

Environmental product declaration

in accordance with ISO 14025 and EN 15804+A2

Adax Neo Basic



ADAX

Owner of the declaration:

Adax AS

Product:

Adax Neo Basic

Declared unit:

1 pcs

This declaration is based on Product Category Rules:

CEN Standard EN 15804:2012+A2:2019
PCR EPD Italy 007 - Electronic and electrical products
and systems - Other electronics

Program operator:

EPD-Global

Declaration number:

NEPD-14524-15008

Issue date:

19.12.2025

Valid to:

19.12.2030

EPD software:

LCAno EPD generator ID: 1327014

General information

Product

Adax Neo Basic

Program operator:

EPD-Global
Post Box 5250 Majorstuen, 0303 Oslo, Norway
Phone: +47 977 22 020
web: www.epd-global.com

Declaration number:

NEPD-14524-15008

This declaration is based on Product Category Rules:

CEN Standard EN 15804:2012+A2:2019
PCR EPD Italy 007 - Electronic and electrical products and systems - Other electronics

Statement of liability:

The owner of the declaration shall be liable for the underlying information and evidence. EPD-Global shall not be liable with respect to manufacturer information, life cycle assessment data and evidences.

Declared unit:

1 pcs Adax Neo Basic

Declared unit with option:

A1, A2, A3, A4, A5, B6, C1, C2, C3, C4, D

Functional unit:

1 pc of Adax Neo Basic, installed and used to warm an indoor environment, during a service life of 17 years, including waste treatment at end-of-life.

General information on verification of EPD from EPD tools:

Independent verification of data, other environmental information and the declaration according to ISO 14025:2010, § 8.1.3 and § 8.1.4. Verification of each EPD is made according to EPD-Global's guidelines for verification and approval requiring that tools are i) integrated into the company's environmental management system, ii) the procedures for use of the EPD tool are approved by EPD-Global, and iii) the process is reviewed annually by an independent third party verifier. See Appendix G of EPD-Global's General Programme Instructions for further information on EPD tools

Verification of EPD tool:

Independent third party verification of the EPD tool, background data and test-EPD in accordance with EPDNorway's procedures and guidelines for verification and approval of EPD tools. Approval number: NEPDT78.

Third party verifier:

Elisabet Amat, GREENIZE projects

(no signature required)

Owner of the declaration:

Adax AS
Contact person: Justinas Kulbe
Phone: + 47 90764511
e-mail: justinas.kulbe@adax.no

Manufacturer:

Adax AS
Myhres gate 1
3060 Svelvik, Norway

Place of production:

Adax production site(UAB ADAX) - Panevezys (Lithuania)
Ramygalos g. 190E
36224 Panevezys, Lithuania

Management system:

ISO - 9001, 14001 and 45001

Organisation no:

991678891

Issue date:

19.12.2025

Valid to:

19.12.2030

Year of study:

Comparability:

EPD of construction products may not be comparable if they not comply with EN 15804 and seen in a building context.

Development and verification of EPD:

The declaration is created using EPD tool lca.tools ver EPD2022.03, developed by LCA.no. The EPD tool is integrated in the company's management system, and has been approved by EPD-Global.

Developer of EPD: Zohaib Ali

Reviewer of company-specific input data and EPD: Børge Heggen Johansen, Energiråd AS

Approved:



Håkon Hauan, CEO EPD-Global

Product

Product description:

Neo Basic is an design award-winning energy saver and has been the bestselling panel heater in Scandinavia since it was launched in 2007. The panel heater has a slim and timeless design that will fit in well with your home interior. Neo Basic is easy to mount, and has a reliable thermostat function with digital display. The thermostat also has a built-in day and night reduction function, to help reduce your electricity consumption.

Product specification

- Easy adjustable and digital thermostat
- Week program.
- Built-in day and night reduction function.
- IP20. • Grounded product (Cl. I).
- Overheating protection
- Cable length 1,3 m
- Approved Ecodesign 2018
- 5 year warranty

Materials	kg	%
Chemical	0.1801	3.85
Electronic - Cable	0.1374	2.94
Electronic - LED chip	0.003038	0.06502
Electronic - Wire	0.02	0.428
Electronic component	0.4743	10.15
Metal - Alloy	0.009	0.1926
Metal - Aluminium	0.02	0.428
Metal - Steel	3.52	75.31
Plastic	0.3087	6.61
Printed paper	0.001	0.0214
Total	4.67	100.00

Packaging	kg	%
Packaging - Cardboard	0.48	88.01
Packaging - Paper	0.06	10.38
Packaging - Plastic	0.01	1.61
Total incl. packaging	5.21	100.00

Technical data:

Market:

Europe.

Reference service life, product

17 years. Standard lifetime for electrical heaters applications, provided in PEP Ecopassport PSR for direct, visible, fixed electric heating appliances.

