





# **ENVIRONMENTAL PRODUCT DECLARATION**

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025

### EPD HUB, HUB-3622

Published on 10.07.2025, last updated on 10.07.2025, valid until 10.07.2030

# High Bay 150W /150WD

Designlight Scandinavian AB



#### **MANUFACTURER AND SITE**

Manufacturer	Designlight Scandinavian AB
Address	Toffelvägen 1, 342 60, Moheda, SE
Contact details	info@designlight.nu
Website	https://designlight.nu/
Place of production	Shenzhen, China
Place(s) of raw material origin	China
Place(s) of installation and use	Sweden
Period for data	Calendar year 2023

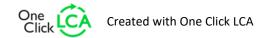
# **EPD STANDARDS, SCOPE AND VERIFICATION**

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Program operator	EPD Hub, hub@epdhub.com
Reference standard	EN 15804:2012+A2:2019/AC:2021 and ISO 14025
PCR	EPD Hub Core PCR Version 1.1, 5 Dec 2023
Sector	Electrical product
Category of EPD	Third party verified EPD
Parent EPD number	-
Scope of the EPD	Cradle to gate with options, A4-B7, and modules C1-C4, D
EPD author	Susanne Feldt. Designlight Scandinavian AB
EPD verification	Independent verification of this EPD and data, according to ISO 14025:  ☐ Internal verification ☑ External verification
EPD verifier	Imane Uald Lamkaddam as an authorized verifier for EPD Hub

## **PRODUCT SPECIFICATION**

Product name	High Bay 150W /150WD
Product number / reference	HB-150W /HB-150WD
Product description	HB-150W /150WD High Bay is a lighting luminaire for factories, warehouses, industrial workshops, etc Including LED light source 4000 Kelvin. 21086lm. Switch on/off alternatively 0-10V. Casambi compatible at 0-10V. With Dali (HB-150WD) Direct light with 120° beam angle. IP65. Impact resistance IK08 Cast aluminum housing with Akzo Nobel powder coating and large heatsink for more efficient cooling of diodes. Tempered glass.
GTIN (Global Trade Item Number)	-
NOBB (Norwegian Building Product Database)	-
A1-A3 Specific data (%)	1,36

This EPD is intended for business-to-business and/or business-to-consumer communication. Life Cycle Assessment study has been performed in accordance with the requirements of EN 15804, EPD Hub PCR version 1.1 (5 Decr 2023) and JRC characterization factors EF 3.1. 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 CLASSIFICATION**

Declared operating voltage, Volt	230
Light source color temperature, Kelvin	4000
Protection index for water and dust (IP)	65
Impact resistance index (IK)	8
Luminous flux, Lumen	21086
Electrical power, Watt	150
Luminous efficiency, Lm/W	146
Additional characteristic	For more detailed specifications, please visit our website: https://designlight.nu/produkt/hb-150w-high-bay/ https://designlight.nu/produkt/hb-150wd-high-bay/

#### **ABOUT THE MANUFACTURER**

Designlight Scandinavian is a company with headquarters and central warehouse located in Moheda, in the middle of Småland. Sweden. We specialize in supplying high quality lighting at competitive prices to electricians, property companies and industrial customers.

#### Wide selection

Our wide range includes different types of lighting solutions that meet the highest quality standards in the Nordics, both in terms of light quality and ease of installation. We always strive to offer reliable and efficient products that meet our customers needs and expectations.

## Tailored solutions

In addition to offering standard products, we are proud to be able to offer tailor-made solutions for various manufacturers in the kitchen, retail and hotel industries. We understand the importance of having lighting that is perfectly suited to specific environments and help our customers design and produce customized lighting solutions that enhance their products and spaces.

#### Experience

Our team of experienced and dedicated employees is always ready to provide professional advice and support to our customers. We strive to build long-term relationships and deliver outstanding customer service. Reliability

We at Designlight are proud to be a reliable partner for electricians, real estate companies and industrial customers. We are convinced that our quality lighting and customized solutions can contribute to creating attractive and functional environments.

