epd-norge
Global program operatør

Environmental product declaration

in accordance with ISO 14025 and EN 15804+A2

Glamox heating H40 H 08

The Norwegian EPD Foundation

Owner of the declaration:
Adax AS

Product:
Glamox heating H40 H 08

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 - Electrical heaters

Program operator:
The Norwegian EPD Foundation

Declaration number:

NEPD-7945-7609-EN

Registration number:

NEPD-7945-7609-EN

Issue date: 30.10.2024

Valid to: 30.10.2029

EPD software:
LCAno EPD generator ID: 483655

General information

Product

Glamox heating H40 H 08

Owner of the declaration:

Adax AS
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Program operator:

The Norwegian EPD Foundation
Post Box 5250 Majorstuen, 0303 Oslo, Norway
Phone: +47 977 22 020
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Manufacturer:

Adax AS
Myhres gate 1
3060 Svelvik, Norway

Declaration number:

NEPD-7945-7609-EN

Place of production:

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

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 - Electrical heaters

Management system:

ISO - 9001, 14001 and 45001

Statement of liability:

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

Organisation no:

991678891

Declared unit:

1 pcs Glamox heating H40 H 08

Issue date:

30.10.2024

Declared unit with option:

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

Valid to:

30.10.2029

Year of study:

2023

Functional unit:

1 pc of Glamox heating H40 H 08, installed and used to warm an indoor environment, during a service life of 17 years, including waste treatment at end-of-life.

Comparability:

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

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-Norway'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-Norway, and iii) the process is reviewed annually by an independent third party verifier. See Appendix G of EPD-Norway's General Programme Instructions for further information on EPD tools

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 Norway.

Developer of EPD: Zohaib Ali

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

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)

Approved:

Håkon Hauan
Managing Director of EPD-Norway

Product

Product description:

Glamox Heating H40 is a steel front panel heater with a contemporary Nordic design

Product specification

Choose from several different thermostats: WIFI (WT2), Digital (DT), and slave modules: SLX, SLA-5/24 and EIB.
Glamox Heating Wifi App
Connect easily to your Wi-Fi router at home, at the office or at your cabin.
H40 is splashproof IP24, double insulated Cl. II and has overheating protection.
5 years warranty
Available as high (H:330mm) and low (L:210mm)
Available in 230V and 400V
Available in three colors: White RAL 9016, Sparkling Grey and Pearl Black RAL 7021.
Can be mounted on floor stand (optional).

Materials	kg	%
Chemical	0,10	2,17
Electronic - Cable	0,12	2,60
Electronic - LED chip	0,00	0,07
Electronic - Wire	0,02	0,46
Electronic component	0,43	9,42
Metal - Alloy	0,01	0,17
Plastic	0,31	6,73
Printed paper	0,00	0,02
Metal - Aluminium	0,06	1,33
Metal - Steel	3,55	77,04
Total	4,60	100,00

Packaging	kg	%
Packaging - Cardboard	0,50	88,29
Packaging - Paper	0,06	10,17
Packaging - Plastic	0,01	1,55
Total incl. packaging	5,17	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 Glamox heating H40 H 08

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:

