

ENVIRONMENTAL PRODUCT DECLARATION

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

25572 XXX0
INFORM SQ P475-9 DOWN
Delta Light nv

EPD HUB, HUB-1409
Publishing date 17 May 2024, last updated on 17 May 2024, valid until 17 May 2029.

Created with One Click LCA

GENERAL INFORMATION

MANUFACTURER

Manufacturer	Delta Light nv
Address	Muizelstraat 2, 8560 Wevelgem, Belgium
Contact details	sustainability@deltalight.com
Website	www.deltalight.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 1.0, 1 Feb 2022 c-PCR EN 50693 for electronic and electrical products and systems
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	Tim Blomme
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

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	INFORM SQ P475-9 DOWN
Additional labels	-
Product reference	25572 XXX0
Place of production	Delta Light N.V., Muizelstraat 2, 8560 Belgium
Period for data	FY2022
Averaging in EPD	Representative product
Variation in GWP-fossil for A1-A3	-14,1% and +22,3%

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 unit of luminaire
Declared unit mass	3.226 kg
GWP-fossil, A1-A3 (kgCO2e)	9,69E+01
GWP-total, A1-A3 (kgCO2e)	9,14E+01
Secondary material, inputs (%)	8.23
Secondary material, outputs (%)	63.9
Total energy use, A1-A3 (kWh)	321
Net fresh water use, A1-A3 (m3)	0.47

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Belgian and family-run since 1989, Delta Light provides premium lighting solutions for architecture. Quality products, designed for comfort and developed to last, that stand for simplicity and consistency but also show unexpected detail, from a visible screw to an ingenious touch. Because in everything Delta Light does, at project start or follow-up, we always seek to add a little extra care — and work with our partners, to guarantee we can bring their visions to completion.

PRODUCT DESCRIPTION

The Inform family is an extensive range of linear and curved lighting solutions, designed to be used in applications that include task areas, like landscape offices, meeting rooms, reception desks, home office,… Areas which need technical architectural lighting at its best: eye for design, eye for the user and eye for performance.

Specifications about the representative product: architectural suspended ceiling profile, IP20 classification, class III (excl. power supply). Luminaire power up to 58W with LEDboards. Length of the profile is 4752mm in length, height is 28mm and width is 28mm. Materials used are aluminium for the profile and end caps. Polycarbonate is used for the reflector parts and cover parts. Further information can be found at www.deltalight.com.

Further information can be found at www.deltalight.com

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass- %	Material origin
Metals	88	Asia, EU
Minerals	-	-
Fossil materials	4	Asia, EU
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	1.53

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 unit of luminaire
Mass per declared unit	3.226 kg
Functional unit	6063 lumen during a reference lifetime of 60 000 hours
Reference service life	20,5 years when the luminaire is operated for 8 hours a day

The type of unit is 'luminaire' and the functional unit is the light output (in lumen), with the RSL based on the LM80 report of the LED. This RSL is used to calculate the operational energy use B6.

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	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.

The product is made of metals, plastics and electronic components. The component manufacturing happens outside of Delta Light with subcontractors (aluminium production, moulding, pcb production,...) and are then transported to Delta Light N.V. where they are assembled together. The finished product is packaged in packaging cardboard before being sent to the installation site. Energy sources are electricity (part voltaic and part electricity from the grid), gas and water.

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. Average distance of transportation from production plant to building site is assumed as average 1340km, 592km, 179km for respectively boat, road and air transport. 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 utilisation 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. EoL of the packaging references: Eurostat & PSR-0014 v2 (2023) for paperboard recycling (82%)/incineration (9%)/landfill (9%). Transportation distance to e-waste handling facility is estimated as 50 km and the transportation method is assumed as lorry.