Reference service life, building or construction works

60 years. Standard service life for buildings according to the PCR Part A of EPD Norway.

LCA: Calculation rules

Declared unit:

1 pcs Adax Neo Basic

Cut-off criteria:

All major raw materials and all the essential energy is included. The production processes for raw materials and energy flows with very small amounts (less than 1%) are not included. These cut-off criteria do not apply for hazardous materials and substances.

Allocation:

The allocation is made in accordance with the provisions of EN 15804. Incoming energy and water and waste production in-house is allocated equally among all products through mass allocation. Effects of primary production of recycled materials is allocated to the main product in which the material was used. The recycling process and transportation of the material is allocated to this analysis.

Data quality:

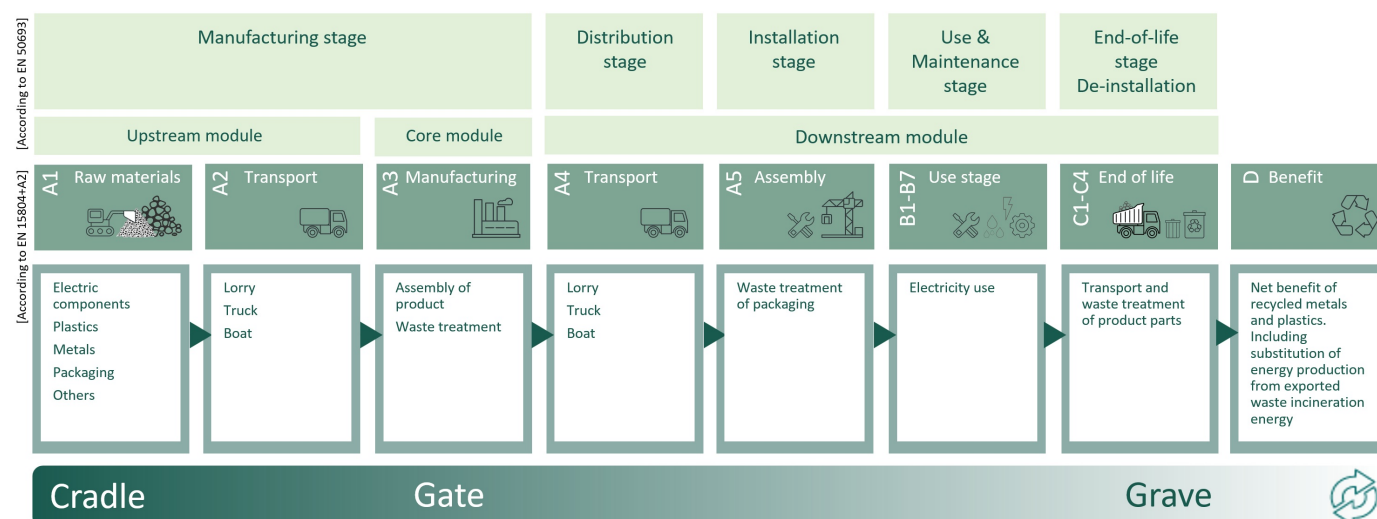
Specific data for the product composition are provided by the manufacturer. The data represent the production of the declared product and were collected for EPD development in the year of study. Background data is based on EPDs according to EN 15804 and different LCA databases. The data quality of the raw materials in A1 is presented in the table below.

Materials	Source	Data quality	Year
Chemical	ecoinvent 3.6	Database	2019
Electronic - Cable	ecoinvent 3.6	Database	2019
Electronic - LED chip	Scholand et al. (2012) + Ecoinvent 3.6	Scientific literature + database	2017
Electronic - Wire	Product composition + ecoinvent 3.6	Supplier data + database	2019
Electronic component	Ecoinvent 3.6	Database	2019
Electronic component	Product composition + ecoinvent 3.6	Supplier data + database	2019
Metal - Alloy	Ecoinvent 3.6	Database	2019
Metal - Aluminium	ecoinvent 3.6	Database	2019
Metal - Steel	ecoinvent 3.6	Database	2019
Packaging - Cardboard	ecoinvent 3.6	Database	2019
Packaging - Paper	ecoinvent 3.6	Database	2019
Packaging - Plastic	Ecoinvent 3.6	Database	2019
Plastic	ecoinvent 3.6	Database	2019
Plastic	Modified ecoinvent 3.6	Database	2019
Printed paper	Ecoinvent 3.6	Database	2019

System boundaries (X=included, MND=module not declared, MNR=module not relevant)

Product stage			Construction installation stage		Use stage							End of life stage				Beyond the system boundaries
Raw materials	Transport	Manufacturing	Transport	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	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	X	MND	X	X	X	X	X

System boundary:



Additional technical information:

The reference product have different configurations but have the same main functionality, product standards and manufacturing technology, so extrapolation rules are established according to PEP Ecopassport PSR-0002-ed3.0 -EN-2023 06 06. The main differences in the product family include :

- Power (W)
- Weight (kg)

The different life cycle modules can be extrapolated to other mentioned configurations of the same product by applying a rule of proportionality to the parameters, presented in the table "Additional Technical Data". To calculate the environmental impacts for each different variant, the results of the reference product "Adax Neo basic" must be multiplied by the factor from the table ""Additional Technical Data".

