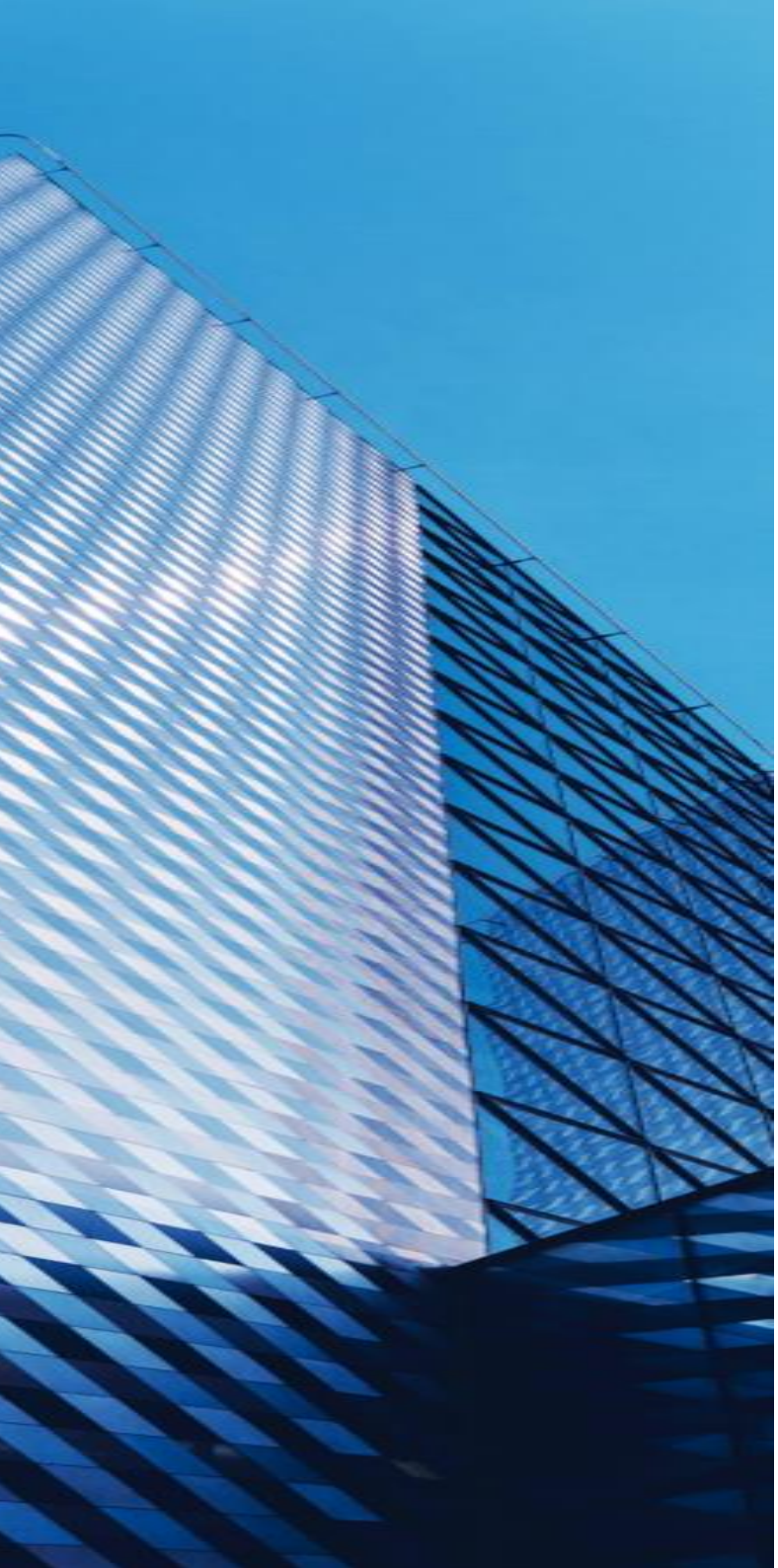


ENVIRONMENTAL PRODUCT DECLARATION

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

Aero 2.0 Flex, Classic 2.0 Flex
Swedstyle AB

EPD HUB, HUB-1436
Published on 23.05.2024, last updated on 23.05.2029

Created with One Click LCA

SWEDSTYLE

GENERAL INFORMATION

MANUFACTURER

Manufacturer	Swedstyle AB
Address	Karlavägen 38, 567 24 Vaggeryd
Contact details	info@swdestyle.se
Website	http://www.swedstyle.se

