ENVIRONMENTAL PRODUCT DECLARATION
no. 01-01/2025

Emergency lighting fixture - EXIT

Owner of the declaration:	**RAFAŁ STANUCH P.P.H.U. AWEX Sp. z o.o.**
Program owner:	**Łukasiewicz Research Network – Institute of Ceramics and Building Materials Center of Environmental Engineering**
Program name:	**Environmental Product Declaration – B2B**
Date of issued:	**17.01.2025**
Declaration valid until:	**17.01.2030**

Łukasiewicz
Institute of Ceramics
and Building Materials

ENVIRONMENTAL PRODUCT DECLARATION no. 01-01/2025

awex

1. GENERAL INFORMATION

Product of declaration:	Emergency lighting fixture EXIT: EXIT S, EXIT M, EXIT M DS, EXIT L, EXIT L DS.
Program owner: Łukasiewicz Research Network– Institute of Ceramics and Building Materials Environmental Engineering Center in Opole. **http://www.icimb.pl/opole/**	**Declaration owner:** **RAFAŁ STANUCH P.P.H.U. AWEX Sp. z o.o**. MASŁOMIĄCA,39 Długa str, 32-091 MICHAŁOWICE Telephone: +48 12 681 55 00 **http: www.awex.eu**
Declared unit:	1 piece
Date of issue:	17.01.2025
Declaration valid until:	17.01.2030
Life Cycle Analysis (LCA):	A1-A3, A4, A5, C1-C4 and D according to PN-EN 15804+A2 (Cradle-to-Gate with options)
Product Categorization (PCR) Rules	PN-EN 15804+A2:2020-03 Sustainability of construction works. Environmental Product Declarations. Basic principles of categorization of construction products, ICIMB-PCR A.
Representatives:	Polish product, year 2022-2023
Declared durability:	10 years
Reasons for performing LCA:	B2B

Declarations that are the result of different programs or are not performed in accordance with the standard may not be comparable.

The Łukasiewicz – Institute of Ceramics and Building Materials Environmental Engineering Center provides access to the Type III environmental declaration for emergency lighting fixture EXIT to interested parties.

The declaration owner is responsible for the information and the base evidence. Łukasiewicz Research Network - Institute of Ceramics and Building Materials Center for Environmental Engineering is not responsible for the manufacturer's information and data and evidence regarding the life cycle assessment.

Authors' team:
Katarzyna Kiprian, M.Sc.
Ewa Głodek-Bucyk, Ph.D.
Patryk Okoń, M.Sc.

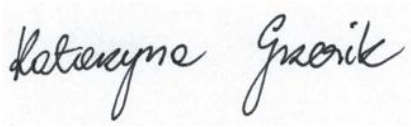
Approved:

Joanna Poluszyńska, PhD
Director of the Environmental Engineering Center

Ewa Głodek-Bucyk, Ph.D.
Leader of the Process Engineering Research Group

Review:
CEN standard PN-EN 15804+A2 serves as the main PCR document.
Independent verification of declarations and data according to EN ISO 14025:2010

☐ Internal ☒ External



Katarzyna Grzesik, PhD, DSc

2. MANUFACTURER AND PRODUCT DESCRIPTION

The company RAFAŁ STANUCH P.P.H.U. AWEX Sp. z o.o. it has been operating since 2002, invariably implementing a clearly defined mission: modern products of the highest quality and customer satisfaction. The company RAFAŁ STANUCH P.P.H.U. AWEX Sp. z o.o. it offers a full range of emergency lighting devices that meet the standards of European standards. During such a long presence on the market, thanks to the involvement of knowledge, resources, cooperation with the best specialists, including research centers, and investments in innovative projects, the company has achieved the position of a leader in the industry. RAFAŁ STANUCH P.P.H.U. AWEX Sp. z o.o. means state-of-the-art technologies, an experienced team of designers and engineers, the highest quality, reliability of equipment, diversity of the offer, unique design, unlimited production capacity and impeccable reputation confirmed by references.

Emergecy lighting fixture EXIT

The EXIT family conventional emergency luminaires designed to adapt to any type of installation thanks to the possibility of surface or flush mounting. Its minimalist design and maximum functionality make it ideal for both indoor and outdoor use. High-quality components were used in its production, thanks to which the luminaire is distinguished by above-average parameters in terms of luminous fluxes, allowing for an individual selection of luminaires depending on the needs of the future user of the facility. In addition, when using the HTR-25 system by AWEX, the EXIT luminaire is perfect for harsh ambient conditions (low temperatures).

The production process begins with the order of individual components of the EXIT luminaire from domestic and foreign partners. Then, in the plant of RAFAŁ STANUCH P.P.H.U. AWEX Sp. z o.o., moulded parts (plate, base, lampshade) are manufactured. After completing all the components of the luminaire, the whole is assembled and verified by quality control. The finished EXIT emergency lighting fixture is packed, transported to the warehouse, where it is waiting to be sent to the customer.
The technological process of production emergency lighting fixture EXIT is shown in Figure 1.

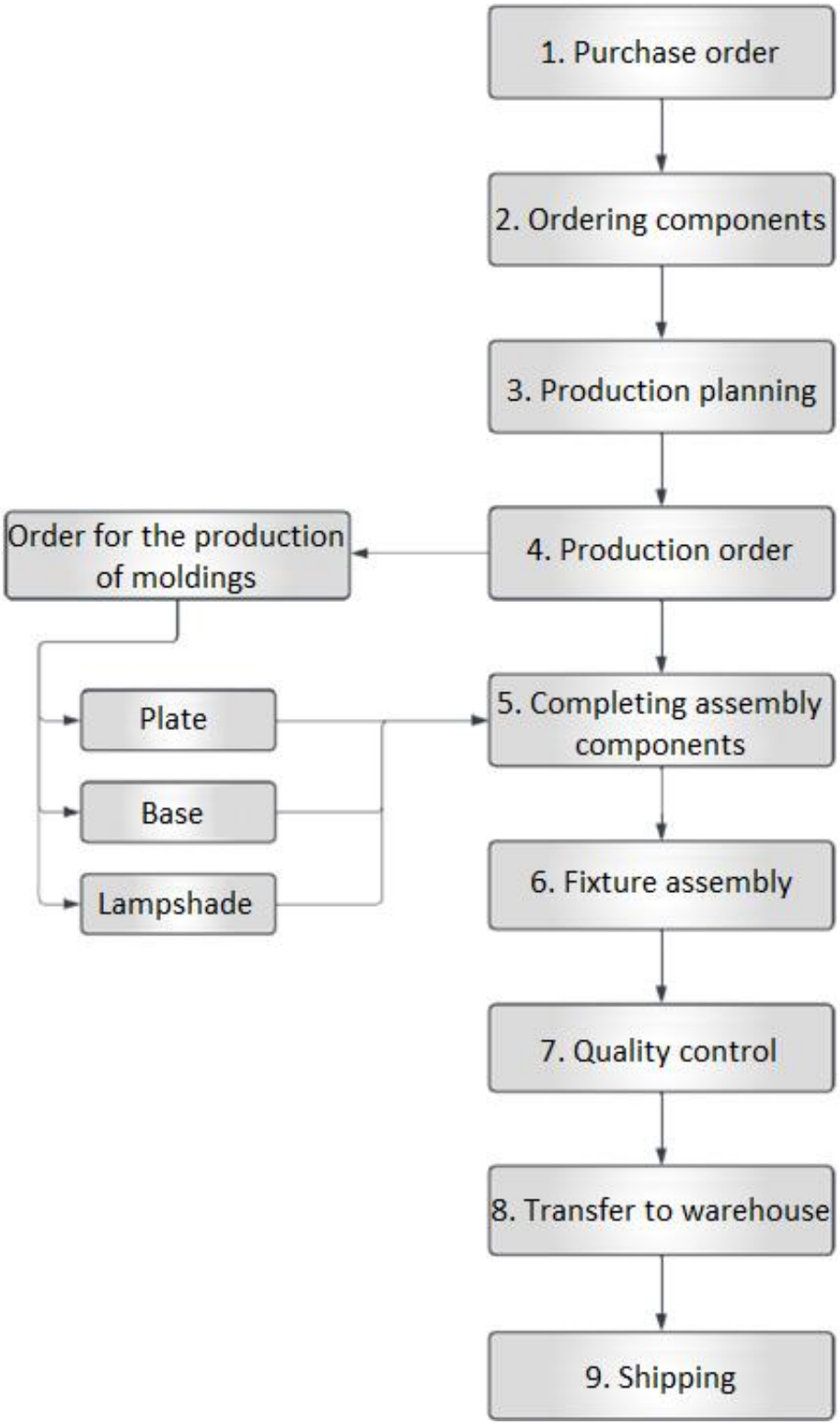


Figure 1: Diagram of the production process of emergency lighting fixture EXIT.