PRODUCT USE AND MAINTENANCE (B1-B7)

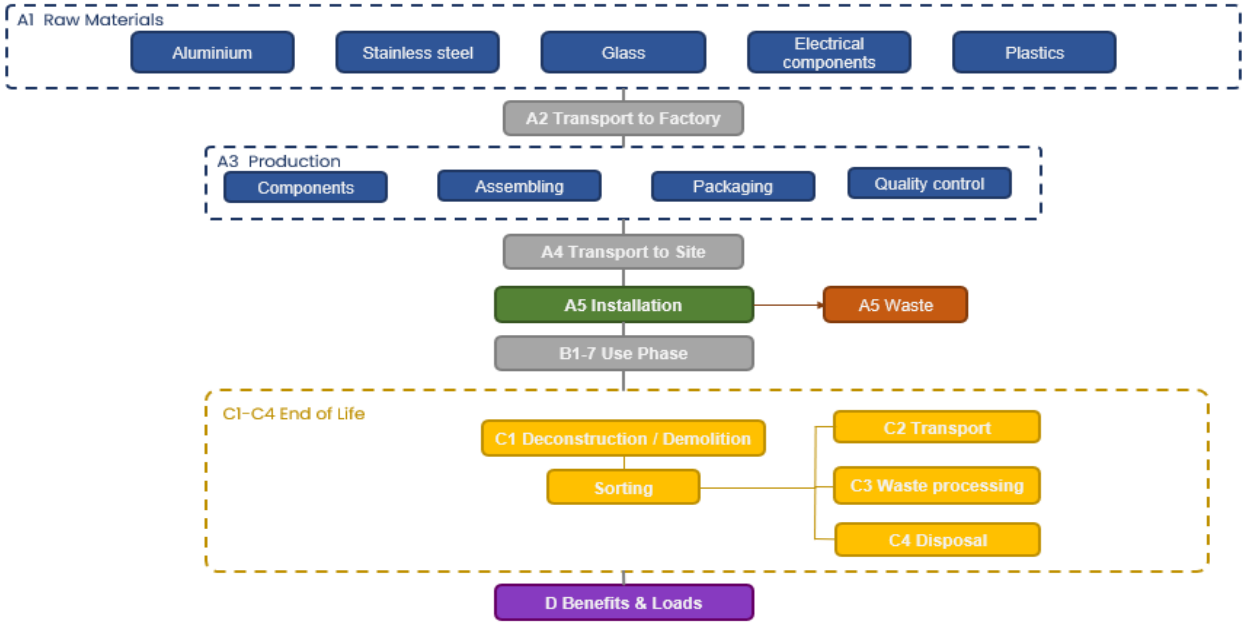
During the use phase, the product consumes electricity from regional (EU, North America, Asia and rest of the world) electricity grid mix (B6). Impacts due to electricity production include direct emissions to air, transformation and transmission losses. The reference service life is based on the LM80 report of the LED which is 60 000 hours. When the luminaire is operated 8 hours a day, this will result in an RSL of approximately 20,5 years.

Air, soil, and water impacts during the use phase have not been studied. The product is assumed to undergo replacement of selected components in intervals of time (20,5 years when the luminaire is operated for 8 hours a day) based on the lifespan of parts and components. This is to ensure that the product is fully functional throughout its lifetime. This is why B1-B5 is excluded. B7 is not applicable.

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



All estimations and assumptions regarding the cut off criteria and the allocation are declared in the part "Cut-off Criteria except the estimations/assumptions below:

- Module A2, A4 & C2: Vehicle capacity utilization volume factor is assumed to be 1 which means full load. It may vary but as the role of transportation emission in total results is small, the variety in load is assumed to be negligible. Empty returns are not considered as it is assumed that return trip is used by transportation companies to serve the needs of other clients.
- Module A4: Transportation does not cause losses as products are packaged properly. Also, volume capacity utilisation factor is assumed to be 1 for the nested packaged products. Additionally, transportation distances are based on a sales volume-based weighted average and a lorry is the assumed vehicle type used.
- Module A5: EoL of the packaging references: Eurostat & PSR-0014 v2 (2023) for paperboard recycling (82%)/incineration (9%)/landfill (9%). Transportation distance to e-waste handling facility is estimated as 50 km and the transportation method is assumed as lorry.
- Module B1-B7: The product is assumed to undergo replacement of selected components in intervals of time (20,5 years when the luminaire is operated for 8 hours a day) based on the lifespan of parts and components. This is to ensure that the product is fully functional throughout its lifetime. This is why B1-B5 is excluded. B7 is not applicable.
- Module C2: Transportation distance to e-waste handling facility is estimated as 50 km and the transportation method is assumed as lorry.
- Module C3, C4, D: The product undergoes dismantling, and the parts are sorted into metals, plastics, paint and electronics. The waste treatment percentages based on EN 50693 are assumed to be applicable. Module C3 accounts for energy and resource inputs for sorting and treating these waste streams for recycling and incineration with energy recovery. Ash from recycling processes is negligible. The recycled end-of-life materials are assumed to serve as secondary raw materials in manufacturing, while incinerated materials displace the need for electricity and heat production.