Product Name	Weight (kg)	Power (W)	Extrapolation factor "All other " phases	Extrapolation factor "Use" phase
NEO Basic NP 04 KDT White-RAL9016 230V	3.52	400	0.675	0.4
NEO Basic NP 06 KDT White-RAL9016 230V	4.21	600	0.808	0.6
NEO Basic NP 08 KDT White-RAL9016 230V	4.855	800	0.931	0.8
NEO Basic NP 10 KDT White-RAL9016 230V	5.235	1000	1.004	1
NEO Basic NP 12 KDT White-RAL9016 230V	6.21	1200	1.191	1.2
NEO Basic NP 14 KDT White-RAL9016 230V	6.88	1400	1.32	0.6
NEO Basic NP 20 KDT White-RAL9016 230V	8.665	2000	1.662	2
NEO Basic NL 06 KDT White-RAL9016 230V	3.68	600	0.706	0.6
NEO Basic NL 08 KDT White-RAL9016 230V	4.365	800	0.837	0.8
NEO Basic NL 10 KDT White-RAL9016 230V	5.155	1000	0.989	1
NEO Basic NL 12 KDT White-RAL9016 230V	6.01	1200	1.153	1.2
NEO Basic NP 04 KDT Black - RAL9005 230V	3.52	400	0.675	0.4
NEO Basic NP 06 KDT Black - RAL9005 230V	4.21	600	0.808	0.6
NEO Basic NP 08 KDT Black - RAL9005 230V	4.855	800	0.931	0.8
NEO Basic NP 10 KDT Black - RAL9005 230V	5.235	1000	1.004	1
NEO Basic NP 12 KDT Black - RAL9005 230V	6.21	1200	1.191	1.2
NEO Basic NP 14 KDT Black - RAL9005 230V	6.88	1400	1.32	0.6
NEO Basic NP 20 KDT Black - RAL9005 230V	8.665	2000	1.662	2
NEO Basic NL 06 KDT Black - RAL9005 230V	3.68	600	0.706	0.6
NEO Basic NL 08 KDT Black - RAL9005 230V	4.365	800	0.837	0.8
NEO Basic NL 10 KDT Black - RAL9005 230V	5.155	1000	0.989	1
NEO Basic NL 12 KDT Black - RAL9005 230V	6.01	1200	1.153	1.2
NEO Basic NP 04 KDT Grey-RAL9006 230V	3.52	400	0.675	0.4
NEO Basic NP 06 KDT Grey-RAL9006 230V	4.21	600	0.808	0.6
NEO Basic NP 08 KDT Grey-RAL9006 230V	4.855	800	0.931	0.8