EPD STANDARDS, SCOPE AND VERIFICATION

Program operator	EPD Hub, hub@epdhub.com
Reference standard	EN 15804+A2:2019 and ISO 14025
PCR	EPD Hub Core PCR version 1.1, 5 Dec 2023
Sector	Construction product
Category of EPD	Third party verified EPD
Parent EPD number	
Scope of the EPD	Cradle to gate with options, A5, and modules C1-C4, D
EPD author	Susanne Flisander
EPD verification	Independent verification of this EPD and data, according to ISO 14025: ☐ Internal verification ☑ External verification
EPD verifier	Imane Uald lamkaddam, as an authorized verifier acting for EPD Hub Limited

The manufacturer has the sole ownership, liability, and responsibility for the EPD. EPDs within the same product category but from different programs may not be comparable. EPDs of construction products may not be comparable if they do not comply with EN 15804 and if they are not compared in a building context.

PRODUCT

Product name	Aero 2.0 Flex, Classic 2.0 Flex
Additional labels	
Product reference	A21113111AXXG, C2113111AXXG
Place of production	Vaggeryd, Sweden
Period for data	2023-01-01 - 2023-12-31
Averaging in EPD	Multiple products
Variation in GWP-fossil for A1-A3	3 %

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 unit of desk frame
Declared unit mass	24.8 kg
GWP-fossil, A1-A3 (kgCO2e)	1,17E+02
GWP-total, A1-A3 (kgCO2e)	1,14E+02
Secondary material, inputs (%)	32.9
Secondary material, outputs (%)	78.3
Total energy use, A1-A3 (kWh)	455
Net fresh water use, A1-A3 (m3)	7.46

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Swedstyle was founded in Vaggeryd, Sweden. We have been developing and manufacturing sit and stand desks in Småland since the early eighties. We design easy-to-understand and easy-to-use solutions. We are always working to improve our products and develop solutions that exceed the demands of the workplace. Quality is our number one priority. To achieve our desired level of quality, we have chosen to manage all production on site in Sweden. With “Made in Sweden as our guiding principle, we create competitive, sustainable products where most of the materials and components come from Sweden or northern Europe. The environment and sustainability have always been important issues for us. We are constantly working to develop our processes and our production to meet current demands. We create sustainable solutions that improve our carbon footprint and reduce our CO2 emissions. With full control over the entire production process, from development to the final product, we can guarantee sustainable manufacturing. We can ensure that our choice of materials and energy sources meet the strict legal requirements that having production in Sweden entails. The company is certified under ISO 14001, ISO 9001, ISO 28000.

PRODUCT DESCRIPTION

AERO/CLASSIC electric Sit & Stand frame for straight desktops, with continuous height adjustment control, makes it easy for the user to create an ergonomic work environment. Robust and flexible design that can be adjusted lengthways ensures a reliable desk that is easily adapted to the desktop of your choice. Free-standing legs allow optimum freedom of movement thanks to unrestricted leg room. Elegant legs of rectangular design with the big leg at the top. Based on the latest technology in height adjustment control to ensure reliable and comfortable operation. - Height-adjustable- Ergonomic- Elegant legs of rectangular design

Further information can be found at http://www.swedstyle.se.

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass- %	Material origin
Metals	89	EU, SE
Minerals		
Fossil materials	11	SE
Bio-based materials		

BIOGENIC CARBON CONTENT

Product’s biogenic carbon content at the factory gate

Biogenic carbon content in product, kg C	0
Biogenic carbon content in packaging, kg C	0.92

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 unit of desk frame
Mass per declared unit	24.8 kg
Functional unit	
Reference service life	

SUBSTANCES, REACH - VERY HIGH CONCERN

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

PRODUCT LIFE-CYCLE

SYSTEM BOUNDARY

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

Product stage			Assembly stage		Use stage							End of life stage				Beyond the system boundaries
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
x	x	x	MND	x	MND	MND	MND	MND	MND	MND	MND	x	x	x	x	x
Raw materials	Transport	Manufacturing	Transport	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstr./demol.	Transport	Waste processing	Disposal	Reuse	Recovery	Recycling

Modules not declared = MND. Modules not relevant = MNR.