Table 1 shows the technical data of emergency lighting fixture EXIT and Figure 2 presents appearance of emergency lighting fixture EXIT with the approximate composition of the components.

Table 1. Technical data of the Emergency lighting fixture EXIT:

Execution	• White polycarbonate housing, optionally grey or black Transparent polycarbonate diffuser
Assembly	Surface-mounted, optionally flush-mounted
Supply voltage	Stand-alone luminaire 220 - 240 VAC 50/60 Hz CB central battery holder - 220 - 240 VAC 50/60 Hz, 176 -275 VDCO Froture for FZLV II central battery - 48 VDC
Light source	1W, 2W, 3W, 4W, 6W, 7W, 9W, 12W LED Optics - optional Color temperature: 6500K
LED Lifespan	50000h
Charging time	Eco LED, Standard: max. 24h Premium: max. 12h; energy-efficient charging system
Holding time	1h, 2h, 3h
Protection class	II or III
Degree of strength	IP 65, IK 10

Elements:

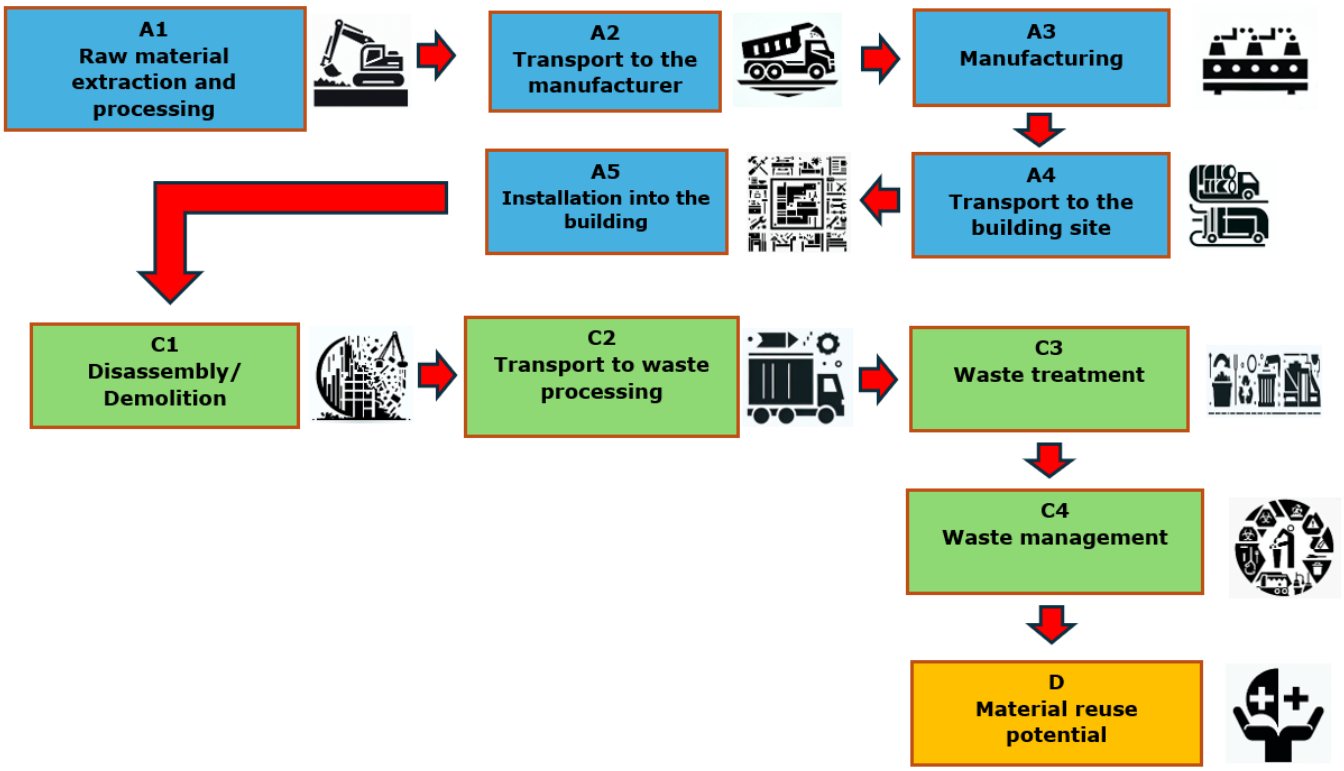
- SOURCE OF LIGHT
- ACCUMULATOR
- EMERGENCY MODULE/POWER SUPPLY
- BASE
- LAMPSHADE
- PLATE
- RUBBER GRROMMET
- SUPPRESSOR
- POWER CONNECTOR
- OTHER

Figure 2. Overview diagram with the approximate composition of emergency lighting fixture EXIT elements.

3. LCA: CALCULATION RULES

System limitations

The life cycle analysis of the tested products includes modules A1-A3, A4, A5, C1-C4 and D (Cradle to Gate with options) in accordance with PN-EN 15804.



Data collection period

Data on the production process were provided in 2024 for the period 01.11.2022 - 31.10.2023 (12 months) and correspond to the production technology of the time.

Declared unit

1 piece

Assumptions

A1 – extraction and consumption of raw materials refers to specific mass shares in the production process, per unit declared of the product,
A2 – distances from the place of obtaining raw materials to the production plant individual for each raw material, means of transport differentiated due to the method of delivery of raw materials,
A3 – CO_2, NO_x, SO_2 and dust emission values from the production process received from the manufacturer,
A4 – transport of the emergency lighting fixture EXIT to the construction site is carried out according to the developed scenario. It assumes the method of transport and the distance over which the materials are transported.

A5 – the installation of the emergency lighting fixture EXIT is carried out according to a developed scenario. It determines the consumption of energy and materials and the amount of waste generated as a result of the assembly process.
C1 - describes the procedure during the disassembly/demolition of the emergency lighting fixture EXIT. The calculations are performed on the basis of the developed scenario.
C2 – refers to the transport of construction waste to a recovery or disposal plant. The calculations are performed on the basis of the developed scenario.
C3 – takes into account the environmental impact during the processing of construction and demolition waste containing elements of the emergency lighting fixture EXIT in the waste recovery plant. The calculations
are performed on the basis of the developed scenario.
C4 – takes into account the impact of the emergency lighting fixture EXIT elements on the storage environment. The calculations are performed on the basis of the developed scenario.
D – refers to the impact and effects of the use of secondary material. The calculations are performed based on the developed scenario.

Cut-off-criteria

99% of all bulk streams involved in the production process were taken into account. All the energy used in the process was taken into account in the environmental declaration.

General data

The data for the calculations come from Ecoinvent v. 3.10 and have been supplemented with KOBiZE *CO_2, SO_2, NO_2, CO and total particulate matter emission indicators for electricity, December 2023.*
Emission factors for electricity were determined using the actual KOBiZE data. The Polish electricity emission factor (Ecoinvent supplemented with current national data from KOBiZE) is 0.685 kg CO_2/kWh. A detailed analysis of data quality was part of an external audit.

Allocation

All data on the components manufactured in the plant were provided by the owner of the declaration RAFAŁ STANUCH P.P.H.U. AWEX Sp. z o.o. and were referred to the declared unit of the product – **1 piece.** The allocation rules used in this EPD are based on the general ICIMB-PCR A principles.

4. LCA: SCENARIOS AND ADDITTIONAL TECHNICAL INFORMATION

The life cycle assessment has been developed in accordance with the requirements of PN-EN ISO 15804+A2:2020, PN-EN ISO 14025 and PN-EN ISO 14040. The rules for product categorization have been adopted in accordance with the PN-EN 15804 standard.

For the life cycle analysis of products covered by the cradle to gate with options, scenarios have been developed for modules A4, A5, C1-C4 and D.

Module A4 – *Transport to the construction site* **–** Transport is carried out by trucks with a load capacity of 3.5-7.5 tonnes that meet the EURO 6 emission standards. The average distance from the plant to the customer is 100 km.

Module A5 – *Building installation* **-** Includes all processes related to the installation of an emergency lighting luminaire. The installation of the emergency lighting fixture EXIT is done manually. The emergency lighting fixture EXIT is attached with a driller.

Emergency lighting fixture EXIT		
Drilling	driller 850 W	
Driling (10 min)	0,141666667	kWh/piece

Module C1 - *Demolition/demolition* – demolition is carried out manually by separating individual components of the emergency lighting fixture.

Module C2 – *Transport* – Waste is directed to the waste treatment plant. From there, after separating the recyclable fraction, the fraction for thermal processing and the fraction for storage in a landfill, their appropriate amounts are directed to further processes.

