the variety in load is assumed to be negligible. Empty returns are not taken into account as it is assumed that return trip is used by the transportation company to serve the needs of other clients. Transportation does not cause losses as products are packaged properly. Also, volume capacity utilization factor is assumed to be 100 % for the nested packaged products. Transportation impacts that occur from delivery of the product cover direct exhaust emissions of fuel, environmental impacts of fuel production, as well as related infrastructure emissions. Environmental impacts from installation into the building include waste packaging materials (A5) and release of biogenic carbon dioxide from wood pallets and cardboard. The impacts of energy consumption and the used ancillary materials during installation are considered negligible.

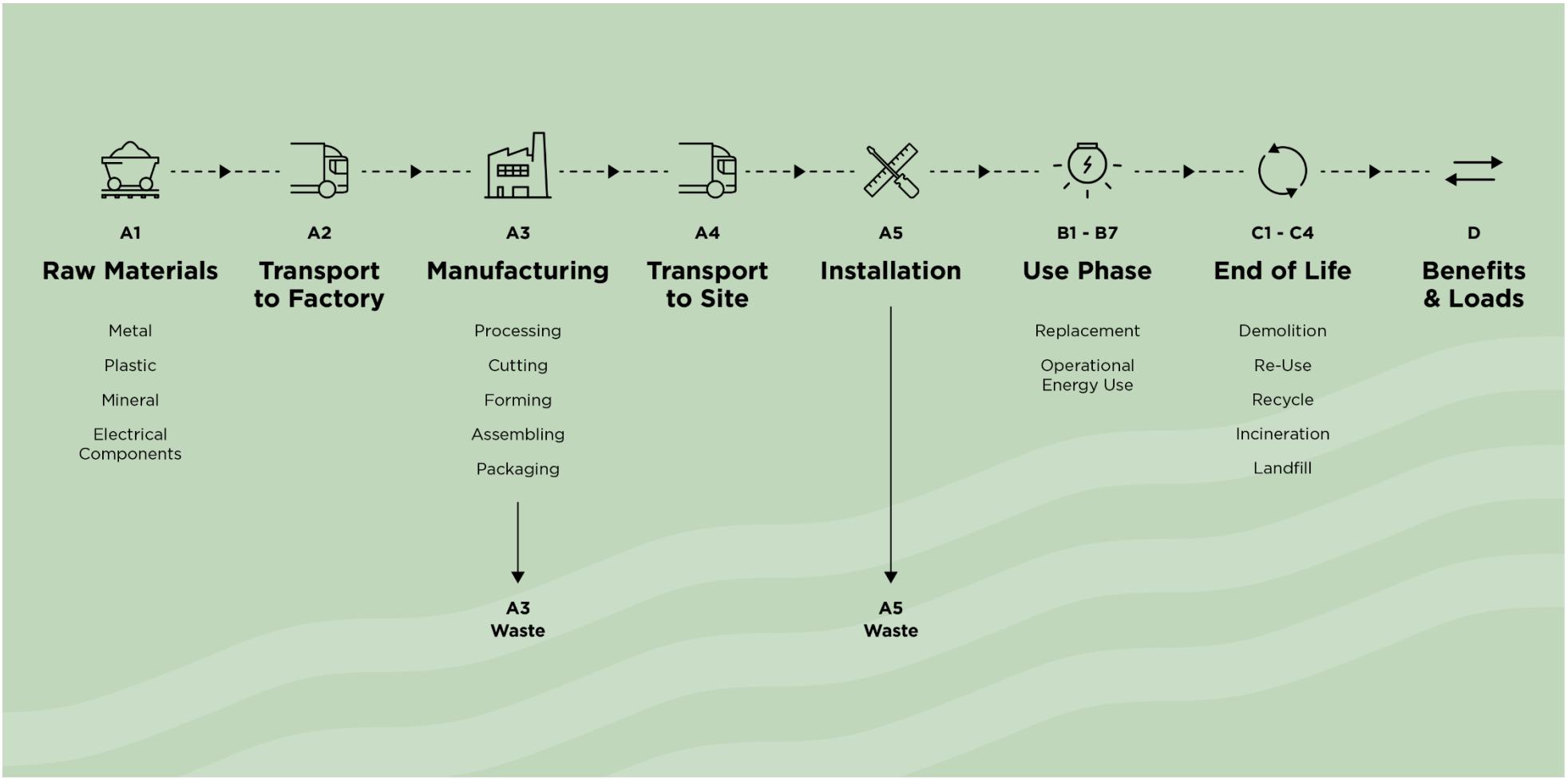
PRODUCT USE AND MAINTENANCE (B1-B7)

During the use phase, the product consumes electricity from Sweden's electricity grid mix (B6). Impacts due to electricity production include direct emissions to air, transformation and transmission losses. The lifetime of the product is assumed to be 50,000 hours, which corresponds to 2,000 hours per year for 25 years. Air, soil, and water impacts during the use phase have not been studied.