#### **ENVIRONMENTAL DATA SUMMARY**

Declared unit	1 unit
Declared unit mass, kg	3,3
Mass of packaging, kg	0,53
Functional unit	Provide lighting that delivers an outgoing artificial luminous flux of 1,000 lumens during a reference lifetime of 103 000 hours
Reference service life (years)	10
Assigned lifetime (hours)	103000
GWP-total, A1-A3 (kg CO₂e)	6,50E+01
GWP-fossil, A1-A3 (kg CO₂e)	6,55E+01
Secondary material, inputs (%)	5,39
Secondary material, outputs (%)	58,7
Total energy use, A1-A3 (kWh)	215
Net freshwater use, A1-A3 (m³)	2,95E-01





# LIFE CYCLE ASSESSMENT

#### **SYSTEM BOUNDARY**

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

Assembly stage Product stage								Use stage					Elia ol lila stable	Find of life stage		Beyond the system boundaries
A1	A2	А3	A4	A5	B1	В2	В3	B4	В5	В6	В7	C1	C2	СЗ	C4	D
×	×	×	×	×	MND	MND	MND	MND	MND	×	MND	×	×	×	×	×
Raw materials	Transport	Manufacturing	Transport	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy	Operational water use	Deconstr./demo.	Transport	Waste processing	Disposal	Reuse, Recovery, Recycling

Modules not declared = MND.

#### **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. 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.

The production of capital equipment, construction activities, and infrastructure, maintenance and operation of capital equipment, personnel-related activities, energy and water use related to company management and sales activities are excluded.

#### **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/AC:2021 and JRC EF 3.1.

#### **ALLOCATION, ESTIMATES AND ASSUMPTIONS**

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	No allocation
Ancillary materials	Allocated by mass
Manufacturing energy and waste	Allocated by mass

#### **PRODUCT & MANUFACTURING SITES GROUPING**

Type of grouping	No grouping
Grouping method	Not applicable
Variation in GWP- fossil for A1-A3, %	

This EPD is product and factory specific.

#### PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass- %	Material origin
Metals	71,99	China
Minerals	1,827	China
Fossil materials	25,763	China
Bio-based materials	0	China
Electronic parts	0,42	China

### **BIOGENIC CARBON CONTENT**

Product's biogenic carbon content at the factory gate

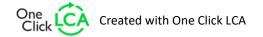
Biogenic carbon content in product, kg C	0
Biogenic carbon content in packaging, kg C	0,10

### **SUBSTANCES, REACH - VERY HIGH CONCERN**

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

### LCA SOFTWARE AND BIBLIOGRAPHY

The LCA and EPD have been prepared according to the reference standards, EN 50693, and ISO 14040/14044. Ecoinvent v3.10.1 and One Click LCA databases were used as sources of environmental data. Allocation used in Ecoinvent 3.10.1 environmental data sources follow the methodology 'allocation, cut-off, EN 15804+A2'.







# **PRODUCT LIFE CYCLE**

### **MANUFACTURING (A1-A3)**

The environmental impacts considered for the product stage cover the manufacturing of raw materials used in the production. The material losses occurring during the manufacturing processes are treated as per the waste handling practices in the factory, while scenario assumptions are made in the absence of exact data. The study also considers the fuels used by machines as well as losses during electricity transmission.

The product is made of metals, plastics, and electronic components. All components are transported to the production facility, where the main manufacturing processes are associated with assembly of different parts and components. The finished product is packaged with polyethylene, cardboard, and/or paper as packaging material before being sent to customers.

### **TRANSPORT AND INSTALLATION (A4-A5)**

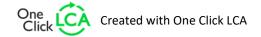
Transportation distances from manufacturing sites to customer locations are based on sales volume-based weighted averages. In the absence of exact data, conservative assumptions are made (A4). Environmental impacts from installation include waste packaging materials (A5). The impacts of energy consumption and the used ancillary materials during installation are considered negligible.

#### **PRODUCT USE AND MAINTENANCE (B1-B7)**

During the use phase, the product consumes electricity (B6). Impacts due to electricity production include direct emissions to air, transformation, and transmission losses.

### 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 centre. The transport distance is 150 km while 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 benefits and loads of incineration and recycling are included in Module D.