- Transport is carried out by trucks with a load capacity of 16-32 tons, meeting the EURO 6 emission standards,
- Transport to the waste treatment plant takes place at a distance of 100 km from the demolition site.
- Transport to the waste incineration plant from the waste treatment plant takes place over a distance of 100 km
- Transport to the landfill takes place over a distance of 20 km

Module C3 - *Waste treatment*, e.g. collection of demolition fractions and treatment of material streams for reuse, recycling and energy recovery. All assembly waste (A5) goes to the waste treatment plant. The plant is divided into fractions, and then the separated fractions are recycled, incinerated and landfilled. Electricity consumption per 1 kg of waste is 0.03 kWh/kg, and energy consumption for internal transport vehicles is 0.3 MJ/kg. The following processes were assumed for the calculations: unloading (loader), crushing (crusher)

Module C4 - *Waste storage.* A 10% landfill was assumed, part of the waste separated in the treatment process (module C2).

Module D – *Potential for material* reuse, the benefits of thermal waste treatment and recovery of some raw materials (module C2) have been taken into account.

5. LCA: RESULTS

W tabeli poniżej przedstawiono moduły LCA uwzględnione przy obliczaniu kategorii wpływu na środowisko dla produktów objętych deklaracją.

SYSTEM BOUNDARIES (X –MODULE INCLUDED IN LCA, MND – MODULE NOT DECLARED)																
Products stage			**Construction process stage**		**Use stage**							**End-of-life stage**				**Benefits and loads beyond the system boundary**
Raw material supply	Transport	Production	Transport	Construction process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction	Transport	Waste processing	Disposal	Reuse-recovery-recycling potential
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**

The following tables present the results of the LCA analysis for – **1 piece emergency lighting fixture EXIT.**

Explanations of the abbreviations used to describe the impact categories are given below:

GWP-total Global warming potential
GWP-fossil Global warming potential fossil fuel
GWP-biogenic Global warming potential biogenic
GWP-luluc Global warming potential land use and land change
ODP Depletion potential of the stratospheric ozone layer
AP Acidification potential of land and water
EP-freshwater Eutrophication potential, fraction of nutrients reaching freshwater end compartment
EP-marine Eutrophication potential, fraction of nutrients reaching marine end compartment
EP-terrestial Eutrophication potential, Accumulated Exceedance
POCP Formation potential of tropospheric ozone photochemical oxidants
ADP-minerals&metals Abiotic depletion potential for nonfossil resources
ADP-fossil Abiotic depletion potential for fossil resources
WDP Water (user) deprivation potential
PM Potential incidence of disease due to PM emissions
IRP Potential Human exposure efficiency relative to U235
ETP-fw Potential comparative Toxic Unit for ecosystems
HTP-c Potential comparative Toxic Unit for humans (cancerogenic)
HTP-nc Potential comparative Toxic Unit for humans (non-cancerogenic)
SQP Potential soil quality index

PERE	Use of renewable primary energy excluding renewable primary energy resources used as raw materials
PERM	Use of renewable primary energy resources used as raw materials
PERT	Total use of renewable primary energy resources
PEN-RE	Use of non-renewable primary energy resources excluding non-renewable primary energy resources used as raw materials
RE	Use of non-renewable primary energy resources used as raw materials
PENRT	Total use of non-renewable primary energy resources
SM	Use of secondary material
RSF	Use of renewable fuels
NRSF	Use of non-renewable secondary fuels
FW	Use of net fresh water

MAIN IMPACT INDICATORS: 1 piece emergency lighting fixture EXIT S

		Life Cycle Stage									
Indicator	**Unit**	**A1**	**A2**	**A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-total	kg CO_2 eq.	7,84E+00	1,95E-01	9,75E-01	1,37E-02	1,15E-01	0,00E+00	2,38E-02	4,03E-02	5,71E-04	-1,85E+00
GWP-fossil	kg CO_2 eq.	7,89E+00	1,95E-01	1,14E+00	1,37E-02	1,10E-01	0,00E+00	2,37E-02	3,95E-02	5,65E-04	-6,39E-01
GWP-biogenic	kg CO_2 eq.	-5,43E-02	5,00E-05	-1,71E-01	9,50E-06	5,11E-03	0,00E+00	1,65E-05	7,83E-04	5,63E-06	-1,21E+00
GWP-luluc	kg CO_2 eq.	8,80E-03	8,21E-05	5,44E-03	4,55E-06	1,04E-04	0,00E+00	7,88E-06	1,78E-05	8,70E-08	-4,31E-04
ODP	kg CFC11 eq.	1,34E-07	3,41E-09	1,71E-08	2,73E-10	1,36E-10	0,00E+00	4,72E-10	3,69E-10	8,91E-12	-9,08E-09
AP	mol H+ eq.	7,08E-02	2,68E-03	5,18E-03	2,85E-05	5,00E-04	0,00E+00	4,95E-05	2,82E-04	4,73E-06	-3,14E-03
EP-freshwater	kg PO_4 eq.	4,28E-03	1,05E-05	1,01E-03	9,28E-07	1,41E-04	0,00E+00	1,61E-06	2,22E-05	1,72E-08	-1,72E-04
EP-marine	kg N eq.	9,28E-03	6,64E-04	1,65E-03	6,86E-06	8,88E-05	0,00E+00	1,19E-05	1,09E-04	2,16E-06	-1,42E-03
EP-terrestrial	mol N eq.	9,52E-02	7,36E-03	1,30E-02	7,40E-05	6,84E-04	0,00E+00	1,28E-04	1,15E-03	2,37E-05	-5,65E-03
POCP	kg NMVOC eq.	3,31E-02	2,21E-03	3,61E-03	4,74E-05	1,92E-04	0,00E+00	8,22E-05	3,40E-04	7,19E-06	-2,09E-03
ADP-minerals & metals	kg Sb eq.	3,28E-04	4,72E-07	2,84E-06	4,46E-08	1,05E-07	0,00E+00	7,73E-08	2,42E-08	3,18E-10	-4,15E-06
ADP-fossil	MJ	1,19E+02	2,59E+00	1,45E+01	1,93E-01	1,18E+00	0,00E+00	3,34E-01	4,78E-01	7,39E-03	-4,62E+00
WDP	WDP (m^3) world ekw	2,22E+00	8,89E-03	3,09E-01	8,00E-04	5,42E-03	0,00E+00	1,39E-03	1,47E-03	1,59E-05	-1,09E-01

ADDITIONAL IMPACT INDICATORS: 1 piece emergency lighting fixture EXIT S

		Life Cycle Stage									
Indicator	**Unit**	**A1**	**A2**	**A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
PM	Disease incidency	6,16E-07	1,01E-08	3,46E-08	1,01E-09	9,51E-10	0,00E+00	1,75E-09	5,98E-09	1,44E-10	-4,04E-08
IRP	kBq U235 eq.	7,28E-01	2,71E-03	6,80E-02	2,50E-04	9,21E-04	0,00E+00	4,33E-04	2,74E-04	6,28E-06	-3,60E-02
ETP-fw	CTUe	3,79E-04	9,74E-04	1,97E-03	5,78E-07	9,43E-07	0,00E+00	8,79E-05	-3,94E-06	1,64E-06	-1,07E-04
HTP-c	CTUh	6,17E-08	1,16E-09	3,03E-09	9,73E-11	9,74E-11	0,00E+00	1,69E-10	1,04E-10	2,09E-12	-1,94E-08
HTP-nc	CTUh	2,80E-07	1,22E-09	1,56E-08	1,21E-10	1,40E-09	0,00E+00	2,10E-10	2,51E-10	1,23E-12	-7,58E-08

SQP	-	3,55E+01	9,55E-01	2,90E+01	1,16E-01	2,01E-01	0,00E+00	2,02E-01	5,17E-02	4,21E-02	-1,67E+00

INDICATORS DESCRIBTIONS RESOURCE CONSUMPTION: 1 piece emergency lighting fixture EXIT S

	Life Cycle Stage									
Indicator	**Unit**	**A1**	**A2**	**A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
PERE	MJ	1,20E+01	3,71E-02	6,18E+00	3,32E-03	1,07E-01	0,00E+00	5,75E-03	1,82E-02	7,24E-04	-8,76E-01
PERM	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	1,20E+01	3,71E-02	6,18E+00	3,32E-03	1,07E-01	0,00E+00	5,75E-03	1,82E-02	7,24E-04	-8,76E-01
PEN-RE	MJ	1,24E+02	2,60E+00	1,56E+01	1,94E-01	1,55E+00	0,00E+00	3,35E-01	5,37E-01	7,39E-03	-4,97E+00
RE	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	MJ	1,24E+02	2,60E+00	1,56E+01	1,94E-01	1,55E+00	0,00E+00	3,35E-01	5,37E-01	7,39E-03	-4,97E+00
SM	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	m^3	9,28E-02	3,78E-04	2,69E-02	3,56E-05	2,28E-03	0,00E+00	6,18E-05	3,61E-04	3,15E-07	-2,62E-03

INDICATORS DESCRIBING OUTPUT STREAMS AND WASTE: 1 piece emergency lighting fixture EXIT S