PRODUCT END OF LIFE (C1-C4, D)

Consumption of energy and natural resources in demolition process is assumed to be negligible. It is assumed that the waste is collected separately and transported to the waste treatment center. Transportation distance to treatment is assumed as 50 km and the transportation method is assumed to be lorry (C2). According to EN 50693:2019, the sequence of treatment operations occurring to the product shall include de-pollution, fractions separation and preparation (dismantling, crushing, shredding, sorting), recycling, other material recovery, energy recovery and disposal. In this study, the default values from table G.4 of EN 50693 is used for treating materials in different waste treatment methods. Due to the material and energy recovery potential of parts in the lighting system, the end-of-life product is converted into recycled raw materials, while the energy recovered from incineration displaces electricity and heat production (D). The wooden pallet and other plastic packaging used during transportation is also incinerated for energy recovery and/or recycled. The benefits and loads of incineration and recycling are included in Module D.

MANUFACTURING PROCESS



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 material	No allocation
Ancillary materials	No allocation
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.

ENVIRONMENTAL IMPACT DATA

CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2

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	3,94E+00	8,53E-02	2,73E+00	6,76E+00	1,61E-02	1,64E-01	MND	MND	MND	MND	MND	4,78E-01	MND	0,00E+00	4,78E-03	1,13E-01	4,02E-03	-8,34E-01
GWP – fossil	kg CO_2e	3,94E+00	8,52E-02	2,89E+00	6,91E+00	1,61E-02	3,88E-03	MND	MND	MND	MND	MND	4,30E-01	MND	0,00E+00	4,78E-03	1,13E-01	4,02E-03	-7,12E-01
GWP – biogenic	kg CO_2e	0,00E+00	0,00E+00	-1,60E-01	-1,60E-01	0,00E+00	1,60E-01	MND	MND	MND	MND	MND	0,00E+00	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-1,09E-01
GWP – LULUC	kg CO_2e	3,68E-03	4,45E-05	3,23E-03	6,95E-03	5,78E-06	3,15E-06	MND	MND	MND	MND	MND	4,83E-02	MND	0,00E+00	2,13E-06	5,07E-06	4,21E-07	-1,30E-02
Ozone depletion pot.	kg CFC_{-11}e	3,94E-08	1,26E-09	5,88E-09	4,66E-08	3,21E-10	4,28E-11	MND	MND	MND	MND	MND	1,29E-08	MND	0,00E+00	6,97E-11	5,19E-11	1,30E-11	-6,76E-09
Acidification potential	mol H^+e	2,79E-02	2,21E-03	1,46E-02	4,47E-02	3,35E-05	1,71E-05	MND	MND	MND	MND	MND	5,26E-03	MND	0,00E+00	1,61E-05	4,63E-05	3,65E-06	-6,25E-03
EP-freshwater[2)]	kg Pe	2,57E-03	3,12E-06	5,69E-04	3,14E-03	1,08E-06	9,11E-07	MND	MND	MND	MND	MND	3,80E-04	MND	0,00E+00	3,71E-07	1,88E-06	6,07E-08	-9,86E-04
EP-marine	kg Ne	4,76E-03	5,50E-04	3,46E-03	8,77E-03	8,05E-06	2,46E-05	MND	MND	MND	MND	MND	7,76E-04	MND	0,00E+00	5,26E-06	1,58E-05	7,13E-06	-1,03E-03
EP-terrestrial	mol Ne	5,21E-02	6,11E-03	3,56E-02	9,38E-02	8,69E-05	5,93E-05	MND	MND	MND	MND	MND	7,92E-03	MND	0,00E+00	5,72E-05	1,55E-04	1,48E-05	-1,19E-02
POCP ("smog")[3)]	kg NMVOCe	1,58E-02	1,67E-03	9,31E-03	2,68E-02	5,58E-05	2,12E-05	MND	MND	MND	MND	MND	2,11E-03	MND	0,00E+00	2,34E-05	4,25E-05	5,62E-06	-3,68E-03
ADP-minerals & metals[4)]	kg Sbe	9,53E-05	1,09E-07	1,82E-06	9,73E-05	5,36E-08	2,07E-08	MND	MND	MND	MND	MND	5,16E-05	MND	0,00E+00	1,41E-08	1,68E-07	1,20E-09	-1,50E-05
ADP-fossil resources	MJ	4,41E+01	1,06E+00	2,67E+01	7,18E+01	2,27E-01	3,94E-02	MND	MND	MND	MND	MND	5,75E+01	MND	0,00E+00	6,86E-02	5,08E-02	1,12E-02	-7,48E+00
Water use[5)]	m^3e depr.	8,10E-01	3,28E-03	3,43E-01	1,16E+00	1,13E-03	1,12E-03	MND	MND	MND	MND	MND	3,17E+00	MND	0,00E+00	3,33E-04	3,73E-03	1,50E-04	-4,82E-01