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	No allocation
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	-14,1% and +22,3%

There is averaging performed in this study based on the representative case.

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 v3.8, Plastics Europe, Federal LCA Commons and One Click LCA databases 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[1)]	kg CO_2e	8,79E+01	5,82E-01	2,92E+00	9,14E+01	0,00E+00	5,73E+00	MND	MND	MND	MND	MND	2,55E+03	MND	MNR	1,39E-02	5,97E-01	4,05E-02	-4,18E+01
GWP – fossil	kg CO_2e	8,79E+01	5,82E-01	8,51E+00	9,69E+01	0,00E+00	1,20E-01	MND	MND	MND	MND	MND	2,54E+03	MND	MNR	1,39E-02	5,97E-01	4,05E-02	-4,16E+01
GWP – biogenic	kg CO_2e	0,00E+00	0,00E+00	-5,61E+00	-5,61E+00	0,00E+00	5,61E+00	MND	MND	MND	MND	MND	0,00E+00	MND	MNR	0,00E+00	0,00E+00	0,00E+00	-2,58E-01
GWP – LULUC	kg CO_2e	5,23E-02	2,20E-04	2,70E-02	7,95E-02	0,00E+00	7,23E-05	MND	MND	MND	MND	MND	5,34E+00	MND	MNR	5,12E-06	2,76E-04	3,66E-05	-1,53E-02
Ozone depletion pot.	kg CFC_{-11}e	3,47E-06	1,32E-07	7,08E-07	4,31E-06	0,00E+00	8,58E-09	MND	MND	MND	MND	MND	8,57E-05	MND	MNR	3,19E-09	1,27E-08	3,73E-09	-1,31E-06
Acidification potential	mol H^+e	7,86E-01	3,99E-03	3,17E-02	8,22E-01	0,00E+00	5,46E-04	MND	MND	MND	MND	MND	1,29E+01	MND	MNR	5,88E-05	1,71E-03	2,19E-04	-4,02E-01
EP-freshwater[2)]	kg Pe	2,74E-02	4,24E-06	4,59E-04	2,79E-02	0,00E+00	3,04E-06	MND	MND	MND	MND	MND	1,33E-01	MND	MNR	1,14E-07	9,28E-06	1,06E-06	-2,77E-03
EP-marine	kg Ne	1,00E-01	1,11E-03	1,15E-02	1,13E-01	0,00E+00	9,55E-04	MND	MND	MND	MND	MND	2,18E+00	MND	MNR	1,75E-05	2,31E-04	5,81E-05	-5,02E-02
EP-terrestrial	mol Ne	1,11E+00	1,23E-02	7,43E-02	1,19E+00	0,00E+00	1,64E-03	MND	MND	MND	MND	MND	2,43E+01	MND	MNR	1,93E-04	2,70E-03	5,91E-04	-5,50E-01
POCP ("smog")[3)]	kg NMVOCe	3,31E-01	3,60E-03	1,82E-02	3,52E-01	0,00E+00	5,93E-04	MND	MND	MND	MND	MND	6,56E+00	MND	MNR	6,17E-05	7,71E-04	1,77E-04	-1,61E-01
ADP-minerals & metals[4)]	kg Sbe	3,46E-03	1,23E-06	4,36E-05	3,51E-03	0,00E+00	1,19E-06	MND	MND	MND	MND	MND	1,19E-02	MND	MNR	3,25E-08	1,92E-05	7,77E-08	-6,48E-05
ADP-fossil resources	MJ	9,28E+02	8,56E+00	1,29E+02	1,07E+03	0,00E+00	1,01E+00	MND	MND	MND	MND	MND	3,31E+04	MND	MNR	2,09E-01	2,39E+00	4,69E-01	-4,15E+02
Water use[5)]	m^3e depr.	2,91E+03	3,55E-02	4,86E+00	2,92E+03	0,00E+00	4,35E-02	MND	MND	MND	MND	MND	6,96E+02	MND	MNR	9,33E-04	6,41E-02	6,00E-03	-5,29E+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.