	Life Cycle Stage										
Indicator	**Unit (expressed per DU)**	**A1**	**A2**	**A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
Hazardous waste	kg	WN	WN	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-hazardous waste	kg	WN	WN	4,00E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Radioactive waste	kg	WN	WN	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Components for re-use	kg	WN	WN	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for recycling	kg	WN	WN	1,03E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for energy recovery	kg	WN	WN	2,67E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy	MJ/energy carrier	WN	WN	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E`+00	0,00E+00	9,69E-01

BIOGENIC CARBON	
Contents organic carbon in product (kg C_{org})	0,00E+00
Contents organic carbon in packaging (kg C_{org})	3,87E-02

MAIN IMPACT INDICATORS: 1 sztuka piece emergency lighting fixture EXIT M

		Life Cycle Stage									
Indicator	**Unit**	**A1**	**A2**	**A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-total	kg CO_2 eq.	7,89E+00	1,25E-01	1,06E+00	1,32E-02	1,15E-01	0,00E+00	2,50E-02	3,89E-02	6,34E-04	-2,06E+00
GWP-fossil	kg CO_2 eq.	7,94E+00	1,25E-01	1,25E+00	1,32E-02	1,10E-01	0,00E+00	2,50E-02	3,81E-02	6,28E-04	-6,08E-01
GWP-biogenic	kg CO_2 eq.	-6,25E-02	4,91E-05	-2,00E-01	9,16E-06	5,11E-03	0,00E+00	1,73E-05	7,55E-04	6,26E-06	-1,45E+00
GWP-luluc	kg CO_2 eq.	8,70E-03	5,00E-05	6,43E-03	4,39E-06	1,04E-04	0,00E+00	8,29E-06	1,72E-05	9,67E-08	-2,45E-04
ODP	kg CFC11 eq.	1,41E-07	2,28E-09	2,03E-08	2,63E-10	1,36E-10	0,00E+00	4,97E-10	3,56E-10	9,90E-12	-5,06E-09
AP	mol H+ eq.	6,49E-02	1,24E-03	5,69E-03	2,75E-05	5,00E-04	0,00E+00	5,20E-05	2,72E-04	5,26E-06	-2,25E-03
EP-freshwater	kg PO_4 eq.	4,52E-03	7,54E-06	1,08E-03	8,96E-07	1,41E-04	0,00E+00	1,69E-06	2,15E-05	1,91E-08	-1,30E-04
EP-marine	kg N eq.	8,83E-03	3,05E-04	1,89E-03	6,62E-06	8,88E-05	0,00E+00	1,25E-05	1,05E-04	2,40E-06	-1,64E-03
EP-terrestrial	mol N eq.	9,13E-02	3,37E-03	1,48E-02	7,14E-05	6,84E-04	0,00E+00	1,35E-04	1,11E-03	2,63E-05	-4,55E-03
POCP	kg NMVOC eq.	3,28E-02	1,09E-03	4,09E-03	4,58E-05	1,92E-04	0,00E+00	8,65E-05	3,28E-04	7,98E-06	-1,86E-03
ADP-minerals & metals	kg Sb eq.	3,42E-04	3,59E-07	3,29E-06	4,30E-08	1,05E-07	0,00E+00	8,13E-08	2,34E-08	3,53E-10	-2,18E-06
ADP-fossil	MJ	1,26E+02	1,68E+00	1,61E+01	1,86E-01	1,18E+00	0,00E+00	3,51E-01	4,61E-01	8,21E-03	-3,09E+00
WDP	WDP (m^3) świat. ekw	2,21E+00	6,23E-03	3,66E-01	7,72E-04	5,42E-03	0,00E+00	1,46E-03	1,42E-03	1,77E-05	-3,67E-02

ADDITIONAL IMPACT INDICATORS: 1 piece emergency lighting fixture EXIT M

		Life Cycle Stage									
Indicator	**Unit**	**A1**	**A2**	**A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
PM	Disease incidency	5,15E-07	6,92E-09	3,98E-08	9,74E-10	9,51E-10	0,00E+00	1,84E-09	5,77E-09	1,60E-10	-2,60E-08
IRP	kBq U235 eq.	8,49E-01	2,08E-03	8,02E-02	2,41E-04	9,21E-04	0,00E+00	4,56E-04	2,64E-04	6,98E-06	-1,90E-02
ETP-fw	CTUe	6,18E-04	1,90E-03	1,01E-03	5,57E-07	9,98E-07	0,00E+00	8,79E-05	-1,76E-05	7,07E-07	-8,07E-05
HTP-c	CTUh	6,63E-08	7,99E-10	3,49E-09	9,39E-11	9,74E-11	0,00E+00	1,77E-10	1,00E-10	2,32E-12	-2,74E-08
HTP-nc	CTUh	2,87E-07	8,74E-10	1,74E-08	1,17E-10	1,40E-09	0,00E+00	2,21E-10	2,42E-10	1,37E-12	-8,90E-08
SQP	-	3,92E+01	7,02E-01	3,37E+01	1,12E-01	2,01E-01	0,00E+00	2,12E-01	4,98E-02	4,67E-02	-1,32E+00

INDICATORS DESCRIBTIONS RESOURCE CONSUMPTION: 1 piece emergency lighting fixture EXIT M

		Life Cycle Stage									
Indicator	**Unit**	**A1**	**A2**	**A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
PERE	MJ	1,32E+01	2,78E-02	7,14E+00	3,20E-03	1,07E-01	0,00E+00	6,05E-03	1,75E-02	8,05E-04	-4,74E-01
PERM	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	1,32E+01	2,78E-02	7,14E+00	3,20E-03	1,07E-01	0,00E+00	6,05E-03	1,75E-02	8,05E-04	-4,74E-01
PEN-RE	MJ	1,29E+02	1,69E+00	1,71E+01	1,87E-01	1,55E+00	0,00E+00	3,53E-01	5,18E-01	8,21E-03	-3,46E+00
RE	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	MJ	1,29E+02	1,69E+00	1,71E+01	1,87E-01	1,55E+00	0,00E+00	3,53E-01	5,18E-01	8,21E-03	-3,46E+00
SM	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	m^3	1,28E-01	3,08E-04	2,99E-02	3,44E-05	2,28E-03	0,00E+00	6,50E-05	3,48E-04	3,50E-07	-1,73E-03

INDICATORS DESCRIBING OUTPUT STREAMS AND WASTE: 1 piece emergency lighting fixture EXIT M

		Life Cycle Stage									
Indicator	**Unit (expressed per DU)**	**A1**	**A2**	**A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**

Hazardous waste	kg	WN	WN	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-hazardous waste	kg	WN	WN	4,00E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Radioactive waste	kg	WN	WN	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Components for re-use	kg	WN	WN	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for recycling	kg	WN	WN	1,11E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for energy recovery	kg	WN	WN	4,70E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy	MJ/energy carrier	WN	WN	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,34E-01

BIOGENIC CARBON	
Contents organic carbon in product (kg C_{org})	0,00E+00
Contents organic carbon in packaging (kg C_{org})	3,87E-02

MAIN IMPACT INDICATORS: 1 piece emergency lighting fixture EXIT M DS

	Life Cycle Stage										
Indicator	**Unit**	**A1**	**A2**	**A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-total	kg CO_2 eq.	9,25E+00	1,36E-01	1,06E+00	1,73E-02	1,15E-01	0,00E+00	2,95E-02	5,09E-02	6,99E-04	-1,73E+00
GWP-fossil	kg CO_2 eq.	9,37E+00	1,36E-01	1,25E+00	1,73E-02	1,10E-01	0,00E+00	2,95E-02	4,99E-02	6,92E-04	-7,84E-01
GWP-biogenic	kg CO_2 eq.	-1,31E-01	5,69E-05	-2,00E-01	1,20E-05	5,11E-03	0,00E+00	2,04E-05	9,87E-04	6,90E-06	-9,43E-01
GWP-luluc	kg CO_2 eq.	1,02E-02	5,37E-05	6,43E-03	5,74E-06	1,04E-04	0,00E+00	9,78E-06	2,25E-05	1,07E-07	-2,59E-04
ODP	kg CFC11 eq.	1,76E-07	2,50E-09	2,03E-08	3,44E-10	1,36E-10	0,00E+00	5,86E-10	4,66E-10	1,09E-11	-5,23E-09
AP	mol H+ eq.	7,89E-02	1,26E-03	5,69E-03	3,60E-05	5,00E-04	0,00E+00	6,13E-05	3,55E-04	5,80E-06	-2,49E-03
EP-freshwater	kg PO_4 eq.	5,68E-03	8,32E-06	1,08E-03	1,17E-06	1,41E-04	0,00E+00	2,00E-06	2,80E-05	2,11E-08	-1,49E-04
EP-marine	kg N eq.	1,03E-02	3,10E-04	1,89E-03	8,65E-06	8,88E-05	0,00E+00	1,47E-05	1,37E-04	2,65E-06	-1,86E-03
EP-terrestrial	mol N eq.	1,08E-01	3,43E-03	1,48E-02	9,33E-05	6,84E-04	0,00E+00	1,59E-04	1,45E-03	2,91E-05	-4,91E-03
POCP	kg NMVOC eq.	3,98E-02	1,13E-03	4,09E-03	5,98E-05	1,92E-04	0,00E+00	1,02E-04	4,29E-04	8,81E-06	-1,91E-03
ADP-minerals & metals	kg Sb eq.	4,65E-04	3,96E-07	3,29E-06	5,63E-08	1,05E-07	0,00E+00	9,59E-08	3,05E-08	3,89E-10	-2,20E-06
ADP-fossil	MJ	1,55E+02	1,84E+00	1,61E+01	2,43E-01	1,18E+00	0,00E+00	4,14E-01	6,03E-01	9,06E-03	-3,49E+00
WDP	WDP (m^3) świat. ekw	2,65E+00	6,89E-03	3,66E-01	1,01E-03	5,42E-03	0,00E+00	1,72E-03	1,86E-03	1,95E-05	-3,01E-02