NEO Basic NP 10 KDT Grey-RAL9006 230V	5.235	1000	1.004	1
NEO Basic NP 12 KDT Grey-RAL9006 230V	6.21	1200	1.191	1.2
NEO Basic NP 14 KDT Grey-RAL9006 230V	6.88	1400	1.32	0.6
NEO Basic NP 20 KDT Grey-RAL9006 230V	8.665	2000	1.662	2
NEO Basic NL 06 KDT Grey-RAL9006 230V	3.68	600	0.706	0.6
NEO Basic NL 08 KDT Grey-RAL9006 230V	4.365	800	0.837	0.8
NEO Basic NL 10 KDT Grey-RAL9006 230V	5.155	1000	0.989	1
NEO Basic NL 12 KDT Grey-RAL9006 230V	6.01	1200	1.153	1.2
NEO Basic NP 04 DT White-RAL9016 400V	3.49	400	0.67	0.4
NEO Basic NP 06 DT White-RAL9016 400V	4.185	600	0.803	0.6
NEO Basic NP 08 DT White-RAL9016 400V	4.805	800	0.922	0.8
NEO Basic NP 10 DT White-RAL9016 400V	5.21	1000	1	1
NEO Basic NP 12 DT White-RAL9016 400V	6.185	1200	1.187	1.2
NEO Basic NP 14 DT White-RAL9016 400V	6.865	1400	1.317	1.4
NEO Basic NP 20 DT White-RAL9016 400V	8.65	2000	1.66	2
NEO Basic NL 06 DT White-RAL9016 400V	3.66	600	0.702	0.6
NEO Basic NL 08 DT White-RAL9016 400V	4.345	800	0.834	0.8
NEO Basic NL 10 DT White-RAL9016 400V	5.135	1000	0.985	1
NEO Basic NL 12 DT White-RAL9016 400V	5.99	1200	1.149	1.2
H30 H 04 KDT White-RAL9016 230V, 2024	3.52	400	0.675	0.4
H30 H 06 KDT White-RAL9016 230V, 2024	4.21	600	0.808	0.6
H30 H 08 KDT White-RAL9016 230V, 2024	4.855	800	0.931	0.8
H30 H 10 KDT White-RAL9016 230V, 2024	5.235	1000	1.004	1
H30 H 12 KDT White-RAL9016 230V, 2024	6.21	1200	1.191	1.2
H30 H 14 KDT White-RAL9016 230V, 2024	6.88	1400	1.32	0.6
H30 H 20 KDT White-RAL9016 230V, 2024	8.665	2000	1.662	2
H30 H 04 KDT Black-RAL9005 230V, 2024	3.52	400	0.675	0.4
H30 H 06 KDT Black-RAL9005 230V, 2024	4.21	600	0.808	0.6
H30 H 08 KDT Black-RAL9005 230V, 2024	4.855	800	0.931	0.8
H30 H 10 KDT Black-RAL9005 230V, 2024	5.235	1000	1.004	1
H30 H 12 KDT Black-RAL9005 230V, 2024	6.21	1200	1.191	1.2
H30 H 14 KDT Black-RAL9005 230V, 2024	6.88	1400	1.32	0.6
H30 H 20 KDT Black-RAL9005 230V, 2024	8.665	2000	1.662	2
H30 H 04 KDT Grey-RAL9006 230V, 2024	3.52	400	0.675	0.4
H30 H 06 KDT Grey-RAL9006 230V, 2024	4.21	600	0.808	0.6
H30 H 08 KDT Grey-RAL9006 230V, 2024	4.855	800	0.931	0.8
H30 H 10 KDT Grey-RAL9006 230V, 2024	5.235	1000	1.004	1
H30 H 12 KDT Grey-RAL9006 230V, 2024	6.21	1200	1.191	1.2
H30 H 14 KDT Grey-RAL9006 230V, 2024	6.88	1400	1.32	0.6
H30 H 20 KDT Grey-RAL9006 230V, 2024	8.665	2000	1.662	2
H30 L 06 KDT White-RAL9016 230V, 2024	3.68	600	0.706	0.6
H30 L 08 KDT White-RAL9016 230V, 2024	4.365	800	0.837	0.8
H30 L 10 KDT White-RAL9016 230V, 2024	5.155	1000	0.989	1
H30 L 12 KDT White-RAL9016 230V, 2024	6.01	1200	1.153	1.2
H30 L 06 KDT Black-RAL9005 230V, 2024	3.68	600	0.706	0.6
H30 L 08 KDT Black-RAL9005 230V, 2024	4.365	800	0.837	0.8
H30 L 10 KDT Black-RAL9005 230V, 2024	5.155	1000	0.989	1
H30 L 12 KDT Black-RAL9005 230V, 2024	6.01	1200	1.153	1.2
H30 L 06 KDT Grey-RAL9006 230V, 2024	3.68	600	0.706	0.6
H30 L 08 KDT Grey-RAL9006 230V, 2024	4.365	800	0.837	0.8
H30 L 10 KDT Grey-RAL9006 230V, 2024	5.155	1000	0.989	1
H30 L 12 KDT Grey-RAL9006 230V, 2024	6.01	1200	1.153	1.2

LCA: Scenarios and additional technical information

The following information describe the scenarios in the different modules of the EPD.

Module A4 = Average distribution into the Europe market (1000 km).

Modules A5 = Installation is performed by manual labor, with the use of electrical machines, that fall under the cut-off criteria of 1% and is therefore neglected. Packaging of the final product consist of a corrugated board box.

Module B6 :The operational energy use of the electrical heater is calculated based on the methodology provided in PEP Ecopassport PSR-0002-ed3.0 -EN-2023 06 06. To calculate the electricity use of the electrical heater , the following scenario parameters have been applied:

$$C = RLT * n * (1 - (A + 0.5 * B))$$

Where:

C: final energy consumption to heat for 17 years, expressed in kWh (17 years is the standard reference lifetime suggested in the PSR).

RLT: number of annual periods defined by the reference lifetime of the reference product, expressed in years.

$n = 8760 * P * R * 0.14$: 1-year consumption by a direct, visible, fixed electric heating appliance as described in table 6 of the PSR.

8760: hours per year.

P: Thermal power of the reference product in kW.

R: 100 % yield rate of the reference product in %.

14 %: average annual working rate in %.

A: Bonus related to type "A" energy saving functions not requiring a predetermined action by the consumer, as described in table 7 of the PSR and expressed in %.

B: Bonus related to type "B" energy saving functions requiring a predetermined action by the consumer, as described in table 7 of the PSR and expressed in %.

