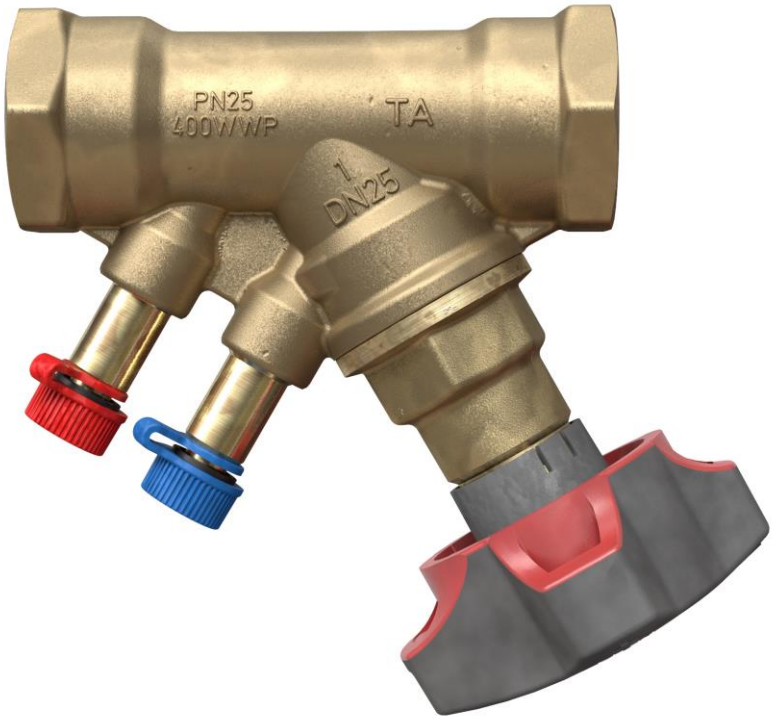
ENVIRONMENTAL PRODUCT DECLARATION

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

Balancing Valve STAD PN 25 - DN 25 (with variants)

IMI Hydronic Engineering AB



EPD HUB, HUB-0668

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Created with One Click LCA

GENERAL INFORMATION

MANUFACTURER

Manufacturer	IMI Hydronic Engineering AB
Address	Falköpingsvägen 2, 524 42 Ljung, Sweden
Contact details	christofer.sundqvist@imi-hydronic.com
Website	https://www.imi-hydronic.com/

EPD STANDARDS, SCOPE AND VERIFICATION

Program operator	EPD Hub, hub@epdhub.com
Reference standard	EN 15804+A2:2019 and ISO 14025
PCR	EPD Hub Core PCR version 1.0, 1 Feb 2022
Sector	Construction product
Category of EPD	Third party verified EPD
Scope of the EPD	Cradle to gate with options, A4-A5, and modules C1-C4, D
EPD author	Paweł Magiera, Michael Kreinin, Teresa Ribeiro, IMI Hydronic Engineering International SA
EPD verification	Independent verification of this EPD and data, according to ISO 14025: ☐ Internal certification ☑ External verification
EPD verifier	Magaly González Vázquez, as an authorized verifier acting for EPD Hub Limited

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

PRODUCT

Product name	Balancing Valve STAD PN 25 - DN 25 (with variants)
Additional labels	This representative data for similar products is valid for STAD dimension range of DN10-50 (with and without drain); STAD NPT dimension range of DN15-50 (with and without drain); STAD-C dimension range of DN14-50; STAD-R dimension range of DN15-25; STAD-B dimension range of DN10-50; STAD-D dimension range of DN10-50.
Product reference	52851125
Place of production	Ljung, Sweden; Erwitte, Germany; Olkusz, Poland
Period for data	01.01.2021-31.12.2021
Averaging in EPD	Multiple products
Variation in GWP-fossil for A1-A3	<40 %

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 kg of STAD PN 25 - DN 25
Declared unit mass	1 kg
GWP-fossil, A1-A3 (kgCO2e)	1,27E0
GWP-total, A1-A3 (kgCO2e)	1,22E0
Secondary material, inputs (%)	91.0
Secondary material, outputs (%)	91.7
Total energy use, A1-A3 (kWh)	15.5
Total water use, A1-A3 (m3e)	1,79E-2

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

IMI Hydronic Engineering is a leading provider of technologies that deliver energy efficient water-based heating and cooling systems for the residential and commercial building sectors. Throughout our history, we have been at the forefront of HVAC industry innovation. Our mission is to create tremendous value for customers through our unique knowledge of the hydronic system and innovating premium products and services to deliver energy efficiency and smart comfort for everyone. Key IMI Hydronic Engineering brands are Pneumatex (pioneers and innovators in pressurisation & water quality), TA (leaders in balancing, control and actuation), IMI Flow-Design (balancing and control in North America), Heimeier (Major European player in thermostatic control) and IMI Aero-Dynamiek (more than 40 years of professional service experience). IMI Hydronic Engineering is a part of IMI PLC Group, listed on the London Stock Exchange on FTSE 100 list.