ADDITIONAL IMPACT INDICATIORS: 1 piece emergency lighting fixture EXIT M DS

	Life Cycle Stage										
Indicator	**Unit**	**A1**	**A2**	**A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
PM	Disease incidency	5,87E-07	7,73E-09	3,98E-08	1,27E-09	9,51E-10	0,00E+00	2,17E-09	7,54E-09	1,76E-10	-2,87E-08
IRP	kBq U235 eq.	1,03E+00	2,29E-03	8,02E-02	3,15E-04	9,21E-04	0,00E+00	5,37E-04	3,46E-04	7,70E-06	-1,92E-02

ETP-fw	CTUe	8,76E-04	2,33E-03	1,05E-03	7,29E-07	1,17E-06	0,00E+00	8,79E-05	-2,74E-05	7,07E-07	-9,28E-05
HTP-c	CTUh	8,95E-08	8,80E-10	3,49E-09	1,23E-10	9,74E-11	0,00E+00	2,09E-10	1,31E-10	2,56E-12	-3,76E-08
HTP-nc	CTUh	3,90E-07	9,72E-10	1,74E-08	1,53E-10	1,40E-09	0,00E+00	2,60E-10	3,17E-10	1,51E-12	-1,00E-08
SQP	-	5,55E+01	7,95E-01	3,37E+01	1,47E-01	2,01E-01	0,00E+00	2,50E-01	6,51E-02	5,16E-02	-1,50E+00

INDICATORS DESCRIBTIONS RESOURCE CONSUMPTION: 1 piece emergency lighting fixture EXIT M DS

	Life Cycle Stage										
Indicator	**Unit**	**A1**	**A2**	**A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
PERE	MJ	1,72E+01	3,06E-02	7,14E+00	4,19E-03	1,07E-01	0,00E+00	7,13E-03	2,29E-02	8,88E-04	-4,89E-01
PERM	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	1,72E+01	3,06E-02	7,14E+00	4,19E-03	1,07E-01	0,00E+00	7,13E-03	2,29E-02	8,88E-04	-4,89E-01
PEN-RE	MJ	1,56E+02	1,85E+00	1,71E+01	2,44E-01	1,55E+00	0,00E+00	4,16E-01	6,77E-01	9,06E-03	-3,98E+00
RE	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	MJ	1,56E+02	1,85E+00	1,71E+01	2,44E-01	1,55E+00	0,00E+00	4,16E-01	6,77E-01	9,06E-03	-3,98E+00
SM	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	m^3	1,71E-01	3,39E-04	2,99E-02	4,50E-05	2,28E-03	0,00E+00	7,66E-05	4,55E-04	3,86E-07	-1,97E-03

INDICATORS DESCRIBING OUTPUT STREAMS AND WASTE: 1 piece emergency lighting fixture EXIT M DS

	Life Cycle Stage										
Indicator	**Unit (expressed per DU)**	**A1**	**A2**	**A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
Hazardous waste	kg	WN	WN	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-hazardous waste	kg	WN	WN	4,00E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Radioactive waste	kg	WN	WN	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Components for re-use	kg	WN	WN	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for recycling	kg	WN	WN	1,28E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for energy recovery	kg	WN	WN	6,85E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy	MJ/energy carrier	WN	WN	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,29E-01

CARBON ORGANIC	
Contents organic carbon in product (kg C_{org})	0,00E+00
Contents organic carbon in packaging (kg C_{org})	3,87E-02

MAIN IMPACT INDICATORS: 1 piece emergency lighting fixture EXIT L

	Life Cycle Stage										
Indicator	**Unit**	**A1**	**A2**	**A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-total	kg CO_2 eq.	1,51E+01	2,19E-01	1,32E+00	2,15E-02	1,15E-01	0,00E+00	3,94E-02	6,33E-02	9,81E-04	-3,19E+00
GWP-fossil	kg CO_2 eq.	1,52E+01	2,19E-01	1,60E+00	2,15E-02	1,10E-01	0,00E+00	3,94E-02	6,20E-02	9,71E-04	-9,95E-01
GWP-biogenic	kg CO_2 eq.	-8,59E-02	7,86E-05	-2,86E-01	1,49E-05	5,11E-03	0,00E+00	2,73E-05	1,23E-03	9,68E-06	-2,19E+00
GWP-luluc	kg CO_2 eq.	1,67E-02	8,88E-05	9,43E-03	7,13E-06	1,04E-04	0,00E+00	1,31E-05	2,80E-05	1,50E-07	-4,51E-04
ODP	kg CFC11 eq.	2,57E-07	3,96E-09	2,98E-08	4,27E-10	1,36E-10	0,00E+00	7,84E-10	5,79E-10	1,53E-11	-9,46E-09
AP	mol H+ eq.	1,10E-01	2,39E-03	7,23E-03	4,48E-05	5,00E-04	0,00E+00	8,21E-05	4,42E-04	8,14E-06	-3,96E-03
EP-freshwater	kg PO_4 eq.	7,50E-03	1,28E-05	1,27E-03	1,46E-06	1,41E-04	0,00E+00	2,67E-06	3,49E-05	2,96E-08	-2,26E-04
EP-marine	kg N eq.	1,67E-02	5,91E-04	2,59E-03	1,08E-05	8,88E-05	0,00E+00	1,97E-05	1,71E-04	3,72E-06	-2,63E-03
EP-terrestrial	mol N eq.	1,69E-01	6,55E-03	2,01E-02	1,16E-04	6,84E-04	0,00E+00	2,13E-04	1,80E-03	4,08E-05	-7,74E-03
POCP	kg NMVOC eq.	5,96E-02	2,07E-03	5,55E-03	7,44E-05	1,92E-04	0,00E+00	1,36E-04	5,34E-04	1,24E-05	-3,09E-03
ADP-minerals & metals	kg Sb eq.	4,34E-04	6,01E-07	4,67E-06	7,00E-08	1,05E-07	0,00E+00	1,28E-07	3,80E-08	5,46E-10	-4,20E-06
ADP-fossil	MJ	2,35E+02	2,95E+00	2,11E+01	3,02E-01	1,18E+00	0,00E+00	5,54E-01	7,50E-01	1,27E-02	-5,49E+00
WDP	WDP (m^3) świat. ekw	4,07E+00	1,07E-02	5,35E-01	1,26E-03	5,42E-03	0,00E+00	2,30E-03	2,31E-03	2,74E-05	-6,05E-02

ADDITIONAL IMPACT INDICATORS: 1 piece emergency lighting fixture EXIT L

	Life Cycle Stage										
Indicator	**Unit**	**A1**	**A2**	**A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
PM	Disease incidency	9,77E-07	1,20E-08	5,54E-08	1,58E-09	9,51E-10	0,00E+00	2,90E-09	9,38E-09	2,47E-10	-4,73E-08
IRP	kBq U235 eq.	1,61E+00	3,47E-03	1,17E-01	3,92E-04	9,21E-04	0,00E+00	7,19E-04	4,30E-04	1,08E-05	-3,56E-02
ETP-fw	CTUe	1,01E-03	1,02E-03	3,47E-03	9,06E-07	1,57E-06	0,00E+00	8,79E-05	-2,75E-05	1,40E-06	-1,41E-04
HTP-c	CTUh	1,14E-07	1,38E-09	4,87E-09	1,53E-10	9,74E-11	0,00E+00	2,80E-10	1,63E-10	3,59E-12	-4,43E-08
HTP-nc	CTUh	3,68E-07	1,49E-09	2,26E-08	1,90E-10	1,40E-09	0,00E+00	3,48E-10	3,94E-10	2,12E-12	-1,36E-07
SQP	-	6,53E+01	1,20E+00	4,77E+01	1,83E-01	2,01E-01	0,00E+00	3,35E-01	8,10E-02	7,23E-02	-2,26E+00

INDICATORS DESCRIBTIONS RESOURCE CONSUMPTION: 1 piece emergency lighting fixture EXIT L