Module C1 = The de-installation of the electrical heater is carried out manually, with the assistance of electrical tools. The energy consumption of portable electrical devices (e.g., drills) is typically low, falling below the 1% cut-off criterion, and is therefore disregarded.

Module C2 = Transportation from building site to the waste treatment facility with an average distance of 300km.

Modules C3 and C4 = Waste treatment of the product follows the default values provided in EN 50693, Product Category Rules for life cycle assessments of electronic and electrical products and systems, table G.4. This table specified how different types of raw materials used in A1 will likely be treated during the end-of-life of the product. Waste treatments in C3 include material recycling and incineration with and without energy recovery and fly ash extraction. Disposal in C4 consist of landfilling of different waste fractions and of ashes.

Module D = The recyclability of metals, plastics, and electronic components allows the producers a credit for the net scrap that is produced at the end of a product's life. The benefits from recycling of net scrap are described in formula from EN 15804:2012+A2:2019. Substitution of heat and electricity generated by the incineration with energy recovery of plastic insulation and other parts is also calculated in module D.

Transport from production place to user (A4)	Capacity utilisation (incl. return) %	Distance (km)	Fuel/Energy Consumption	Unit	Value (Liter/tonne)
Truck, 16-32 tonnes, EURO 6 (km) - Europe	36.7 %	1000.00	0.043	l/tkm	43.00
Assembly (A5)	Unit	Value			
Waste, packaging, corrugated board box, to average treatment - A5 including transport (kg)	kg	0.475			
Waste, packaging, paper printed, to average treatment - A5 including transport (kg)	kg	0.046			
Waste, packaging, kraft paper, unbleached, to average treatment - A5 including transport (kg)	kg	0.01			
Waste, packaging, plastic parts, polycarbonate, PC, to average treatment (kg)	kg	0.008			
Waste, packaging, plastic film (PET), to average treatment (kg)	kg	0.0007			
Waste, packaging, label, paper printed, supercalendered with silicone and adhesive, to average treatment (kg)	kg	0.000035			
Operational energy (B6)	Unit	Value			
Electricity, European average (kWh)	kWh	17200.26			
Transport to waste processing (C2)	Capacity utilisation (incl. return) %	Distance (km)	Fuel/Energy Consumption	Unit	Value (Liter/tonne)
Truck, 16-32 tonnes, EURO 6 (km) - Europe	36.7 %	300.00	0.043	l/tkm	12.90

Waste processing (C3)	Unit	Value			
Steel to recycling (kg)	kg	2.82			
Waste treatment per kg used electronic components, manual separation (kg)	kg	0.157			
Waste treatment of plastic mixture, incineration with energy recovery and fly ash extraction (kg)	kg	0.2068			
Copper to recycling (kg)	kg	0.03133			
Waste treatment per kg used PWB, shredding and separation - C3 (kg)	kg	0.06736			
Waste treatment per kg electronics scrap from PWB, with components, recycling of metals C3 (kg)	kg	0.03368			
Aluminium to recycling (kg)	kg	0.014			
Waste treatment per kg used electronic plug connector, manual separation (kg)	kg	0.0004			
Waste treatment of hazardous waste, incineration with energy recovery and fly ash extraction (kg)	kg	0.0000507			
Disposal (C4)	Unit	Value			
Landfilling of steel (kg)	kg	0.7038			
Aluminium to recycling (kg)	kg	0.287			
Landfilling of aluminium (kg)	kg	0.129			
Landfilling of hazardous waste (kg)	kg	0.2139			
Landfilling of ashes from incineration of Plastic mixture, process per kg ashes and residues (kg)	kg	0.007232			
Landfilling of plastic mixture (kg)	kg	0.2068			
Landfilling of copper (kg)	kg	0.02088			
Landfilling of mixed metals (kg)	kg	0.009			
Landfilling of municipal solid waste (kg)	kg	0.001			
Landfilling of ashes from incineration of Hazardous waste, process per kg ashes and residues - C4 (kg)	kg	0.000009582			
Benefits and loads beyond the system boundaries (D)	Unit	Value			
Substitution of primary steel with net scrap (kg)	kg	1.88			
Substitution of primary aluminium with net scrap (kg)	kg	0.2849			
Substitution of electricity, in Norway (MJ)	MJ	0.3178			
Substitution of thermal energy, district heating, in Norway (MJ)	MJ	4.81			
Substitution of primary copper with net scrap (kg)	kg	0.009279			
Substitution of primary metals with net scrap from PWB, with components (kg)	kg	0.009903			

LCA: Results

The LCA results are presented below for the declared unit defined on page 2 of the EPD document.