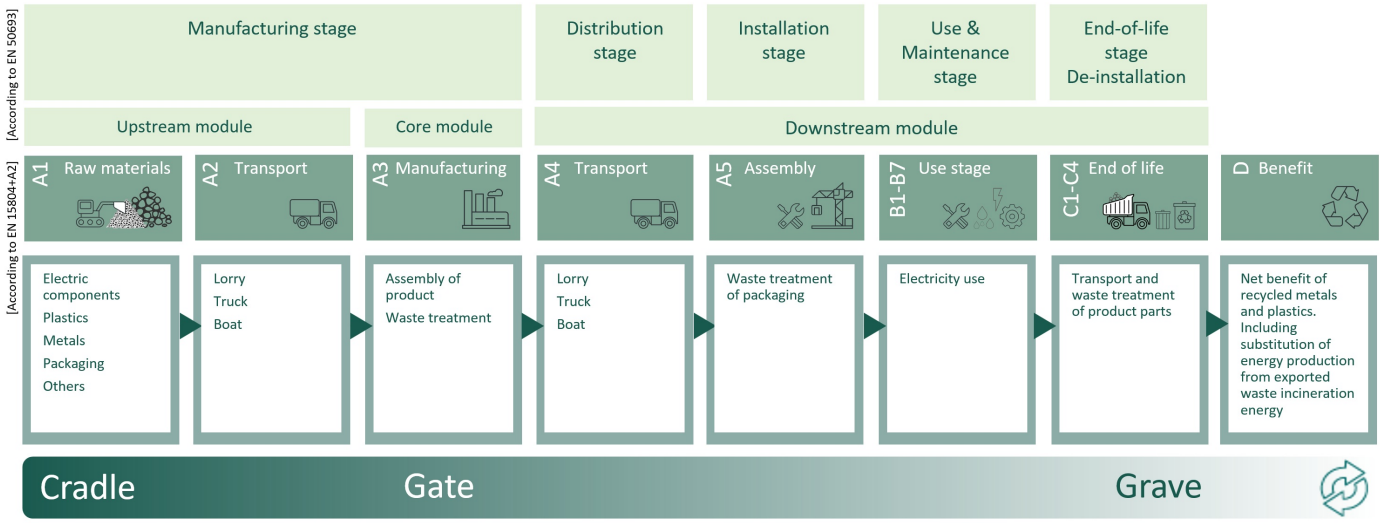
Specific data for the product composition are provided by the manufacturer. The data represent the production of the declared product and were collected for EPD development in the year of study. Background data is based on EPDs according to EN 15804 and different LCA databases. The data quality of the 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 "Glamox heating H40 H 08" 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
Glamox Heating H40 H 02	3.85	250	0.75	0.31
Glamox Heating H40 H 04	4.15	400	0.80	0.5
Glamox Heating H40 H 06	4.65	600	0.90	0.75
Glamox Heating H40 H 08	5.17	800	1.00	1.00
Glamox Heating H40 H 10	5.55	1000	1.07	1.25
Glamox Heating H40 H 12	6.45	1200	1.25	1.50
Glamox Heating H40 H 14	7.15	1400	1.38	1.75
Glamox Heating H40 H 20	8.95	2000	1.73	2.50
Glamox Heating H40 L 02	3.24	250	0.63	0.31
Glamox Heating H40 L 04	3.74	400	0.72	0.50
Glamox Heating H40 L 06	4.54	600	0.88	0.75
Glamox Heating H40 L 08	5.24	800	1.01	1.00
Glamox Heating H40 L 10	6.04	1000	1.17	1.25
Glamox Heating H40 L 12	6.64	1200	1.29	1.50
Glamox Heating H40 L 14	7.84	1400	1.52	1.75
Adax Neo H 02	3.85	250	0.75	0.31
Adax Neo H 04	4.15	400	0.8	0.50
Adax Neo H 06	4.65	600	0.90	0.75
Adax Neo H 08	5.17	800	1.00	1.00
Adax Neo H 10	5.55	1000	1.07	1.25
Adax Neo H 12	6.45	1200	1.25	1.50
Adax Neo H 14	7.15	1400	1.38	1.75
Adax Neo H 20	8.95	2000	1.73	2.50
Adax Neo L 02	3.24	250	0.63	0.31
Adax Neo L 04	3.74	400	0.72	0.50
Adax Neo L 06	4.54	600	0.88	0.75
Adax Neo L 08	5.24	800	1.01	1.00
Adax Neo L 10	6.04	1000	1.17	1.25
Adax Neo L 12	6.64	1200	1.29	1.50
Adax Neo L 14	7.84	1400	1.52	1.75
Adax Famn FH 02	3.85	250	0.75	0.31
Adax Famn FH 04	4.15	400	0.80	0.50
Adax Famn FH 06	4.65	600	0.90	0.75
Adax Famn FH 08	5.17	800	1.00	1.00
Adax Famn FH 10	5.55	1000	1.07	1.25
Adax Famn FH 12	6.45	1200	1.25	1.50
Adax Famn FH 14	7.15	1400	1.38	1.75
Adax Famn FH 20	8.95	2000	1.73	2.50
Adax Famn FL 02	3.24	250	0.63	0.31
Adax Famn FL 04	3.74	400	0.72	0.50
Adax Famn FL 06	4.54	600	0.88	0.75
Adax Famn FL 08	5.24	800	1.01	1.00
Adax Famn FL 10	6.04	1000	1.17	1.25
Adax Famn FL 12	6.64	1200	1.29	1.50
Adax Famn FL 14	7.84	1400	1.52	1.75