PRODUCT DESCRIPTION

The STAD balancing valve delivers accurate hydronic performance in an impressive range of applications. Ideally suited for use on the secondary side in heating and cooling systems, and tap water systems. Valve has high accuracy for all settings, ergonomic setting knob, self-sealing measuring points - which are key to proper setting of the system. Product is made of AMETAL® - special copper alloy with high mechanical strength and corrosion resistance, providing long life and reduced risk of leakage. Valves are available in different sizes to accommodate various flow requirements and system specifications. In this document we assess representative data for similar products, it is valid for STAD dimension range of DN10-50 (with and without drain); STAD NPT dimension range of DN15-50 (with and without drain); STAD-C dimension range of DN14-50; STAD-R dimension range of DN15-25; STAD-B dimension range of DN10-50; STAD-D dimension range of DN10-50.

Further information can be found at https://www.imi-hydronic.com/.

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass- %	Material origin
Metals	92	Sweden, Norway, Belgium, Germany
Minerals		
Fossil materials	8	Germany, Poland, Sweden other European countries
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	0.066067377

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 kg of STAD PN 25 - DN 25
Mass per declared unit	1 kg
Functional unit	-
Reference service life	25

SUBSTANCES, REACH - VERY HIGH CONCERN

Substances of very high concern	EC	CAS
Lead (PB)	231-100-4	7439-92-1

PRODUCT LIFE-CYCLE

SYSTEM BOUNDARY

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

Product stage			Assembly stage		Use stage							End of life stage				Beyond the system boundaries		
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D		
x	x	x	x	x	MND	MND	MND	MND	MND	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 valve is made mostly of dezincification resistant Ametal alloy obtained from casting and metal processing. The pieces are mechanically processed from raw rods and ingots at our site and assembled with other valves components like handwheel, spring, washers, spindle, measuring points, O-rings, sealants, gaskets and caps. Other main components along with Ametal are polyamide, steel, polypropylene and rubber components.

The manufacturing process takes part in different sites during other steps of production and requires mostly electricity (casting, machining, assembly, injection moulding) and small portion of fossil fuels in LPG form (preheating of the ladle). Waste related to production process are recycled according to agreements with disposal companies. Vast majority of our metal waste (scrap) is already recycled on site for further products. Wastewater was addressed, only water-intense processes are related to washing of machined parts, where most of agent is recirculating.

Other waste, related to production is treated with the most efficient available way - through recycling (cardboard) or incineration with energy recovery (plastic elements, pallet). We assume that significant amount of incoming pallets (56%) are reused by us.

During transport internal transport of subcomponents we use reusable boxes. Product is packed in dedicated cardboard package. Additionally, reusable EPAL wooden pallet and packaging film are used as a packaging material for transporting the product from the factory gate.

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.

Average emissions related to 1 kg of valve are based on real sales volumes from previous years. Average distance of transportation from warehouse to building site is assumed as 1218 km and the transportation method is assumed to be lorry (93%) and 18500 km while delivering overseas (7%). Transportation does not cause losses as products are packaged properly.

Environmental impacts from installation into the building include a waste packaging materials (A5), pallets are standardized and planned to be reused, however for calculation we used standard European EOL

averages. Other packaging materials, cardboard and plastic are utilized as per European EOL averages. We assume that small amount of fibre sealant and grease will be used during installation and will be assembled until product end of life. The impacts of material production, its processing and its disposal as installation waste are also included.