Environmental impact							
Indicator		Unit	A1	A2	A3	A4	A5
	GWP-total	kg CO ₂ -eq	3.68E+01	2.86E-01	9.99E-01	8.52E-01	9.13E-01
	GWP-fossil	kg CO ₂ -eq	3.73E+01	2.86E-01	9.80E-01	8.51E-01	9.29E-03
	GWP-biogenic	kg CO ₂ -eq	-5.57E-01	1.18E-04	1.09E-02	3.52E-04	9.03E-01
	GWP-luluc	kg CO ₂ -eq	6.59E-02	1.02E-04	8.96E-03	3.03E-04	2.89E-06
	ODP	kg CFC11 -eq	2.53E-06	6.47E-08	1.54E-07	1.93E-07	1.85E-09
	AP	mol H ⁺ -eq	3.46E-01	8.21E-04	5.89E-03	2.45E-03	4.15E-05
	EP-FreshWater	kg P -eq	3.27E-03	2.28E-06	2.72E-05	6.80E-06	7.20E-08
	EP-Marine	kg N -eq	4.44E-02	1.62E-04	1.22E-03	4.84E-04	1.42E-05
	EP-Terrestrial	mol N -eq	7.70E-01	1.82E-03	1.43E-02	5.42E-03	1.49E-04
	POCP	kg NMVOC -eq	1.48E-01	6.96E-04	3.83E-03	2.07E-03	4.29E-05
	ADP-minerals&metals ¹	kg Sb-eq	1.58E-02	7.89E-06	5.85E-06	2.35E-05	2.13E-07
	ADP-fossil ¹	MJ	4.53E+02	4.32E+00	1.76E+01	1.29E+01	1.23E-01
	WDP ¹	m ³	2.16E+03	4.18E+00	1.19E+03	1.25E+01	1.62E-01

Indicator		Unit	B6	C1	C2	C3	C4	D
	GWP-total	kg CO ₂ -eq	7.36E+03	0.00E+00	2.56E-01	5.30E-01	8.28E-02	-5.27E+00
	GWP-fossil	kg CO ₂ -eq	7.29E+03	0.00E+00	2.55E-01	5.29E-01	8.16E-02	-5.20E+00
	GWP-biogenic	kg CO ₂ -eq	5.13E+01	0.00E+00	1.06E-04	8.71E-05	8.00E-04	-1.45E-02
	GWP-luluc	kg CO ₂ -eq	1.70E+01	0.00E+00	9.09E-05	8.18E-05	4.08E-04	-5.08E-02
	ODP	kg CFC11 -eq	6.18E-04	0.00E+00	5.79E-08	3.42E-09	6.42E-09	-2.03E-03
	AP	mol H ⁺ -eq	4.26E+01	0.00E+00	7.34E-04	2.65E-04	3.26E-04	-6.68E-02
	EP-FreshWater	kg P -eq	7.79E-01	0.00E+00	2.04E-06	1.41E-06	2.29E-06	-4.47E-04
	EP-Marine	kg N -eq	5.41E+00	0.00E+00	1.45E-04	7.97E-05	1.09E-04	-6.32E-03
	EP-Terrestrial	mol N -eq	6.66E+01	0.00E+00	1.62E-03	8.47E-04	9.13E-04	-7.35E-02
	POCP	kg NMVOC -eq	1.69E+01	0.00E+00	6.22E-04	2.17E-04	3.59E-04	-2.63E-02
	ADP-minerals&metals ¹	kg Sb-eq	5.35E-02	0.00E+00	7.06E-06	3.32E-07	3.73E-07	-8.98E-04
	ADP-fossil ¹	MJ	1.51E+05	0.00E+00	3.86E+00	4.63E-01	8.35E-01	-5.75E+01
	WDP ¹	m ³	2.26E+06	0.00E+00	3.74E+00	4.03E+00	8.17E+00	-1.36E+03

GWP-total = Global Warming Potential total; GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption

"Reading example: 9.0 E-03 = 9.0*10⁻³ = 0.009"

1. The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator

Remarks to environmental impacts

Additional environmental impact indicators

Indicator	Unit	A1	A2	A3	A4	A5
 PM	Disease incidence	2.90E-06	1.75E-08	8.07E-08	5.21E-08	6.15E-10
 IRP ²	kgBq U235 -eq	1.41E+00	1.89E-02	1.70E-01	5.63E-02	5.27E-04
 ETP-fw ¹	CTUe	2.11E+03	3.20E+00	1.92E+01	9.54E+00	1.63E-01
 HTP-c ¹	CTUh	1.09E-07	0.00E+00	7.22E-10	0.00E+00	4.00E-12
 HTP-nc ¹	CTUh	1.75E-06	3.50E-09	1.15E-08	1.04E-08	2.04E-10
 SQP ¹	dimensionless	1.80E+02	3.02E+00	4.46E+01	9.00E+00	8.56E-02