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	0,043	l/tkm	43,00

Assembly (A5)	Unit	Value			
Waste, packaging, label, paper printed, supercalendered with silicone and adhesive, to average treatment (kg)	kg	0,00			
Waste, packaging, plastic parts, polycarbonate, PC, to average treatment (kg)	kg	0,01			
Waste, packaging, plastic film (PET), to average treatment (kg)	kg	0,00			
Waste, packaging, label, paper printed, supercalendering, with PVC and adhesive to average treatment (kg)	kg	0,00			
Waste, packaging, paper printed, to average treatment - A5 including transport (kg)	kg	0,05			
Waste, packaging, kraft paper, unbleached, to average treatment - A5 including transport (kg)	kg	0,01			
Waste, packaging, corrugated board box, to average treatment - A5 including transport (kg)	kg	0,50			

Operational energy (B6)	Unit	Value			
Electricity, European average (kWh)	kWh/DU	13760,21			

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	0,043	l/tkm	12,90

Waste processing (C3)	Unit	Value			
Copper to recycling (kg)	kg	0,03			
Waste treatment per kg electronics scrap from PWB, with components, recycling of metals C3 (kg)	kg	0,03			
Waste treatment per kg used PWB, shredding and separation - C3 (kg)	kg	0,07			
Waste treatment of plastic mixture, incineration with energy recovery and fly ash extraction (kg)	kg	0,20			
Waste treatment per kg used electronic plug connector, manual seperation (kg)	kg	0,00			
Waste treatment of hazardous waste, incineration with energy recovery and fly ash extraction (kg)	kg	0,00			
Waste treatment per kg used electronic cable, manual seperation (kg)	kg	0,14			
Steel to recycling (kg)	kg	2,84			
Waste treatment per kg electronics scrap from PWB, with components, recycling of metals C3 (kg)	kg	0,00			
Waste treatment per kg used PWB, shredding and separation - C3 (kg)	kg	0,00			
Waste treatment of hazardous waste, incineration with fly ash extraction (kg)	kg	0,10			
Aluminium to recycling (kg)	kg	0,04			

Disposal (C4)	Unit	Value			
Landfilling of steel (kg)	kg	0,71			
Landfilling of ashes from incineration of Plastic mixture, process per kg ashes and residues (kg)	kg	0,01			
Landfilling of aluminium (kg)	kg	0,13			
Landfilling of municipal solid waste (kg)	kg	0,00			
Landfilling of plastic mixture (kg)	kg	0,20			
Landfilling of mixed metals (kg)	kg	0,01			
Landfilling of copper (kg)	kg	0,02			
Landfilling of hazardous waste (kg)	kg	0,00			
Landfilling of hazardous waste (kg)	kg	0,03			
Landfilling of ashes from incineration of Hazardous waste, process per kg ashes and residues - C4 (kg)	kg	0,02			
Aluminium to recycling (kg)	kg	0,26			

Benefits and loads beyond the system boundaries (D)	Unit	Value			
Substitution of primary aluminium with net scrap (kg)	kg	0,25			
Substitution of electricity, in Norway (MJ)	MJ	0,31			
Substitution of primary steel with net scrap (kg)	kg	1,89			
Substitution of primary copper with net scrap (kg)	kg	0,01			
Substitution of primary metals with net scrap from PWB, with components (kg)	kg	0,00			
Substitution of primary metals with net scrap from PWB, with components (kg)	kg	0,01			
Substitution of thermal energy, district heating, in Norway (MJ)	MJ	4,69			

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	3,91E+01	1,07E+00	1,77E+00	8,45E-01	9,52E-01
	GWP-fossil	kg CO_2 -eq	3,96E+01	1,07E+00	1,73E+00	8,44E-01	1,05E-02
	GWP-biogenic	kg CO_2 -eq	-5,76E-01	4,42E-04	1,84E-02	3,49E-04	9,42E-01
	GWP-luluc	kg CO_2 -eq	6,84E-02	3,80E-04	1,84E-02	3,00E-04	3,03E-06
	ODP	kg CFC11 -eq	2,72E-06	2,42E-07	2,64E-07	1,91E-07	1,94E-09
	AP	mol H+ -eq	3,56E-01	3,08E-03	1,00E-02	2,43E-03	4,38E-05
	EP-FreshWater	kg P -eq	3,90E-03	8,53E-06	5,28E-05	6,74E-06	7,89E-08
	EP-Marine	kg N -eq	4,64E-02	6,12E-04	1,60E-03	4,80E-04	1,58E-05
	EP-Terrestial	mol N -eq	8,24E-01	6,84E-03	1,94E-02	5,37E-03	1,57E-04
	POCP	kg NMVOC -eq	1,55E-01	2,61E-03	5,28E-03	2,06E-03	4,54E-05
	ADP-minerals&metals[1]	kg Sb-eq	1,83E-02	2,95E-05	1,20E-05	2,33E-05	2,22E-07
	ADP-fossil[1]	MJ	4,79E+02	1,62E+01	3,15E+01	1,28E+01	1,29E-01
	WDP[1]	m^3	2,20E+03	1,56E+01	2,51E+03	1,23E+01	1,75E-01