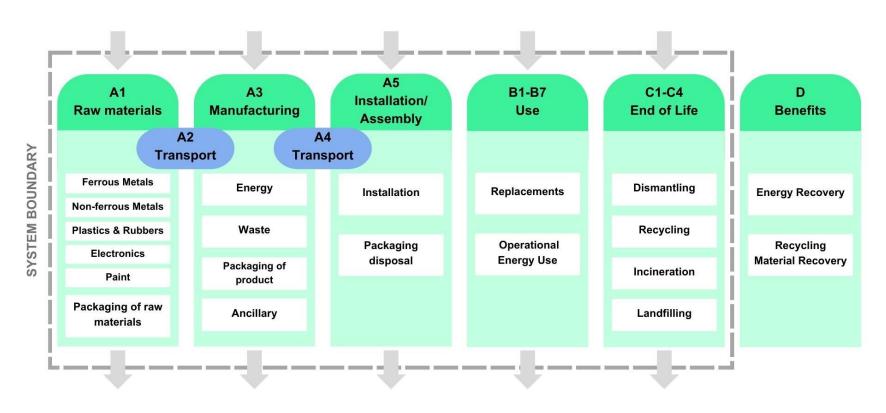




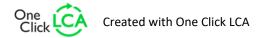


# LIFE CYCLE FLOW DIAGRAM

## MATERIAL, ENERGY AND WATER INPUT



## **ENVIRONMENTAL EMISSIONS**







# **ENVIRONMENTAL IMPACT DATA, RESULTS PER DECLARED UNIT**

The estimated impact results are only relative statements which do not indicate the end points of the impact categories, exceeding threshold values, safety margins or risks.

### CORE ENVIRONMENTAL IMPACT INDICATORS - EN 15804+A2, EF 3.1

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	В3	B4	B5	В6	В7	C1	C2	C3	C4	D
GWP – total <sup>1)</sup>	kg CO₂e	6,42E+01	6,88E-01	9,64E-02	6,50E+01	1,60E-01	1,70E+00	MNR	MNR	MNR	0,00E+00	MNR	1,09E+03	MNR	0,00E+00	9,67E-02	1,87E-01	3,59E-01	-1,88E+01
GWP – fossil	kg CO₂e	6,39E+01	6,87E-01	9,46E-01	6,55E+01	1,60E-01	8,11E-02	MNR	MNR	MNR	0,00E+00	MNR	1,08E+03	MNR	0,00E+00	9,67E-02	1,86E-01	3,59E-01	-2,80E+01
GWP – biogenic	kg CO₂e	2,58E-01	3,32E-04	-8,66E-01	-6,07E-01	3,62E-05	1,62E+00	MNR	MNR	MNR	0,00E+00	MNR	2,42E+00	MNR	0,00E+00	2,11E-05	7,83E-04	-4,44E-05	9,30E+00
GWP – LULUC	kg CO₂e	5,15E-02	3,85E-04	1,61E-02	6,80E-02	7,16E-05	1,96E-05	MNR	MNR	MNR	0,00E+00	MNR	3,32E+00	MNR	0,00E+00	4,28E-05	1,14E-04	3,71E-05	-1,38E-02
Ozone depletion pot.	kg CFC-11e	6,13E-07	1,03E-08	1,93E-08	6,42E-07	2,36E-09	4,04E-10	MNR	MNR	MNR	0,00E+00	MNR	1,99E-05	MNR	0,00E+00	1,35E-09	7,54E-10	4,89E-10	-1,13E-07
Acidification potential	mol H⁺e	5,70E-01	3,22E-03	4,83E-03	5,78E-01	5,45E-04	1,46E-04	MNR	MNR	MNR	0,00E+00	MNR	6,35E+00	MNR	0,00E+00	3,22E-04	6,77E-04	1,86E-04	-3,43E-01
EP-freshwater <sup>2)</sup>	kg Pe	3,72E-02	9,14E-05	4,26E-04	3,77E-02	1,25E-05	5,70E-06	MNR	MNR	MNR	0,00E+00	MNR	1,01E+00	MNR	0,00E+00	7,52E-06	3,86E-05	4,22E-06	-1,83E-02
EP-marine	kg Ne	8,01E-02	1,04E-03	1,84E-03	8,30E-02	1,79E-04	1,53E-04	MNR	MNR	MNR	0,00E+00	MNR	9,96E-01	MNR	0,00E+00	1,04E-04	1,54E-04	1,27E-04	-3,81E-02
EP-terrestrial	mol Ne	8,21E-01	1,14E-02	1,23E-02	8,44E-01	1,95E-03	5,00E-04	MNR	MNR	MNR	0,00E+00	MNR	8,93E+00	MNR	0,00E+00	1,14E-03	1,68E-03	8,08E-04	-4,00E-01
POCP ("smog") <sup>3)</sup>	kg NMVOCe	2,61E-01	4,40E-03	4,19E-03	2,70E-01	8,04E-04	1,86E-04	MNR	MNR	MNR	0,00E+00	MNR	2,94E+00	MNR	0,00E+00	4,49E-04	4,89E-04	2,46E-04	-1,24E-01
ADP-minerals & metals <sup>4)</sup>	kg Sbe	2,28E-03	5,45E-06	4,37E-06	2,29E-03	4,46E-07	1,76E-07	MNR	MNR	MNR	0,00E+00	MNR	1,46E-02	MNR	0,00E+00	3,17E-07	2,94E-06	7,48E-08	-1,13E-03
ADP-fossil resources	MJ	7,13E+02	9,44E+00	1,46E+01	7,37E+02	2,32E+00	4,02E-01	MNR	MNR	MNR	0,00E+00	MNR	2,51E+04	MNR	0,00E+00	1,36E+00	9,48E-01	4,33E-01	-2,86E+02
Water use <sup>5)</sup>	m³e depr.	1,17E+01	6,19E-02	3,76E-01	1,22E+01	1,15E-02	1,15E-02	MNR	MNR	MNR	0,00E+00	MNR	6,85E+02	MNR	0,00E+00	6,29E-03	2,29E-02	1,24E-02	-2,61E+00