Indicator	Unit	B6	C1	C2	C3	C4	D
 PM	Disease incidence	1.12E-04	0.00E+00	1.56E-08	1.56E-09	5.87E-09	-4.40E-07
 IRP ²	kgBq U235 -eq	1.32E+03	0.00E+00	1.69E-02	2.16E-03	2.89E-03	-1.62E-01
 ETP-fw ¹	CTUe	1.05E+05	0.00E+00	2.86E+00	1.73E+00	5.35E+02	-4.41E+02
 HTP-c ¹	CTUh	2.94E-06	0.00E+00	0.00E+00	5.96E-10	2.25E-10	-1.80E-08
 HTP-nc ¹	CTUh	1.02E-04	0.00E+00	3.13E-09	3.48E-08	1.89E-09	1.83E-08
 SQP ¹	dimensionless	3.63E+04	0.00E+00	2.70E+00	1.06E-01	1.95E+00	-1.00E+01

PM = Particulate Matter emissions; IRP = Ionizing radiation – human health; ETP-fw = Eco toxicity – freshwater; HTP-c = Human toxicity – cancer effects; HTP-nc = Human toxicity – non cancer effects; SQP = Potential Soil Quality Index (dimensionless)

"Reading example: 9.0 E-03 = 9.0×10^{-3} = 0.009"

1. The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator
2. 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.

Resource use							
Indicator		Unit	A1	A2	A3	A4	A5
	PERE	MJ	4.90E+01	6.19E-02	1.38E+01	1.84E-01	2.05E-03
	PERM	MJ	4.70E+00	0.00E+00	0.00E+00	0.00E+00	-4.69E+00
	PERT	MJ	5.37E+01	6.19E-02	1.38E+01	1.84E-01	-4.68E+00
	PENRE	MJ	4.41E+02	4.32E+00	1.77E+01	1.29E+01	1.23E-01
	PENRM	MJ	1.27E+01	0.00E+00	0.00E+00	0.00E+00	-2.20E-01
	PENRT	MJ	4.54E+02	4.32E+00	1.77E+01	1.29E+01	-9.73E-02
	SM	kg	1.81E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	RSF	MJ	1.30E+00	2.21E-03	2.77E-01	6.59E-03	6.75E-05
	NRSF	MJ	1.37E-01	7.91E-03	3.67E-02	2.36E-02	2.75E-04
	FW	m ³	3.63E-01	4.62E-04	1.21E-02	1.38E-03	5.82E-05

Indicator		Unit	B6	C1	C2	C3	C4	D
	PERE	MJ	2.92E+04	0.00E+00	5.53E-02	5.62E-02	2.19E-01	-1.63E+01
	PERM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	PERT	MJ	2.92E+04	0.00E+00	5.53E-02	5.62E-02	2.19E-01	-1.63E+01
	PENRE	MJ	1.51E+05	0.00E+00	3.86E+00	4.63E-01	8.35E-01	-5.75E+01
	PENRM	MJ	0.00E+00	0.00E+00	0.00E+00	-1.24E+01	0.00E+00	0.00E+00
	PENRT	MJ	1.51E+05	0.00E+00	3.86E+00	-1.20E+01	8.35E-01	-5.75E+01
	SM	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.62E-03	6.49E-03
	RSF	MJ	2.13E+03	0.00E+00	1.98E-03	1.02E-03	1.25E-03	7.01E-02
	NRSF	MJ	5.05E+02	0.00E+00	7.07E-03	-3.41E-05	4.01E-02	2.05E+00
	FW	m ³	1.28E+02	0.00E+00	4.13E-04	8.29E-04	7.03E-04	-7.67E-02

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; PENRE = Use of non renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non renewable primary energy resources used as raw materials; PENRT = Total use of non renewable primary energy resources; SM = Use of secondary materials; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Net use of fresh water

"Reading example: 9.0 E-03 = 9.0×10^{-3} = 0.009"

End of life - Waste							
Indicator		Unit	A1	A2	A3	A4	A5
	HWD	kg	2.35E-01	2.23E-04	2.64E-03	6.64E-04	0.00E+00
	NHWD	kg	7.89E+00	2.10E-01	8.21E-02	6.26E-01	5.40E-01
	RWD	kg	1.28E-03	2.94E-05	9.85E-05	8.77E-05	0.00E+00

Indicator		Unit	B6	C1	C2	C3	C4	D
	HWD	kg	2.27E+01	0.00E+00	1.99E-04	1.68E-05	2.46E-01	-2.34E-03
	NHWD	kg	5.10E+02	0.00E+00	1.88E-01	2.27E-02	1.08E+00	-1.69E+00
	RWD	kg	1.08E+00	0.00E+00	2.63E-05	8.35E-07	2.31E-06	-1.52E-04

HWD = Hazardous waste disposed; NHWD = Non-hazardous waste disposed; RWD = Radioactive waste disposed

"Reading example: 9.0 E-03 = 9.0×10^{-3} = 0.009"