MANUFACTURING AND PACKAGING (A1-A3)

The environmental impacts considered for the product stage cover the manufacturing of raw materials used in the production as well as packaging materials and other ancillary materials. Also, fuels used by machines, and handling of waste formed in the production processes at the manufacturing facilities are included in this stage. The study also considers the material losses occurring during the manufacturing processes as well as losses during electricity transmission.

The manufacturing process includes production and supply of raw materials as well as their processing at the factory. The steel tubes are delivered to manufacturers site and are cut and shaped to the desired dimensions to form the legs and the feet. The steel elements are then transferred to a painting line where they are first washed and then are left to dry to ensure completely clean surface. The next step includes application of powder coating on the surface to achieve protection and desired colour. When the processing is finished, the legs, feet and supporting elements are packed together along with electronic assembly materials. The motors, cables and the electronic box are supplied as ready-made products by an external provider, and they are packed in the same corrugated board box as the frame. The frames are prepared for delivery by placing them on wooden pallets.

TRANSPORT AND INSTALLATION (A4-A5)

Transportation impacts occurred from final products delivery to construction site (A4) cover fuel direct exhaust emissions, environmental impacts of fuel production, as well as related infrastructure emissions.

PRODUCT USE AND MAINTENANCE (B1-B7)

This EPD does not cover the use phase.

Air, soil, and water impacts during the use phase have not been studied.

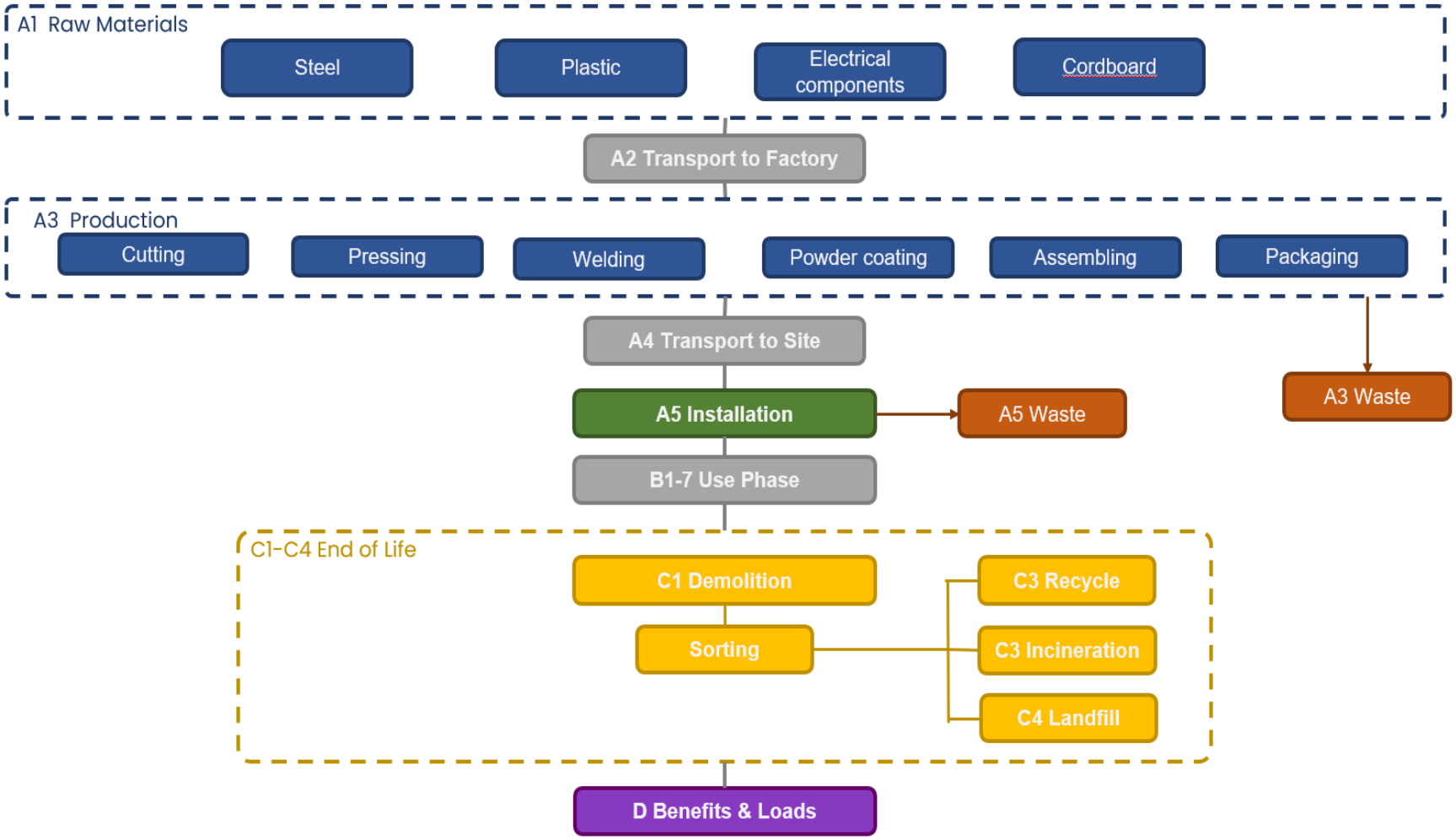
PRODUCT END OF LIFE (C1-C4, D)