Indicator		**Unit**	B6	C1	C2	C3	C4	D
	GWP-total	kg CO_2 -eq	5,89E+03	0,00E+00	2,53E-01	7,38E-01	5,18E-02	-4,99E+00
	GWP-fossil	kg CO_2 -eq	5,84E+03	0,00E+00	2,53E-01	7,37E-01	5,11E-02	-4,93E+00
	GWP-biogenic	kg CO_2 -eq	4,10E+01	0,00E+00	1,05E-04	6,37E-04	6,18E-04	-1,32E-02
	GWP-luluc	kg CO_2 -eq	1,36E+01	0,00E+00	9,01E-05	1,35E-04	7,12E-05	-4,51E-02
	ODP	kg CFC11 -eq	4,94E-04	0,00E+00	5,73E-08	2,87E-08	4,87E-09	-1,98E-03
	AP	mol H+ -eq	3,41E+01	0,00E+00	7,28E-04	5,79E-04	1,63E-04	-6,55E-02
	EP-FreshWater	kg P -eq	6,23E-01	0,00E+00	2,02E-06	6,61E-06	6,59E-07	-4,40E-04
	EP-Marine	kg N -eq	4,32E+00	0,00E+00	1,44E-04	1,44E-04	7,63E-05	-6,11E-03
	EP-Terrestial	mol N -eq	5,33E+01	0,00E+00	1,61E-03	1,57E-03	5,76E-04	-7,13E-02
	POCP	kg NMVOC -eq	1,35E+01	0,00E+00	6,17E-04	4,22E-04	1,83E-04	-2,56E-02
	ADP-minerals&metals[1]	kg Sb-eq	4,28E-02	0,00E+00	6,99E-06	1,10E-06	1,66E-07	-9,15E-04
	ADP-fossil[1]	MJ	1,20E+05	0,00E+00	3,83E+00	1,37E+00	4,53E-01	-5,40E+01
	WDP[1]	m^3	1,81E+06	0,00E+00	3,70E+00	7,41E+00	8,86E+00	-1,19E+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"
*INA Indicator Not Assessed

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	3,13E-06	6,54E-08	8,37E-08	5,17E-08	6,46E-10
	IRP[2]	kgBq U235 -eq	1,56E+00	7,07E-02	3,54E-01	5,58E-02	5,52E-04
	ETP-fw[1]	CTUe	2,44E+03	1,20E+01	2,46E+01	9,46E+00	1,75E-01
	HTP-c[1]	CTUh	1,12E-07	0,00E+00	1,37E-09	0,00E+00	5,00E-12
	HTP-nc[1]	CTUh	1,87E-06	1,31E-08	1,91E-08	1,03E-08	2,20E-10
	SQP[1]	dimensionless	1,89E+02	1,13E+01	2,77E+01	8,93E+00	8,99E-02

Indicator		Unit	B6	C1	C2	C3	C4	D
	PM	Disease incidence	8,93E-05	0,00E+00	1,55E-08	6,47E-09	2,72E-09	-4,21E-07
	IRP[2]	kgBq U235 -eq	1,05E+03	0,00E+00	1,67E-02	6,28E-03	2,48E-03	-1,46E-01
	ETP-fw[1]	CTUe	8,43E+04	0,00E+00	2,84E+00	6,18E+00	5,36E+02	-4,42E+02
	HTP-c[1]	CTUh	2,35E-06	0,00E+00	0,00E+00	8,19E-10	6,00E-11	-1,74E-08
	HTP-nc[1]	CTUh	8,12E-05	0,00E+00	3,10E-09	3,68E-08	9,14E-10	2,76E-08
	SQP[1]	dimensionless	2,91E+04	0,00E+00	2,68E+00	4,69E-01	9,88E-01	-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"
*INA Indicator Not Assessed