End of life - Output flow							
Indicator		Unit	A1	A2	A3	A4	A5
	CRU	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	MFR	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.98E-01
	MER	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.71E-02
	EEE	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.04E-02
	EET	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.60E-01

Indicator		Unit	B6	C1	C2	C3	C4	D
	CRU	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	MFR	kg	0.00E+00	0.00E+00	0.00E+00	2.86E+00	2.87E-01	-2.54E-04
	MER	kg	0.00E+00	0.00E+00	0.00E+00	2.07E-01	4.54E-07	-3.34E-05
	EEE	MJ	0.00E+00	0.00E+00	0.00E+00	3.18E-01	2.94E-05	-8.19E-05
	EET	MJ	0.00E+00	0.00E+00	0.00E+00	4.81E+00	4.45E-04	-1.24E-03

CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported energy electrical; EET = Exported energy thermal

"Reading example: 9.0 E-03 = 9.0×10^{-3} = 0.009"

Biogenic Carbon Content		
Indicator	Unit	At the factory gate
Biogenic carbon content in product	kg C	3.35E-04
Biogenic carbon content in accompanying packaging	kg C	2.46E-01

Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO₂

Additional requirements

Greenhouse gas emissions from the use of electricity in the manufacturing phase

National production mix from import, low voltage (production of transmission lines, in addition to direct emissions and losses in grid) of applied electricity for the manufacturing process (A3).

Electricity mix	Source	Amount	Unit
Electricity, Lithuania (kWh)	ecoinvent 3.6	373.46	g CO ₂ -eq/kWh

Dangerous substances

The product contains no substances given by the REACH Candidate list.

Indoor environment

Additional Environmental Information

Additional environmental impact indicators required in NPCR Part A for construction products							
Indicator	Unit	A1	A2	A3	A4	A5	
GWPIOBC	kg CO ₂ -eq	3.77E+01	2.86E-01	1.24E+00	8.52E-01	9.30E-03	
Indicator	Unit	B6	C1	C2	C3	C4	D
GWPIOBC	kg CO ₂ -eq	7.36E+03	0.00E+00	2.56E-01	5.30E-01	8.28E-02	-5.14E+00

GWPIOBC: Global warming potential calculated according to the principle of instantaneous oxidation. In order to increase the transparency of biogenic carbon contribution to climate impact, the indicator GWP-IOBC is required as it declares climate impacts calculated according to the principle of instantaneous oxidation. GWP-IOBC is also referred to as GWP-GHG in context to Swedish public procurement legislation.

Bibliography

ISO 14025:2010. Environmental labels and declarations - Type III environmental declarations - Principles and procedures. International Organization for Standardization.

ISO 14044:2006. Environmental management - Life cycle assessment - Requirements and guidelines. International Organization for Standardization.

EN 15804:2012+A2:2019. Environmental product declaration - Core rules for the product category of construction products. European Committee for Standardization.

ISO 21930:2017. Sustainability in buildings and civil engineering works - Core rules for environmental product declarations of construction products. International Organization for Standardization.

EN 50693:2019. Product category rules for life cycle assessments of electronic and electrical products and systems. European Committee for Standardization.

Ecoinvent v3, 2019. Allocation, cut-off by classification. Swiss Centre of Life Cycle Inventories.

Iversen et al., (2021). eEPD v2021.09, background information for EPD generator tool system verification, LCA.no. Report number: 07.21. System verification report.

Babwah & Philis (2023). EPD generator based on PCR EPD Italy 007, background information for EPD generator application and LCA data, LCA.no. Report number 09.2023. PCR verification report (based on core PCR).

EPD Italy (2020). PCR EPD Italy 007 Part A for electronic and electrical products and systems. EPD Italy. Version 3, issue 13-01-2023 and valid until 19-01-2025.

PEP Ecopassport (2023). PSR specific rules for direct, visible, fixed electric heating appliances. PSR-0002-ed3.0-EN-2023 06 06. Version 3, 06-06-2023.

 epd-global Powered by EPD-Norway	Program operator and publisher EPD-Global Postboks 5250 Majorstuen, 0303 Oslo, Norway	Phone: +47 977 22 020 e-mail: post@epd-norge.no web: www.epd-global.com
	Owner of the declaration: Adax AS Myhres gate 1, 3060 Svelvik, Norway	Phone: + 47 90764511 e-mail: justinas.kulbe@adax.no web:
	Author of the Life Cycle Assessment LCA.no AS Dokka 6A, 1671 Kråkerøy, Norway	Phone: +47 916 50 916 e-mail: post@lca.no web: www.lca.no
	Developer of EPD generator LCA.no AS Dokka 6A, 1671 Kråkerøy, Norway	Phone: +47 916 50 916 e-mail: post@lca.no web: www.lca.no
	ECO Platform ECO Portal	web: www.eco-platform.org web: ECO Portal