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

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	3,27E-07	3,02E-09	2,24E-07	5,54E-07	1,19E-09	2,53E-10	MND	MND	MND	MND	MND	4,38E-08	MND	0,00E+00	4,46E-10	5,35E-10	7,68E-11	-7,95E-08
Ionizing radiation[6)]	kBq U235e	1,28E-01	5,75E-04	7,09E-02	1,99E-01	2,92E-04	2,06E-04	MND	MND	MND	MND	MND	4,13E+00	MND	0,00E+00	5,88E-05	2,27E-04	1,25E-05	-4,55E-02
Ecotoxicity (freshwater)	CTUe	5,46E+01	8,92E-02	7,92E+00	6,26E+01	3,01E-02	9,65E-02	MND	MND	MND	MND	MND	7,20E+00	MND	0,00E+00	1,00E-02	5,17E-02	8,39E-01	-1,04E+01
Human toxicity, cancer	CTUh	2,63E-09	1,76E-11	3,21E-10	2,96E-09	2,70E-12	2,56E-12	MND	MND	MND	MND	MND	8,48E-10	MND	0,00E+00	7,96E-13	6,59E-12	2,60E-13	-7,83E-10
Human tox. non-cancer	CTUh	6,96E-08	3,19E-10	1,65E-08	8,64E-08	1,43E-10	1,37E-10	MND	MND	MND	MND	MND	4,43E-08	MND	0,00E+00	4,40E-11	3,08E-10	4,51E-11	-6,50E-09
SQP[7)]	-	1,26E+01	1,64E-01	1,50E+01	2,78E+01	1,37E-01	3,33E-02	MND	MND	MND	MND	MND	1,35E+01	MND	0,00E+00	6,02E-02	7,88E-02	2,31E-02	-9,75E+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	3,45E+00	9,39E-03	1,94E+00	5,40E+00	3,97E-03	-1,71E+00	MND	MND	MND	MND	MND	3,94E+01	MND	0,00E+00	9,44E-04	6,41E-03	1,94E-04	-6,20E+00
Renew. PER as material	MJ	0,00E+00	0,00E+00	1,41E+00	1,41E+00	0,00E+00	-1,41E+00	MND	MND	MND	MND	MND	0,00E+00	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,04E+00
Total use of renew. PER	MJ	3,45E+00	9,39E-03	3,34E+00	6,81E+00	3,97E-03	-3,12E+00	MND	MND	MND	MND	MND	3,94E+01	MND	0,00E+00	9,44E-04	6,41E-03	1,94E-04	-5,16E+00
Non-re. PER as energy	MJ	4,16E+01	1,06E+00	2,67E+01	6,94E+01	2,27E-01	3,57E-02	MND	MND	MND	MND	MND	5,75E+01	MND	0,00E+00	6,86E-02	-2,28E+00	-8,36E-01	-7,67E+00
Non-re. PER as material	MJ	2,42E+00	0,00E+00	1,50E-02	2,43E+00	0,00E+00	-3,89E-02	MND	MND	MND	MND	MND	0,00E+00	MND	0,00E+00	0,00E+00	-1,75E+00	-6,45E-01	7,99E-01
Total use of non-re. PER	MJ	4,41E+01	1,06E+00	2,67E+01	7,18E+01	2,27E-01	-3,16E-03	MND	MND	MND	MND	MND	5,75E+01	MND	0,00E+00	6,86E-02	-4,03E+00	-1,48E+00	-6,87E+00
Secondary materials	kg	2,24E-02	5,04E-04	6,30E-02	8,59E-02	1,05E-04	5,21E-05	MND	MND	MND	MND	MND	1,12E-02	MND	0,00E+00	2,97E-05	1,14E-04	3,91E-06	1,71E-01
Renew. secondary fuels	MJ	1,57E-03	1,84E-06	2,24E-02	2,39E-02	1,33E-06	3,33E-07	MND	MND	MND	MND	MND	5,10E-05	MND	0,00E+00	3,78E-07	2,20E-06	7,32E-08	-2,13E-05
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	0,00E+00	MND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of net fresh water	m^3	1,97E-02	8,27E-05	8,13E-03	2,79E-02	3,09E-05	-5,46E-05	MND	MND	MND	MND	MND	7,54E-02	MND	0,00E+00	9,81E-06	3,98E-05	-1,03E-04	-1,04E-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	6,67E-01	1,45E-03	3,60E-01	1,03E+00	3,29E-04	5,36E-04	MND	MND	MND	MND	MND	5,87E-02	MND	0,00E+00	1,17E-04	1,34E-03	5,50E-05	-2,17E-01
Non-hazardous waste	kg	7,87E+00	2,11E-02	2,64E+00	1,05E+01	6,95E-03	1,20E-01	MND	MND	MND	MND	MND	1,94E+00	MND	0,00E+00	2,18E-03	5,82E-02	1,46E-01	-1,19E+00
Radioactive waste	kg	3,15E-05	1,41E-07	1,66E-05	4,83E-05	7,26E-08	5,22E-08	MND	MND	MND	MND	MND	8,81E-04	MND	0,00E+00	1,44E-08	5,71E-08	3,06E-09	-9,53E-06