The desk is easy to disassemble manually, so no energy is considered for module C1. It is assumed that the waste is collected separately and transported to a dedicated waste treatment plant. The distance to treatment site is assumed to be 50 km and the transportation mode is assumed to be truck (C2). Module C3 accounts for energy and resource inputs for sorting and treating these waste streams for recycling and incineration with energy recovery with efficiency greater than 60%. Landfilled waste is included in module C4. Due to the material and energy recovery potential of parts in the end-of-life product and packaging, recycled raw materials lead to avoided virgin material production (steel, aluminium, electronics), while the energy recovered from incineration replaces electricity and heat production (D). The benefits and loads of incineration and recycling are included in module D. At EOL 78% of the product is recycled, 22% is landfill or incinerated.

Sources:

- Standard EN 50693, Table G.4
- https://www.worldsteel.org
- https://www.zinc.org
- https://www.iea.org

SYSTEM BOUNDARIES



LIFE-CYCLE ASSESSMENT

CUT-OFF CRITERIA

The study does not exclude any modules or processes which are stated mandatory in the reference standard and the applied PCR. The study does not exclude any hazardous materials or substances. The study includes all major raw material and energy consumption. All inputs and outputs of the unit processes, for which data is available for, are included in the calculation. There is no neglected unit process more than 1% of total mass or energy flows. The module specific total neglected input and output flows also do not exceed 5% of energy usage or mass.

ALLOCATION, ESTIMATES AND ASSUMPTIONS

Allocation is required if some material, energy, and waste data cannot be measured separately for the product under investigation. All allocations are done as per the reference standards and the applied PCR. In this study, allocation has been done in the following ways:

Data type	Allocation
Raw materials	No allocation
Packaging materials	No allocation
Ancillary materials	No allocation
Manufacturing energy and waste	Allocated by mass or volume

AVERAGES AND VARIABILITY

Type of average	Multiple products
Averaging method	Representative product
Variation in GWP-fossil for A1-A3	3 %

The representative model is Aero 2.0 Flex, average model is Classic 2.0 Flex. Different kinds of 3D-column frames, Aero 2.0 Flex has the big tube up and Classic 2.0 Flex has the big tube down.
GWP (fossil) A1-A3 for Aero 2.0 Flex is 117 kg CO2
GWP (fossil) A1-A3 for Classic 2.0 Flex is 121 kgCO2
Both models are produced at the same factory site.

LCA SOFTWARE AND BIBLIOGRAPHY

This EPD has been created using One Click LCA EPD Generator. The LCA and EPD have been prepared according to the reference standards and ISO 14040/14044. The EPD Generator uses Ecoinvent v3.8, Plastics Europe, Federal LCA Commons and One Click LCA databases as sources of environmental data.