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	5,20E-06	5,82E-08	3,81E-07	5,64E-06	0,00E+00	7,66E-09	MND	MND	MND	MND	MND	9,80E-05	MND	MNR	1,60E-09	2,96E-08	3,31E-09	-2,38E-06
Ionizing radiation[6)]	kBq U235e	5,84E+00	4,05E-02	9,95E-01	6,88E+00	0,00E+00	1,00E-02	MND	MND	MND	MND	MND	3,71E+02	MND	MNR	9,93E-04	1,32E-02	2,74E-03	-2,55E+00
Ecotoxicity (freshwater)	CTUe	2,91E+03	7,32E+00	2,30E+02	3,14E+03	0,00E+00	6,47E+00	MND	MND	MND	MND	MND	5,02E+04	MND	MNR	1,88E-01	1,32E+01	5,08E+02	-7,75E+02
Human toxicity, cancer	CTUh	9,89E-08	1,97E-10	3,78E-09	1,03E-07	0,00E+00	2,20E-10	MND	MND	MND	MND	MND	7,66E-07	MND	MNR	4,61E-12	3,05E-10	3,04E-11	9,28E-09
Human tox. non-cancer	CTUh	2,63E-06	7,30E-09	8,89E-08	2,72E-06	0,00E+00	4,69E-09	MND	MND	MND	MND	MND	2,83E-05	MND	MNR	1,86E-10	1,28E-08	8,10E-10	-8,62E-07
SQP[7)]	-	2,27E+02	8,60E+00	1,50E+02	3,86E+02	0,00E+00	9,36E-01	MND	MND	MND	MND	MND	5,36E+03	MND	MNR	2,40E-01	2,61E+00	6,25E-01	-6,84E+02

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	4,72E+01	8,89E-02	4,46E+01	9,19E+01	0,00E+00	7,89E-02	MND	MND	MND	MND	MND	4,30E+03	MND	MNR	2,35E-03	3,32E-01	2,98E-02	-7,00E+01
Renew. PER as material	MJ	0,00E+00	0,00E+00	4,91E+01	4,91E+01	0,00E+00	-4,91E+01	MND	MND	MND	MND	MND	0,00E+00	MND	MNR	0,00E+00	0,00E+00	0,00E+00	-4,30E+01
Total use of renew. PER	MJ	4,72E+01	8,89E-02	9,38E+01	1,41E+02	0,00E+00	-4,90E+01	MND	MND	MND	MND	MND	4,30E+03	MND	MNR	2,35E-03	3,32E-01	2,98E-02	-1,13E+02
Non-re. PER as energy	MJ	9,25E+02	8,56E+00	1,29E+02	1,06E+03	0,00E+00	1,01E+00	MND	MND	MND	MND	MND	3,31E+04	MND	MNR	2,09E-01	2,39E+00	4,69E-01	-4,14E+02
Non-re. PER as material	MJ	2,18E+00	0,00E+00	3,99E-01	2,58E+00	0,00E+00	-3,99E-01	MND	MND	MND	MND	MND	0,00E+00	MND	MNR	0,00E+00	-1,09E+00	-1,09E+00	-1,98E-01
Total use of non-re. PER	MJ	9,27E+02	8,56E+00	1,29E+02	1,07E+03	0,00E+00	6,11E-01	MND	MND	MND	MND	MND	3,31E+04	MND	MNR	2,09E-01	1,31E+00	-6,20E-01	-4,15E+02
Secondary materials	kg	2,66E-01	2,36E-03	3,84E+00	4,11E+00	0,00E+00	1,84E-03	MND	MND	MND	MND	MND	3,05E+00	MND	MNR	5,79E-05	2,08E-03	1,17E-04	2,15E+00
Renew. secondary fuels	MJ	8,34E-03	2,17E-05	2,72E-01	2,81E-01	0,00E+00	9,29E-06	MND	MND	MND	MND	MND	2,12E-02	MND	MNR	5,84E-07	7,08E-05	7,34E-06	-6,19E-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	0,00E+00	MND	MNR	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of net fresh water	m^3	3,93E-01	1,01E-03	7,55E-02	4,69E-01	0,00E+00	6,93E-04	MND	MND	MND	MND	MND	1,95E+01	MND	MNR	2,70E-05	1,73E-03	3,68E-04	-1,12E-01