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	0,00E+00	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	2,65E-03	2,65E-03	0,00E+00	7,50E-02	MND	MND	MND	MND	MND	0,00E+00	MND	0,00E+00	0,00E+00	1,18E-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	0,00E+00	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	5,08E-03	5,08E-03	0,00E+00	8,35E-02	MND	MND	MND	MND	MND	0,00E+00	MND	0,00E+00	0,00E+00	0,00E+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	3,93E+00	8,48E-02	2,87E+00	6,89E+00	1,60E-02	1,24E-02	MND	MND	MND	MND	MND	4,81E-01	MND	0,00E+00	4,75E-03	1,13E-01	3,91E-03	-7,14E-01
Ozone depletion Pot.	kg $CFC_{-11}e$	3,63E-08	9,99E-10	6,64E-09	4,39E-08	2,55E-10	3,49E-11	MND	MND	MND	MND	MND	1,11E-08	MND	0,00E+00	5,56E-11	4,33E-11	1,04E-11	-5,73E-09
Acidification	kg SO_2e	2,31E-02	1,76E-03	1,18E-02	3,67E-02	2,69E-05	1,29E-05	MND	MND	MND	MND	MND	4,41E-03	MND	0,00E+00	1,23E-05	3,56E-05	2,70E-06	-5,15E-03
Eutrophication	kg PO_4^3e	5,70E-03	1,96E-04	1,89E-03	7,79E-03	6,80E-06	1,45E-05	MND	MND	MND	MND	MND	5,47E-04	MND	0,00E+00	3,00E-06	7,29E-06	1,50E-06	-5,69E-04
POCP (“smog”)	kg C_2H_4e	1,71E-03	8,84E-05	6,90E-04	2,48E-03	2,85E-06	3,04E-06	MND	MND	MND	MND	MND	2,38E-04	MND	0,00E+00	1,10E-06	2,32E-06	5,93E-07	-4,64E-04
ADP-elements	kg Sbe	9,40E-05	1,07E-07	1,80E-06	9,60E-05	5,24E-08	2,02E-08	MND	MND	MND	MND	MND	5,16E-05	MND	0,00E+00	1,38E-08	1,67E-07	1,15E-09	-1,48E-05
ADP-fossil	MJ	4,20E+01	1,05E+00	2,54E+01	6,85E+01	2,22E-01	3,58E-02	MND	MND	MND	MND	MND	3,03E+00	MND	0,00E+00	6,77E-02	4,71E-02	1,10E-02	-6,86E+00

ENVIRONMENTAL IMPACTS – GWP-GHG

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	3,94E+00	8,53E-02	2,89E+00	6,92E+00	1,61E-02	3,89E-03	MND	MND	MND	MND	MND	4,78E-01	MND	0,00E+00	4,78E-03	1,13E-01	4,02E-03	-7,25E-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.

Sarah Curpen, as an authorized verifier acting for EPD Hub Limited
27.07.2025