<sup>1)</sup> 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, EF 3.1

Impact category	Unit	A1	A2	А3	A1-A3	A4	A5	B1	B2	В3	B4	B5	В6	В7	C1	C2	С3	C4	D
Particulate matter	Incidence	3,67E-06	6,80E-08	7,63E-08	3,81E-06	1,60E-08	2,39E-09	MNR	MNR	MNR	0,00E+00	MNR	2,27E-05	MNR	0,00E+00	7,67E-09	8,53E-09	3,50E-09	-1,53E-06
Ionizing radiation <sup>6)</sup>	kBq U235e	4,45E+00	1,69E-02	7,30E-02	4,54E+00	2,02E-03	1,44E-03	MNR	MNR	MNR	0,00E+00	MNR	6,94E+02	MNR	0,00E+00	1,10E-03	5,66E-03	5,76E-04	-1,63E+00
Ecotoxicity (freshwater)	CTUe	3,94E+02	1,62E+00	4,98E+00	4,00E+02	3,28E-01	2,16E+00	MNR	MNR	MNR	0,00E+00	MNR	3,83E+03	MNR	0,00E+00	2,14E-01	6,37E-01	5,19E+01	-1,12E+02
Human toxicity, cancer	CTUh	3,32E-08	7,90E-10	6,68E-10	3,47E-08	2,64E-11	2,09E-11	MNR	MNR	MNR	0,00E+00	MNR	3,65E-07	MNR	0,00E+00	1,64E-11	5,59E-11	4,00E-10	-1,77E-08
Human tox. non-cancer	CTUh	9,81E-07	5,91E-09	1,21E-08	9,99E-07	1,50E-09	1,04E-09	MNR	MNR	MNR	0,00E+00	MNR	1,89E-05	MNR	0,00E+00	8,49E-10	3,53E-09	4,06E-09	-1,07E-06
SQP <sup>7)</sup>	-	1,68E+02	3,88E+00	5,93E+01	2,31E+02	2,34E+00	2,93E-01	MNR	MNR	MNR	0,00E+00	MNR	5,59E+03	MNR	0,00E+00	8,10E-01	1,17E+00	6,23E-01	-9,09E+02