ENVIRONMENTAL IMPACT DATA

CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, PEF

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP – total[1)]	kg CO_2e	1,13E+02	3,34E+00	-1,73E+00	1,14E+02	MND	3,52E+00	MND	MND	MND	MND	MND	MND	MND	MNR	6,48E-01	3,61E+00	4,37E+00	-1,78E+01
GWP – fossil	kg CO_2e	1,12E+02	3,34E+00	1,61E+00	1,17E+02	MND	1,38E-01	MND	MND	MND	MND	MND	MND	MND	MNR	6,47E-01	3,61E+00	4,37E+00	-1,78E+01
GWP – biogenic	kg CO_2e	0,00E+00	0,00E+00	-3,38E+00	-3,38E+00	MND	3,38E+00	MND	MND	MND	MND	MND	MND	MND	MNR	0,00E+00	0,00E+00	0,00E+00	1,62E-02
GWP – LULUC	kg CO_2e	1,34E-01	1,47E-03	4,08E-02	1,76E-01	MND	1,16E-04	MND	MND	MND	MND	MND	MND	MND	MNR	4,34E-04	5,57E-04	1,06E-04	8,95E-03
Ozone depletion pot.	kg CFC_{-11}e	6,84E-06	7,19E-07	1,76E-07	7,73E-06	MND	2,16E-08	MND	MND	MND	MND	MND	MND	MND	MNR	1,26E-07	5,47E-08	1,23E-07	-5,60E-07
Acidification potential	mol H^+e	9,20E-01	1,61E-02	8,56E-03	9,45E-01	MND	7,50E-04	MND	MND	MND	MND	MND	MND	MND	MNR	3,59E-03	5,92E-03	2,35E-03	-8,13E-02
EP-freshwater[2)]	kg Pe	7,95E-03	2,74E-05	1,08E-04	8,09E-03	MND	3,26E-06	MND	MND	MND	MND	MND	MND	MND	MNR	9,04E-06	2,26E-05	2,42E-06	-1,93E-04
EP-marine	kg Ne	3,82E-01	3,54E-03	3,62E-03	3,90E-01	MND	2,10E-04	MND	MND	MND	MND	MND	MND	MND	MNR	1,07E-03	1,50E-03	7,02E-04	-2,05E-03
EP-terrestrial	mol Ne	1,38E+00	3,94E-02	2,67E-02	1,44E+00	MND	2,28E-03	MND	MND	MND	MND	MND	MND	MND	MNR	1,19E-02	1,67E-02	6,86E-03	-1,91E-01
POCP ("smog")[3)]	kg NMVOCe	5,11E-01	1,26E-02	6,63E-03	5,31E-01	MND	7,37E-04	MND	MND	MND	MND	MND	MND	MND	MNR	3,84E-03	4,43E-03	1,90E-03	-9,93E-02
ADP-minerals & metals[4)]	kg Sbe	1,72E-02	1,15E-05	1,09E-05	1,73E-02	MND	1,93E-06	MND	MND	MND	MND	MND	MND	MND	MNR	9,45E-06	5,41E-05	1,09E-06	-8,64E-04
ADP-fossil resources	MJ	1,32E+03	4,81E+01	8,20E+01	1,46E+03	MND	1,87E+00	MND	MND	MND	MND	MND	MND	MND	MNR	9,11E+00	6,08E+00	7,84E+00	-1,63E+02
Water use[5)]	m^3e depr.	5,68E+01	2,10E-01	3,25E+00	6,03E+01	MND	2,07E-02	MND	MND	MND	MND	MND	MND	MND	MNR	6,48E-02	1,87E-01	1,01E-01	6,59E+00

1) GWP = Global Warming Potential; 2) EP = Eutrophication potential. Required characterisation method and data are in kg P-eq. Multiply by 3,07 to get PO4e; 3) POCP = Photochemical ozone formation; 4) ADP = Abiotic depletion potential; 5) EN 15804+A2 disclaimer for Abiotic depletion and Water use and optional indicators except Particulate matter and Ionizing radiation, human health. The results of these environmental impact indicators shall be used with care as the uncertainties on these results are high or as there is limited experience with the indicator.