	Life Cycle Stage										
Indicator	**Unit**	**A1**	**A2**	**A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
PERE	MJ	2,41E+01	3,06E-02	7,14E+00	4,97E-03	1,06E-01	0,00E+00	9,11E-03	2,82E-02	1,24E-03	-4,93E-01
PERM	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	2,41E+01	3,06E-02	7,14E+00	4,97E-03	1,06E-01	0,00E+00	9,11E-03	2,82E-02	1,24E-03	-4,93E-01
PEN-RE	MJ	2,41E+02	1,72E+01	3,40E+03	3,04E-01	1,55E+00	0,00E+00	5,56E-01	8,42E-01	1,27E-02	-1,78E+02
RE	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	MJ	2,41E+02	1,72E+01	3,40E+03	3,04E-01	1,55E+00	0,00E+00	5,56E-01	8,42E-01	1,27E-02	-1,78E+02
SM	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	m^3	2,25E-01	5,05E-04	3,90E-02	5,59E-05	2,28E-03	0,00E+00	1,02E-04	5,65E-04	5,41E-07	-3,11E-03

INDICATORS DESCRIBING OUTPUT STREAMS AND WASTE: 1 piece emergency lighting fixture EXIT L

	Life Cycle Stage										
Indicator	**Unit (expressed per DU)**	**A1**	**A2**	**A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
Hazardous waste	kg	WN	WN	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Non-hazardous waste	kg	WN	WN	4,00E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Radioactive waste	kg	WN	WN	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Components for re-use	kg	WN	WN	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for recycling	kg	WN	WN	1,73E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for energy recovery	kg	WN	WN	7,51E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy	MJ/energy carrier	WN	WN	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,89E-01

CARBON ORGANIC	
Contents organic carbon in product (kg C_{org})	0,00E+00
Contents organic carbon in packaging (kg C_{org})	3,87E-02

MAIN IMPACT INDICATORS: 1 piece emergency lighting fixture EXIT L DS

		Life Cycle Stage									
Indicator	**Unit**	**A1**	**A2**	**A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-total	kg CO_2 eq.	1,70E+01	2,38E-01	1,32E+00	2,85E-02	1,15E-01	0,00E+00	4,71E-02	8,38E-02	1,09E-03	-3,48E+00
GWP-fossil	kg CO_2 eq.	1,72E+01	2,38E-01	1,60E+00	2,85E-02	1,10E-01	0,00E+00	4,71E-02	8,22E-02	1,08E-03	-1,29E+00
GWP-biogenic	kg CO_2 eq.	-2,01E-01	9,13E-05	-2,86E-01	1,97E-05	5,11E-03	0,00E+00	3,26E-05	1,63E-03	1,08E-05	-2,19E+00
GWP-luluc	kg CO_2 eq.	1,89E-02	9,52E-05	9,43E-03	9,46E-06	1,04E-04	0,00E+00	1,56E-05	3,71E-05	1,67E-07	-4,83E-04
ODP	kg CFC11 eq.	3,06E-07	4,33E-09	2,98E-08	5,67E-10	1,36E-10	0,00E+00	9,37E-10	7,67E-10	1,71E-11	-9,87E-09
AP	mol H+ eq.	1,33E-01	2,43E-03	7,23E-03	5,93E-05	5,00E-04	0,00E+00	9,81E-05	5,86E-04	9,07E-06	-4,44E-03
EP-freshwater	kg PO_4 eq.	9,42E-03	1,42E-05	1,27E-03	1,93E-06	1,41E-04	0,00E+00	3,19E-06	4,62E-05	3,30E-08	-2,63E-04
EP-marine	kg N eq.	1,89E-02	6,00E-04	2,59E-03	1,43E-05	8,88E-05	0,00E+00	2,36E-05	2,26E-04	4,15E-06	-3,09E-03
EP-terrestrial	mol N eq.	1,94E-01	6,64E-03	2,01E-02	1,54E-04	6,84E-04	0,00E+00	2,54E-04	2,39E-03	4,54E-05	-8,75E-03
POCP	kg NMVOC eq.	7,01E-02	2,13E-03	5,55E-03	9,86E-05	1,92E-04	0,00E+00	1,63E-04	7,08E-04	1,38E-05	-3,49E-03
ADP-minerals & metals	kg Sb eq.	6,55E-04	6,66E-07	4,67E-06	9,27E-08	1,05E-07	0,00E+00	1,53E-07	5,03E-08	6,09E-10	-4,26E-06
ADP-fossil	MJ	2,75E+02	3,21E+00	2,11E+01	4,01E-01	1,18E+00	0,00E+00	6,62E-01	9,93E-01	1,42E-02	-6,18E+00
WDP	WDP (m^3) świat. ekw	4,74E+00	1,18E-02	5,35E-01	1,66E-03	5,42E-03	0,00E+00	2,75E-03	3,06E-03	3,05E-05	-7,40E-02

ADDITIONAL IMPACT INDICATORS: 1 piece emergency lighting fixture EXIT L DS

		Life Cycle Stage									
Indicator	**Unit**	**A1**	**A2**	**A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
PM	Disease incidency	1,09E-06	1,33E-08	5,54E-08	2,10E-09	9,51E-10	0,00E+00	3,47E-09	1,24E-08	2,76E-10	-5,17E-08
IRP	kBq U235 eq.	1,87E+00	3,84E-03	1,17E-01	5,20E-04	9,21E-04	0,00E+00	8,59E-04	5,70E-04	1,20E-05	-3,69E-02
ETP-fw	CTUe	1,36E-03	1,82E-03	3,55E-03	1,20E-06	1,87E-06	0,00E+00	8,79E-05	-4,03E-05	1,40E-06	-1,63E-04
HTP-c	CTUh	1,48E-07	1,51E-09	4,87E-09	2,02E-10	9,74E-11	0,00E+00	3,34E-10	2,16E-10	4,00E-12	-5,99E-08
HTP-nc	CTUh	5,52E-07	1,66E-09	2,26E-08	2,52E-10	1,40E-09	0,00E+00	4,16E-10	5,22E-10	2,36E-12	-1,38E-07
SQP	-	9,18E+01	1,35E+00	4,77E+01	2,42E-01	2,01E-01	0,00E+00	4,00E-01	1,07E-01	8,06E-02	-2,54E+00

INDICATORS DESCRIBTIONS RESOURCE CONSUMPTION: 1 piece emergency lighting fixture EXIT L DS											
	Life Cycle Stage										
Indicator	**Unit**	**A1**	**A2**	**A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
PERE	MJ	3,03E+01	5,16E-02	1,00E+01	6,90E-03	1,07E-01	0,00E+00	1,14E-02	3,77E-02	1,39E-03	-9,32E-01
PERM	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	3,03E+01	5,16E-02	1,00E+01	6,90E-03	1,07E-01	0,00E+00	1,14E-02	3,77E-02	1,39E-03	-9,32E-01
PEN-RE	MJ	2,80E+02	3,22E+00	2,16E+01	4,02E-01	1,55E+00	0,00E+00	6,65E-01	1,12E+00	1,42E-02	-6,98E+00
RE	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	MJ	2,80E+02	3,22E+00	2,16E+01	4,02E-01	1,55E+00	0,00E+00	6,65E-01	1,12E+00	1,42E-02	-6,98E+00
SM	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	m^3	2,86E-01	5,62E-04	3,90E-02	7,41E-05	2,28E-03	0,00E+00	1,22E-04	7,49E-04	6,03E-07	-3,51E-03

INDICATORS DESCRIBING OUTPUT STREAMS AND WASTE: 1 piece emergency lighting fixture EXIT L DS											
	Life Cycle Stage										
Indicator	**Unit (expressed per DU)**	**A1**	**A2**	**A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
Hazardous waste	kg	WN	WN	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Non-hazardous waste	kg	WN	WN	4,00E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Radioactive waste	kg	WN	WN	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Components for re-use	kg	WN	WN	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for recycling	kg	WN	WN	2,03E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for energy recovery	kg	WN	WN	1,06E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy	MJ/energy carrier	WN	WN	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,69E-01

CARBON ORGANIC	
Contents organic carbon in product (kg C_{org})	0,00E+00
Contents organic carbon in packaging (kg C_{org})	3,87E-02

6. INTERPRETATION OF LCA

Figures 3, 4, 5, 6, 7 show contributions of the each life cycle module to the basic impact categories emergency lighting fixture EXIT:

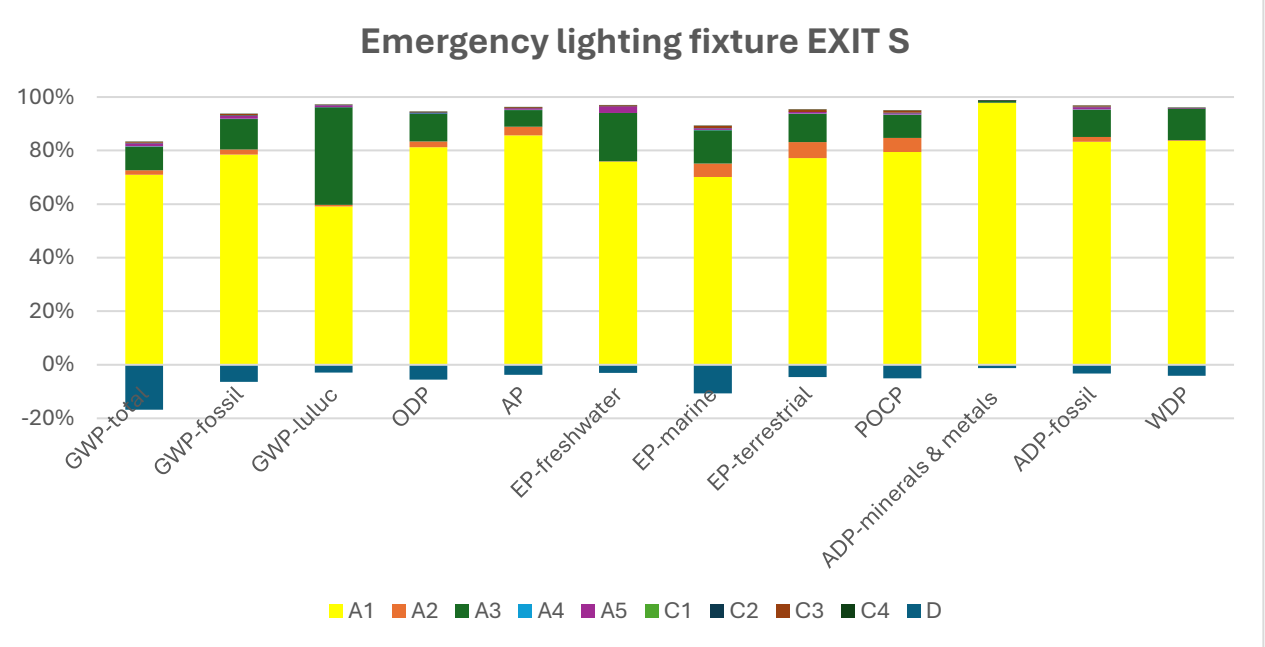


Figure 3 Shares of life cycle modules on the main categories of influence- emergency lighting fixture EXIT S

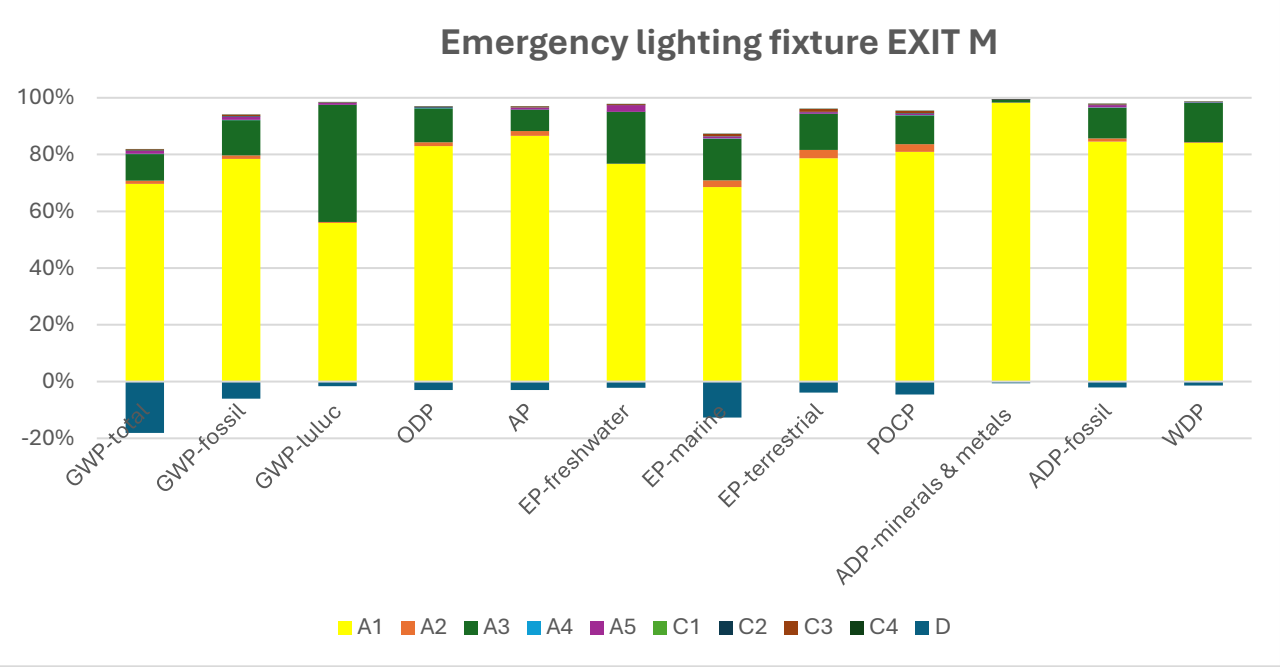


Figure 4 Shares of life cycle modules on the main categories of influence- emergency lighting fixture EXIT M

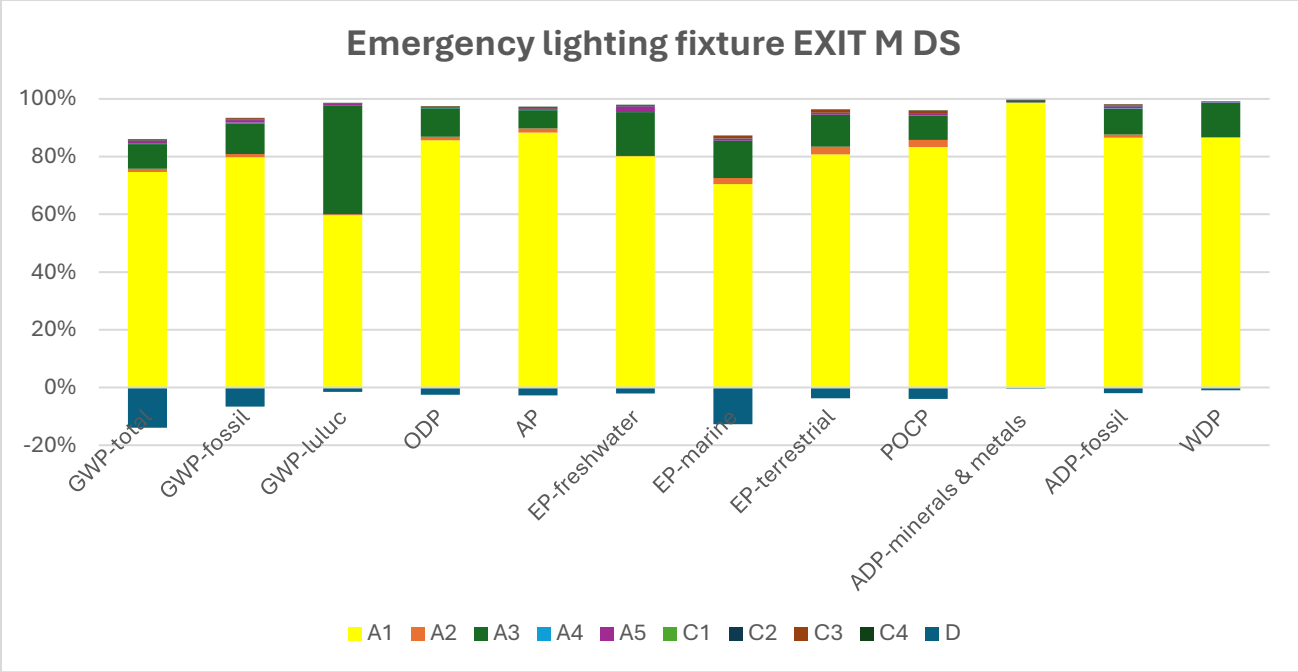


Figure 5 Shares of life cycle modules on the main categories of influence- emergency lighting fixture EXIT M DS