<sup>6)</sup> EN 15804+A2 disclaimer for Ionizing radiation, human health. This impact category deals mainly with the eventual impact of low-dose ionizing radiation on the 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	А3	A1-A3	A4	A5	B1	B2	В3	B4	B5	В6	B7	C1	C2	С3	C4	D
Renew. PER as energy <sup>8)</sup>	МЈ	4,13E+01	2,54E-01	2,57E+00	4,41E+01	3,18E-02	-9,16E+00	MNR	MNR	MNR	0,00E+00	MNR	6,90E+03	MNR	0,00E+00	1,86E-02	1,36E-01	9,68E-03	-9,73E+01
Renew. PER as material	МЈ	0,00E+00	0,00E+00	7,63E+00	7,63E+00	0,00E+00	-7,63E+00	MNR	MNR	MNR	0,00E+00	MNR	0,00E+00	MNR	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Total use of renew. PER	MJ	4,13E+01	2,54E-01	1,02E+01	5,18E+01	3,18E-02	-1,68E+01	MNR	MNR	MNR	0,00E+00	MNR	6,90E+03	MNR	0,00E+00	1,86E-02	1,36E-01	9,68E-03	-9,73E+01
Non-re. PER as energy	MJ	7,10E+02	9,44E+00	1,24E+01	7,32E+02	2,32E+00	-1,54E+00	MNR	MNR	MNR	0,00E+00	MNR	2,51E+04	MNR	0,00E+00	1,36E+00	-7,31E-01	-2,43E+00	-2,86E+02
Non-re. PER as material	MJ	1,98E+00	0,00E+00	2,28E+00	4,25E+00	0,00E+00	-2,28E+00	MNR	MNR	MNR	0,00E+00	MNR	0,00E+00	MNR	0,00E+00	0,00E+00	-3,90E-01	-1,59E+00	0,00E+00
Total use of non-re. PER	MJ	7,12E+02	9,44E+00	1,47E+01	7,36E+02	2,32E+00	-3,81E+00	MNR	MNR	MNR	0,00E+00	MNR	2,51E+04	MNR	0,00E+00	1,36E+00	-1,12E+00	-4,02E+00	-2,86E+02
Secondary materials	kg	1,78E-01	0,00E+00	0,00E+00	1,78E-01	0,00E+00	0,00E+00	MNR	MNR	MNR	0,00E+00	MNR	0,00E+00	MNR	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Renew. secondary fuels	MJ	1,10E-02	4,53E-05	9,51E-02	1,06E-01	1,25E-05	3,66E-06	MNR	MNR	MNR	0,00E+00	MNR	3,32E-02	MNR	0,00E+00	7,76E-06	4,48E-05	6,35E-06	-1,51E-03
Non-ren. secondary fuels	МЈ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MNR	MNR	MNR	0,00E+00	MNR	0,00E+00	MNR	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of net fresh water	m³	2,85E-01	1,67E-03	8,78E-03	2,95E-01	3,43E-04	-1,81E-04	MNR	MNR	MNR	0,00E+00	MNR	2,17E+01	MNR	0,00E+00	1,80E-04	4,28E-04	-1,23E-03	-1,13E-01

<sup>8)</sup> PER = Primary energy resources.







## **END OF LIFE – WASTE**

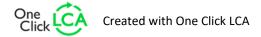
Impact category	Unit	A1	A2	А3	A1-A3	A4	A5	B1	B2	В3	B4	B5	В6	В7	C1	C2	С3	C4	D
Hazardous waste	kg	1,15E+01	2,40E-02	6,67E-02	1,16E+01	3,93E-03	3,56E-03	MNR	MNR	MNR	0,00E+00	MNR	6,36E+01	MNR	0,00E+00	2,36E-03	8,73E-03	1,04E-01	-5,85E+00
Non-hazardous waste	kg	1,88E+02	5,02E-01	2,51E+00	1,91E+02	7,28E-02	6,69E-01	MNR	MNR	MNR	0,00E+00	MNR	4,92E+03	MNR	0,00E+00	4,43E-02	4,07E-01	3,32E+00	-7,07E+01
Radioactive waste	kg	1,08E-03	4,23E-06	1,76E-05	1,11E-03	4,95E-07	3,66E-07	MNR	MNR	MNR	0,00E+00	MNR	1,78E-01	MNR	0,00E+00	2,69E-07	1,39E-06	1,42E-07	-3,94E-04

## **END OF LIFE – OUTPUT FLOWS**

Impact category	Unit	A1	A2	А3	A1-A3	A4	A5	B1	B2	В3	B4	B5	В6	В7	C1	C2	С3	C4	D
Components for reuse	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MNR	MNR	MNR	0,00E+00	MNR	0,00E+00	MNR	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	0,00E+00	0,00E+00	0,00E+00	4,48E-01	MNR	MNR	MNR	0,00E+00	MNR	0,00E+00	MNR	0,00E+00	0,00E+00	1,94E+00	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	MNR	MNR	MNR	0,00E+00	MNR	0,00E+00	MNR	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	6,27E-01	MNR	MNR	MNR	0,00E+00	MNR	0,00E+00	MNR	0,00E+00	0,00E+00	5,27E-01	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	2,54E-01	MNR	MNR	MNR	0,00E+00	MNR	0,00E+00	MNR	0,00E+00	0,00E+00	2,22E-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	3,52E-01	MNR	MNR	MNR	0,00E+00	MNR	0,00E+00	MNR	0,00E+00	0,00E+00	3,05E-01	0,00E+00	0,00E+00