ADDITIONAL (OPTIONAL) ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, PEF

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Particulate matter	Incidence	8,45E-06	2,60E-07	1,38E-07	8,85E-06	MND	2,04E-08	MND	MND	MND	MND	MND	MND	MND	MNR	6,79E-08	6,99E-08	1,97E-08	-6,89E-07
Ionizing radiation[6)]	kBq U235e	1,36E+01	2,25E-01	4,71E+00	1,85E+01	MND	1,49E-02	MND	MND	MND	MND	MND	MND	MND	MNR	4,96E-02	6,25E-02	3,47E-02	-1,96E-01
Ecotoxicity (freshwater)	CTUe	8,55E+03	4,34E+01	4,66E+01	8,64E+03	MND	6,76E+00	MND	MND	MND	MND	MND	MND	MND	MNR	1,06E+01	4,39E+01	2,38E+01	-5,29E+02
Human toxicity, cancer	CTUh	5,26E-07	1,32E-09	3,21E-09	5,31E-07	MND	2,70E-10	MND	MND	MND	MND	MND	MND	MND	MNR	1,02E-09	1,22E-09	3,41E-09	1,68E-07
Human tox. non-cancer	CTUh	8,55E-06	3,91E-08	2,74E-08	8,61E-06	MND	2,92E-09	MND	MND	MND	MND	MND	MND	MND	MNR	1,23E-08	1,19E-07	7,97E-08	8,48E-07
SQP[7)]	-	7,70E+02	3,29E+01	2,02E+02	1,00E+03	MND	8,62E-01	MND	MND	MND	MND	MND	MND	MND	MNR	4,34E+00	1,11E+01	2,43E+00	-8,04E+01

6) EN 15804+A2 disclaimer for Ionizing radiation, human health. This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator; 7) SQP = Land use related impacts/soil quality.

USE OF NATURAL RESOURCES

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Renew. PER as energy[8)]	MJ	1,31E+02	5,61E-01	8,61E+01	2,18E+02	MND	9,19E-02	MND	MND	MND	MND	MND	MND	MND	MNR	2,23E-01	9,85E-01	5,82E-02	-2,56E+01
Renew. PER as material	MJ	0,00E+00	0,00E+00	2,94E+01	2,94E+01	MND	-2,94E+01	MND	MND	MND	MND	MND	MND	MND	MNR	0,00E+00	0,00E+00	0,00E+00	1,45E+00
Total use of renew. PER	MJ	1,31E+02	5,61E-01	1,15E+02	2,47E+02	MND	-2,93E+01	MND	MND	MND	MND	MND	MND	MND	MNR	2,23E-01	9,85E-01	5,82E-02	-2,41E+01
Non-re. PER as energy	MJ	1,29E+03	4,81E+01	8,06E+01	1,42E+03	MND	1,87E+00	MND	MND	MND	MND	MND	MND	MND	MNR	9,11E+00	6,08E+00	7,84E+00	-1,56E+02
Non-re. PER as material	MJ	4,33E+01	0,00E+00	1,15E+00	4,45E+01	MND	-1,15E+00	MND	MND	MND	MND	MND	MND	MND	MNR	0,00E+00	-2,31E+01	-2,02E+01	-1,14E-01
Total use of non-re. PER	MJ	1,34E+03	4,81E+01	8,18E+01	1,47E+03	MND	7,19E-01	MND	MND	MND	MND	MND	MND	MND	MNR	9,11E+00	-1,70E+01	-1,24E+01	-1,56E+02
Secondary materials	kg	8,16E+00	1,64E-02	1,10E+00	9,27E+00	MND	1,42E-03	MND	MND	MND	MND	MND	MND	MND	MNR	4,88E-03	6,52E-03	3,02E-03	1,05E+01
Renew. secondary fuels	MJ	4,13E-02	1,98E-04	6,04E-01	6,46E-01	MND	9,89E-06	MND	MND	MND	MND	MND	MND	MND	MNR	4,64E-05	3,25E-04	1,57E-05	-7,78E-02
Non-ren. secondary fuels	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	MNR	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of net fresh water	m^3	7,37E+00	5,62E-03	8,08E-02	7,46E+00	MND	5,57E-04	MND	MND	MND	MND	MND	MND	MND	MNR	1,64E-03	5,23E-03	3,16E-03	-4,77E-01

8) PER = Primary energy resources.