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	5,20E+01	2,31E-01	1,52E+01	1,83E-01	2,17E-03
	PERM	MJ	4,88E+00	0,00E+00	0,00E+00	0,00E+00	-4,87E+00
	PERT	MJ	5,69E+01	2,31E-01	1,52E+01	1,83E-01	-4,87E+00
	PENRE	MJ	4,76E+02	1,62E+01	3,16E+01	1,28E+01	1,29E-01
	PENRM	MJ	1,10E+01	0,00E+00	0,00E+00	0,00E+00	-2,45E-01
	PENRT	MJ	4,87E+02	1,62E+01	3,16E+01	1,28E+01	-1,16E-01
	SM	kg	1,95E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	RSF	MJ	1,32E+00	8,27E-03	5,85E-01	6,53E-03	7,13E-05
	NRSF	MJ	1,50E-01	2,96E-02	8,01E-02	2,34E-02	2,90E-04
	FW	m^3	3,59E-01	1,73E-03	2,15E-02	1,36E-03	6,26E-05

Indicator		Unit	B6	C1	C2	C3	C4	D
	PERE	MJ	2,33E+04	0,00E+00	5,48E-02	2,21E-01	7,55E-02	-1,49E+01
	PERM	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	PERT	MJ	2,33E+04	0,00E+00	5,48E-02	2,21E-01	7,55E-02	-1,49E+01
	PENRE	MJ	1,21E+05	0,00E+00	3,83E+00	1,37E+00	4,53E-01	-5,40E+01
	PENRM	MJ	0,00E+00	0,00E+00	0,00E+00	-1,07E+01	0,00E+00	0,00E+00
	PENRT	MJ	1,21E+05	0,00E+00	3,83E+00	-9,34E+00	4,53E-01	-5,40E+01
	SM	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,47E-04	6,45E-03
	RSF	MJ	1,70E+03	0,00E+00	1,96E-03	4,64E-03	1,02E-03	7,13E-02
	NRSF	MJ	4,04E+02	0,00E+00	7,01E-03	-3,47E-05	7,41E-03	2,07E+00
	FW	m^3	1,02E+02	0,00E+00	4,09E-04	1,66E-03	5,46E-04	-6,93E-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"
*INA Indicator Not Assessed

End of life - Waste

Indicator		Unit	A1	A2	A3	A4	A5
	HWD	kg	2,50E-01	8,33E-04	3,73E-02	6,58E-04	0,00E+00
	NHWD	kg	7,80E+00	7,85E-01	1,25E+00	6,21E-01	5,63E-01
	RWD	kg	1,38E-03	1,10E-04	1,98E-04	8,69E-05	0,00E+00

Indicator		Unit	B6	C1	C2	C3	C4	D
	HWD	kg	1,81E+01	0,00E+00	1,97E-04	1,71E-05	6,72E-02	-3,72E-03
	NHWD	kg	4,08E+02	0,00E+00	1,86E-01	1,23E-01	1,10E+00	-1,61E+00
	RWD	kg	8,61E-01	0,00E+00	2,61E-05	8,51E-07	2,31E-06	-1,36E-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"
*INA Indicator Not Assessed

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	1,14E+00	0,00E+00	5,18E-01
	MER	kg	0,00E+00	0,00E+00	1,95E-02	0,00E+00	4,02E-02
	EEE	MJ	0,00E+00	0,00E+00	6,81E-03	0,00E+00	3,25E-02
	EET	MJ	0,00E+00	0,00E+00	1,03E-01	0,00E+00	4,92E-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	2,91E+00	2,58E-01	-2,53E-04
	MER	kg	0,00E+00	0,00E+00	0,00E+00	3,02E-01	4,43E-07	-3,33E-05
	EEE	MJ	0,00E+00	0,00E+00	0,00E+00	3,10E-01	2,87E-05	-8,15E-05
	EET	MJ	0,00E+00	0,00E+00	0,00E+00	4,69E+00	4,34E-04	-1,23E-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"
*INA Indicator Not Assessed

Biogenic Carbon Content

Indicator	Unit	At the factory gate
Biogenic carbon content in product	kg C	2,59E-04
Biogenic carbon content in accompanying packaging	kg C	2,57E-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 CO2-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	4,00E+01	1,07E+00	2,28E+00	8,45E-01	1,05E-02

Indicator	**Unit**	B6	C1	C2	C3	C4	D
GWPIOBC	kg CO_2 -eq	6,32E+03	0,00E+00	2,53E-01	7,38E-01	5,49E-02	-5,91E+00

GWP-IOBC: 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.

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