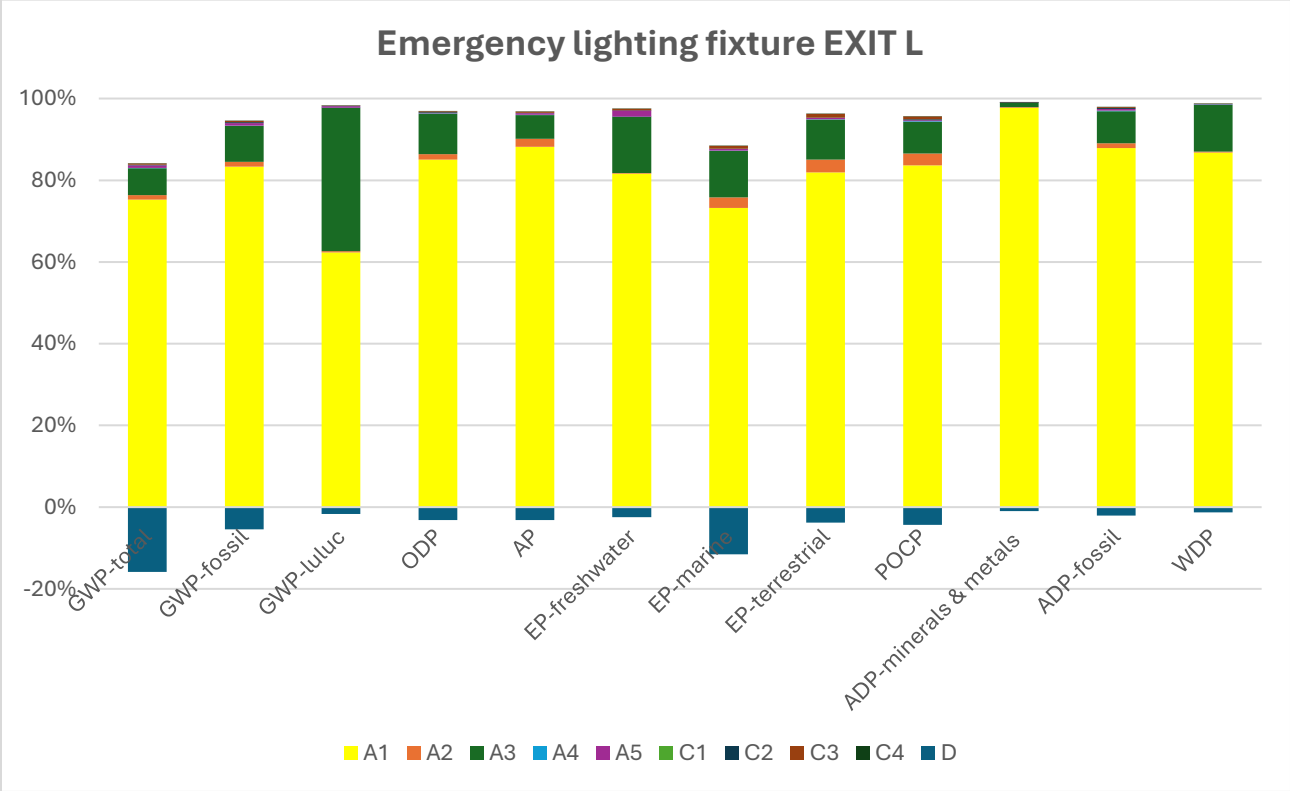


Figure 6 Shares of life cycle modules on the main categories of influence- emergency lighting fixture EXIT M

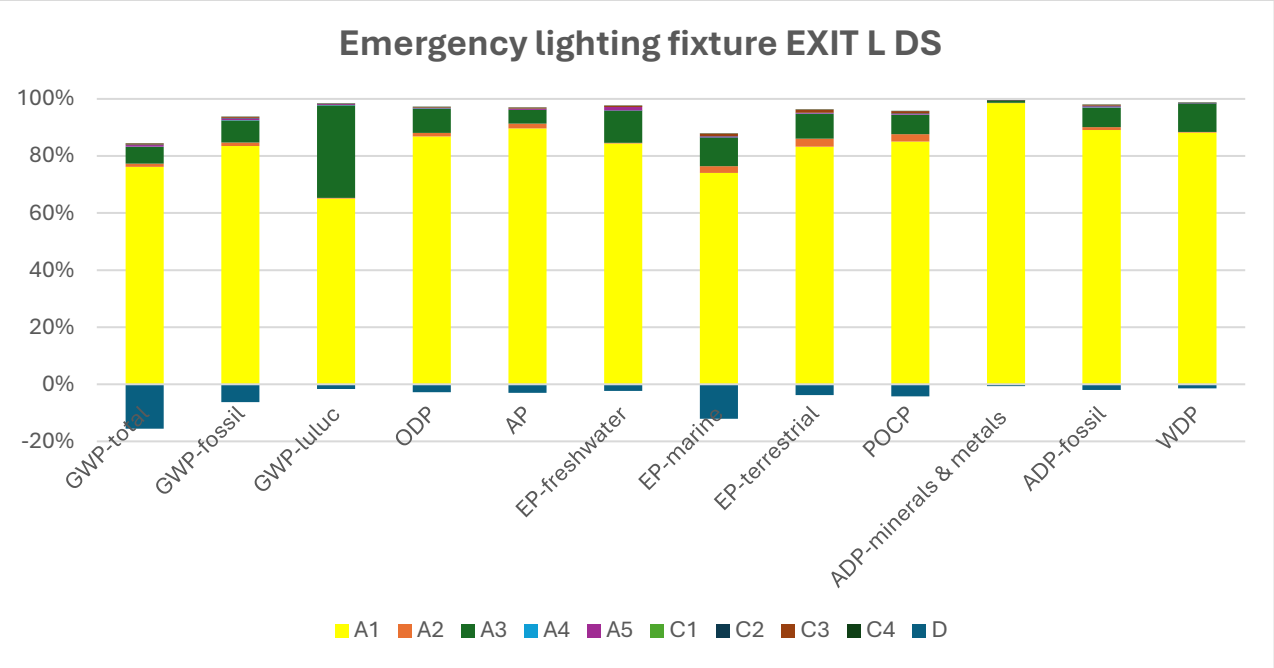


Figure 7 Shares of life cycle modules on the main categories of influence- emergency lighting fixture EXIT L DS.

LITERATURE

- ✓ ICIMB-PCR A. General Product Category Rules for Construction Products.
- ✓ PN-EN ISO 14025:2014-04, Environmental labels and declarations -- Type III environmental declarations -- Rules and procedures.
- ✓ PN-EN 15804+A2:2020, Sustainability of building structures -- Environmental product declarations -Basic principles of categorization of construction products.
- ✓ PN-EN ISO 14040:2009 Environmental management. Life Cycle Assessment. Principles and structure.
- ✓ PN-EN ISO 14044:2009, Environmental management. Life Cycle Assessment. Requirements and guidelines.
- ✓ ISO 21930:2017 - Zrównoważony rozwój w budynkach i robotach inżynierii lądowej — Zasady podstawowe dotyczące środowiskowych deklaracji wyrobu dla wyrobów budowlanych.
- ✓ EN 15942:2012, Sustainability of construction works – Environmental product declarations – Communication format business-to-business.
- ✓ Ustawa z dnia 14 grudnia 2012 r. o odpadach Dz.U. 2013 poz. 21.
- ✓ Ustawa z dnia 27 kwietnia 2001 r. Prawo ochrony środowiska Dz.U.2024.54 t.j.
- ✓ KOBiZE Wskaźniki emisyjności CO2, SO2, NOx, CO i pyłu całkowitego dla energii elektrycznej, grudzień 2023.
- ✓ USTAWA z dnia 11 września 2015 r. o zużytym sprzęcie elektrycznym i elektronicznym Dz. U. z 2024 r. poz. 573.t.j.
- ✓ Dane ze strony firmowej: **WWW.AWEX.EU**

Materiały objaśniające można uzyskać kontaktując się bezpośrednio z przedstawicielem RAFAŁ STANUCH P.P.H.U. AWEX Sp. z o.o.

Łukasiewicz Research Network – Institute of Ceramics and Building Materials
31-983 Kraków, Cementowa 8 Str., Poland

CENTER OF ENVIROMENTAL ENGINEERING

45-641 Opole, Oświęcimska 21 Str., Poland
Phone: +48 77 456 32 01
www.icimb.lukasiewicz.gov.pl
info.opole@icimb.lukasiewicz.gov.pl

Łukasiewicz
Institute
of Ceramics
and Building
Materials

PROCESS ENGINEERING RESEARCH GROUP

TYPE III ENVIRONMENTAL DECLARATION CERTIFICATE

no. 01-01/2025

Products:

Emergency lighting fixture EXIT:

EXIT S, EXIT M, EXIT M DS, EXIT L, EXIT L DS

Owner:

Rafał Stanuch P.P.H.U. AWEX Sp. z o.o.

MASŁOMIĄCA ul. Długa 39,
32-091 MICHAŁOWICE

The declaration was developed in accordance with the requirements of the standard:

PN-EN 15804+A2: 2020-03

Sustainability of construction works
Environmental product declarations
Core rules for the product category of construction products

The declaration was verified in accordance with the requirements of the standard:

PN-EN ISO 14025:2010

Environmental labels and declarations
Type III environmental declarations. Principles and procedures

The certificate was issued for the first time on **January,17 2025** and is valid for 5 years or until the said EPD is amended.

Process Engineering Research Group Leader

Ewa Głodek-Bucyk, PhD Eng.

Director of Center of Environmental Engineering

Joanna Poluszyńska, PhD

Opole, January 2025