## **ENVIRONMENTAL IMPACTS – EN 15804+A1, CML**

Impact category	Unit	A1	A2	А3	A1-A3	A4	A5	B1	B2	В3	B4	В5	В6	В7	C1	C2	С3	C4	D
Global Warming Pot.	kg CO₂e	6,37E+01	6,84E-01	1,01E+00	6,54E+01	1,59E-01	1,44E-01	MNR	MNR	MNR	0,00E+00	MNR	1,08E+03	MNR	0,00E+00	9,62E-02	1,85E-01	3,58E-01	-2,79E+01
Ozone depletion Pot.	kg CFC <sub>-11</sub> e	6,01E-07	8,21E-09	1,94E-08	6,29E-07	1,88E-09	3,30E-10	MNR	MNR	MNR	0,00E+00	MNR	1,66E-05	MNR	0,00E+00	1,08E-09	6,31E-10	3,95E-10	-1,04E-07
Acidification	kg SO₂e	4,85E-01	2,46E-03	3,52E-03	4,91E-01	4,17E-04	1,11E-04	MNR	MNR	MNR	0,00E+00	MNR	5,41E+00	MNR	0,00E+00	2,47E-04	5,45E-04	1,36E-04	-2,97E-01
Eutrophication	kg PO <sub>4</sub> ³e	7,72E-02	7,70E-04	4,83E-03	8,28E-02	1,01E-04	8,30E-05	MNR	MNR	MNR	0,00E+00	MNR	7,00E-01	MNR	0,00E+00	6,00E-05	8,17E-05	6,22E-05	-1,89E-02
POCP ("smog")	kg C <sub>2</sub> H <sub>4</sub> e	3,45E-02	3,22E-04	3,89E-04	3,52E-02	3,71E-05	2,40E-05	MNR	MNR	MNR	0,00E+00	MNR	2,95E-01	MNR	0,00E+00	2,21E-05	3,20E-05	1,20E-05	-1,72E-02
ADP-elements	kg Sbe	2,27E-03	5,41E-06	4,31E-06	2,27E-03	4,35E-07	1,71E-07	MNR	MNR	MNR	0,00E+00	MNR	1,45E-02	MNR	0,00E+00	3,10E-07	2,93E-06	6,89E-08	-1,12E-03
ADP-fossil	MJ	6,41E+02	9,16E+00	1,34E+01	6,64E+02	2,29E+00	3,78E-01	MNR	MNR	MNR	0,00E+00	MNR	1,29E+04	MNR	0,00E+00	1,34E+00	8,59E-01	4,23E-01	-2,60E+02







# THIRD-PARTY VERIFICATION STATEMENT

EPD Hub declares that this EPD is verified in accordance with ISO 14025 by an independent, third-party verifier and has been generated using an end-to-end verified tool.

EPD Hub maintains its independence as a third-party body; it was not involved in the execution of the LCA or in the development of the declaration and has no conflicts of interest regarding this verification. EPD Hub confirms that it possesses sufficient knowledge and experience in construction products and the relevant standards to carry the verification.





Nemanja Nedic

Program Manager, EPD Hub

EPD Hub has performed a detailed examination of the end-to-end verified tool and underlying data to ensure that there are no deviations in the studied Environmental Product Declaration (EPD), its Life Cycle Assessment (LCA), and project report. The tool is implemented according to the procedural and methodological requirements outlined in ISO 14025:2010, ISO 14040/14044, EN 15804+A2, and EPD Hub Core Product Category Rules version 1.1 and General Program Instructions version 1.2.

Tool verifier: Hai Ha Nguyen & Nemanja Nedic

Tool verification validity: 11 July 2024 - 11 July 2027

EPD Hub has examined the company-specific data for plausibility and consistency. The declaration owner is responsible for ensuring its factual integrity and legal compliance.