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	1,38E+01	1,08E-02	3,47E-01	1,42E+01	0,00E+00	2,13E-02	MND	MND	MND	MND	MND	2,14E+02	MND	MNR	2,76E-04	4,33E-02	0,00E+00	-6,26E+00
Non-hazardous waste	kg	2,32E+02	1,69E-01	1,41E+01	2,46E+02	0,00E+00	2,22E-01	MND	MND	MND	MND	MND	5,73E+03	MND	MNR	4,54E-03	9,46E-01	8,97E-01	-1,16E+02
Radioactive waste	kg	2,13E-03	5,78E-05	3,17E-04	2,50E-03	0,00E+00	5,13E-06	MND	MND	MND	MND	MND	1,02E-01	MND	MNR	1,40E-06	5,26E-06	0,00E+00	-9,66E-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	0,00E+00	MND	MNR	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	3,06E+00	MND	MND	MND	MND	MND	0,00E+00	MND	MNR	0,00E+00	2,00E+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	3,60E-01	MND	MND	MND	MND	MND	0,00E+00	MND	MNR	0,00E+00	6,45E-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	3,60E+00	MND	MND	MND	MND	MND	0,00E+00	MND	MNR	0,00E+00	8,14E-01	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	8,63E+01	5,76E-01	8,63E+00	9,55E+01	0,00E+00	5,17E-01	MND	MND	MND	MND	MND	2,49E+03	MND	MNR	1,37E-02	5,95E-01	3,80E-02	-4,08E+01
Ozone depletion Pot.	kg CFC_{-11}e	3,10E-06	1,05E-07	5,85E-07	3,79E-06	0,00E+00	7,08E-09	MND	MND	MND	MND	MND	7,17E-05	MND	MNR	2,53E-09	1,07E-08	2,99E-09	-1,11E-06
Acidification	kg SO_2e	6,71E-01	3,13E-03	2,44E-02	6,99E-01	0,00E+00	4,24E-04	MND	MND	MND	MND	MND	1,08E+01	MND	MNR	4,57E-05	1,45E-03	1,75E-04	-3,44E-01
Eutrophication	kg PO_4^3e	2,59E-01	5,48E-04	1,84E-02	2,78E-01	0,00E+00	3,55E-03	MND	MND	MND	MND	MND	4,68E+00	MND	MNR	1,04E-05	5,24E-04	4,41E-04	-1,11E-01
POCP (“smog”)	kg C_2H_4e	3,99E-02	1,01E-04	1,50E-03	4,15E-02	0,00E+00	1,16E-04	MND	MND	MND	MND	MND	4,32E-01	MND	MNR	1,78E-06	6,74E-05	1,31E-05	-1,75E-02
ADP-elements	kg Sbe	3,45E-03	1,19E-06	3,99E-05	3,49E-03	0,00E+00	1,17E-06	MND	MND	MND	MND	MND	1,19E-02	MND	MNR	3,15E-08	1,91E-05	7,31E-08	-6,04E-05
ADP-fossil	MJ	9,08E+02	8,56E+00	1,29E+02	1,05E+03	0,00E+00	1,01E+00	MND	MND	MND	MND	MND	3,31E+04	MND	MNR	2,09E-01	2,39E+00	4,69E-01	-4,15E+02