END OF LIFE – WASTE

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste	kg	2,77E+01	6,95E-02	1,19E-01	2,78E+01	MND	7,22E-03	MND	MND	MND	MND	MND	MND	MND	MNR	2,30E-02	3,76E-02	4,34E-01	-1,01E+01
Non-hazardous waste	kg	3,21E+02	1,08E+00	4,36E+00	3,27E+02	MND	1,49E-01	MND	MND	MND	MND	MND	MND	MND	MNR	4,09E-01	2,23E+00	5,01E+00	-3,94E+01
Radioactive waste	kg	1,21E-02	3,21E-04	1,04E-03	1,35E-02	MND	1,14E-05	MND	MND	MND	MND	MND	MND	MND	MNR	5,82E-05	3,20E-05	0,00E+00	-8,82E-05

END OF LIFE – OUTPUT FLOWS

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Components for re-use	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	MNR	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for recycling	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	1,07E+00	MND	MND	MND	MND	MND	MND	MND	MNR	0,00E+00	1,84E+01	0,00E+00	0,00E+00
Materials for energy rec	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	1,25E+00	MND	MND	MND	MND	MND	MND	MND	MNR	0,00E+00	1,03E+00	0,00E+00	0,00E+00
Exported energy	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	MND	0,00E+00	MND	MND	MND	MND	MND	MND	MND	MNR	0,00E+00	0,00E+00	0,00E+00	0,00E+00

ENVIRONMENTAL IMPACTS – EN 15804+A1, CML / ISO 21930

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Global Warming Pot.	kg CO_2e	1,09E+02	3,31E+00	1,68E+00	1,14E+02	MND	1,59E-01	MND	MND	MND	MND	MND	MND	MND	MNR	6,35E-01	3,60E+00	4,36E+00	-1,66E+01
Ozone depletion Pot.	kg CFC_{-11}e	6,46E-06	5,70E-07	1,50E-07	7,18E-06	MND	1,73E-08	MND	MND	MND	MND	MND	MND	MND	MNR	1,00E-07	4,46E-08	9,78E-08	-7,45E-07
Acidification	kg SO_2e	7,76E-01	1,31E-02	6,18E-03	7,96E-01	MND	5,87E-04	MND	MND	MND	MND	MND	MND	MND	MNR	2,78E-03	4,69E-03	1,86E-03	-6,56E-02
Eutrophication	kg PO_4^3e	4,38E-01	2,29E-03	4,66E-03	4,45E-01	MND	4,17E-04	MND	MND	MND	MND	MND	MND	MND	MNR	7,20E-04	1,90E-03	3,97E-03	-3,00E-02
POCP (“smog”)	kg C_2H_4e	6,54E-02	5,20E-04	4,75E-04	6,64E-02	MND	5,88E-05	MND	MND	MND	MND	MND	MND	MND	MNR	2,36E-04	1,65E-04	6,69E-05	-1,29E-02
ADP-elements	kg Sbe	1,72E-02	1,12E-05	9,88E-06	1,72E-02	MND	1,92E-06	MND	MND	MND	MND	MND	MND	MND	MNR	9,40E-06	5,40E-05	1,01E-06	-8,62E-04
ADP-fossil	MJ	1,34E+03	4,81E+01	8,16E+01	1,47E+03	MND	1,87E+00	MND	MND	MND	MND	MND	MND	MND	MNR	9,11E+00	6,08E+00	7,84E+00	-1,62E+02

VERIFICATION STATEMENT

VERIFICATION PROCESS FOR THIS EPD

This EPD has been verified in accordance with ISO 14025 by an independent, third-party verifier by reviewing results, documents and compliancy with reference standard, ISO 14025 and ISO 14040/14044, following the process and checklists of the program operator for:

- This Environmental Product Declaration
- The Life-Cycle Assessment used in this EPD
- The digital background data for this EPD

Why does verification transparency matter? Read more online
This EPD has been generated by One Click LCA EPD generator, which has been verified and approved by the EPD Hub.

THIRD-PARTY VERIFICATION STATEMENT

I hereby confirm that, following detailed examination, I have not established any relevant deviations by the studied Environmental Product Declaration (EPD), its LCA and project report, in terms of the data collected and used in the LCA calculations, the way the LCA-based calculations have been carried out, the presentation of environmental data in the EPD, and other additional environmental information, as present with respect to the procedural and methodological requirements in ISO 14025:2010 and reference standard.

I confirm that the company-specific data has been examined as regards plausibility and consistency; the declaration owner is responsible for its factual integrity and legal compliance.

I confirm that I have sufficient knowledge and experience of construction products, this specific product category, the construction industry, relevant standards, and the geographical area of the EPD to carry out this verification.

I confirm my independence in my role as verifier; I have not been involved in the execution of the LCA or in the development of the declaration and have no conflicts of interest regarding this verification.

Imane Uald lamkaddam, as an authorized verifier acting for EPD Hub Limited

23.05.2024