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

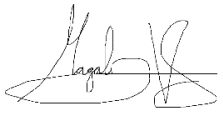
I hereby confirm that, following detailed examination, I have not established any relevant deviations by the studied Environmental Product Declaration (EPD), its LCA and project report, in terms of the data collected and used in the LCA calculations, the way the LCA-based calculations have been carried 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
17.05.2024



VERIFIED ISO 14025

ANNEX 1: AVERAGING TABLE

CODE	DESCRIPTION	IP	Length (mm)	luminaire lumen (lm)	net weight (kg)	GWP [EN15804+A1] (kg CO2e)	% difference GWP fossil	GWP - total [EN15804+A2] (kg CO2e)	GWP fossil [EN15804+A2] (kg CO2e)
25570 XXX0	INFORM SQ P392-6 DOWN	IP20	3924mm	3834	2,751	82,01	-14,08%	78,69	83,3
25572 XXX0	INFORM SQ P475-9 DOWN	IP20	4752mm	6063	3,225	95,47	/	91,41	96,95
25574 XXX0	INFORM SQ P585-9 DOWN	IP20	5856mm	6063	3,973	116,8	+22,30%	111,71	118,57

ANNEX 2: PEP EXTRAPOLATION COEFFICIENTS

Extrapolation rules have been calculated according to PSR-0014-ED2-EN-2023 07 13.
The extrapolation coefficients are calculated at product level and not at functional unit for the formula below:

$$Extrapolation\ coefficient\ at\ the\ product\ level\ x\ \left(\frac{Lighting\ output\ of\ reference\ product\ (lumen)}{Lighting\ output\ of\ product\ concerned\ (lumen)}\right)$$

Table with information to calculate the extrapolation coefficients

MASS CODE	DESCRIPTION	product weight (kg)	packaging weight (kg)	Total weight (kg)	Class	IP	Luminaire lumen (lm)	Luminaire power (W)
25570 XXX0 **(min. case)**	INFORM SQ P392-6 DOWN	2,751	3,205	5,956	III	IP20	3834	38
25572 XXX0 **(rep. case)**	INFORM SQ P475-9 DOWN	3,225	3,85	7,075	III	IP20	6063	58
25574 XXX0 **(max. case)**	INFORM SQ P585-9 DOWN	3,973	4,772	8,745	III	IP20	6063	58

Applicable extrapolation coefficients:

MASS CODE	DESCRIPTION	Production of luminaire structure	Production of packaging	Distribution stage	Installation stage	Use stage
25570 XXX0 **(min. case)**	INFORM SQ P392-6 DOWN	0,74	0,85	0,83	0,84	0,83
25572 XXX0 **(rep. case)**	INFORM SQ P475-9 DOWN	0,75	1,00	1,00	1,00	1,00
25574 XXX0 **(max. case)**	INFORM SQ P585-9 DOWN	0,75	1,23	1,24	1,24	1,24

Used formulas from PSR-0014-ED2-EN-2023 07 13.:

- **Production of luminaire structure (3.6.3)**

Rule applicable to the production of luminaire structure:

$$\frac{\text{Structure weight of concerned product (kg)}}{\text{Structure weight of reference product (kg)}}$$

- **Production of packaging (3.6.3)**

Rule applicable to the production of the packaging:

$$\frac{\text{Packaging weight of concerned product (kg)}}{\text{Packaging weight of reference product (kg)}}$$

- **Distribution stage (3.6.4)**

$$\frac{\text{Weight of concerned product + Packaging weight of concerned product (kg)}}{\text{Weight of reference product + Packaging weight of reference product (kg)}}$$

- **Installation stage (3.6.5)**

$$\frac{\text{Packaging weight of concerned product (kg)}}{\text{Packaging weight of reference product (kg)}}$$

- **Use stage (3.6.6)**

Rule applicable to the electricity consumption (B6):

$$\frac{\text{Power of concerned product (W)}}{\text{Power of reference product (W)}} x \frac{\text{Energy saving coefficient of concerned product}}{\text{Energy saving coefficient of reference product}}$$

Not applicable: EOL: no control gear included.