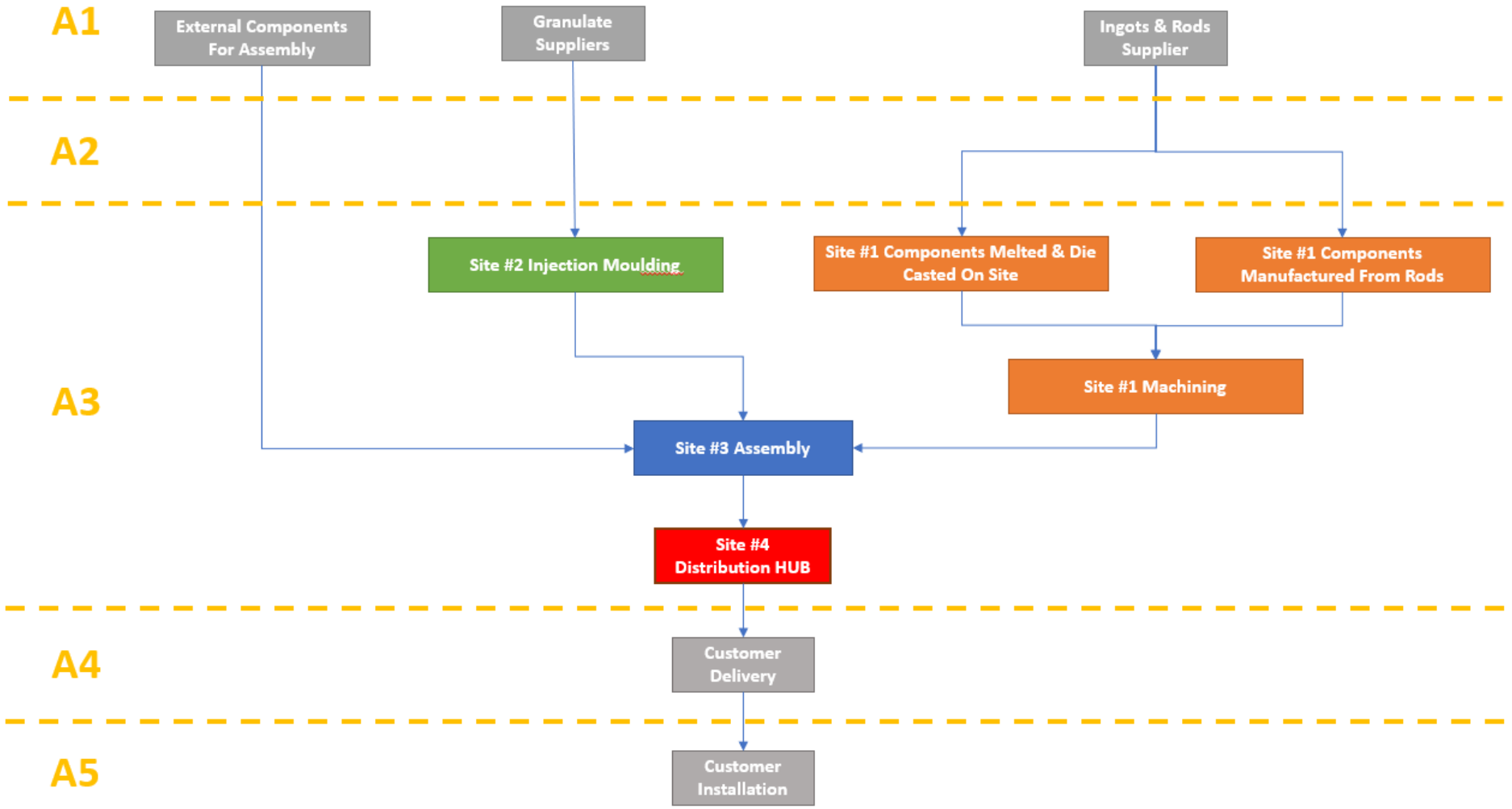
PRODUCT USE AND MAINTENANCE (B1-B7)

B stage is not applicable - product does not need resource consuming maintenance and is not using electricity.
Air, soil, and water impacts during the use phase have not been studied.

PRODUCT END OF LIFE (C1-C4, D)

Since the consumption of energy and natural resources is negligible for disassembling of the end-of-life product, the impacts of demolition are assumed zero (C1) The end-of-life product is assumed to be sent to the closest facilities by lorry and is assumed to be 100 km away (C2). 100% of the product is collected separately from the demolition site while 83% sent to recycling (brass and steel elements) and 8% to incineration facilities (rubber and plastic elements) (C3). 9% of the end-of-life product goes to landfill - according to EU data 10% of brass and steel components ends at landfill (C4). Due to the recycling and incineration potential of metals and plastics, the end-of-life product is converted into recycled materials, while energy and heat is produced from material incineration (D). The benefits and loads of waste packaging materials in A5 are also considered in module D.

MANUFACTURING PROCESS



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	Allocated by mass or volume
Ancillary materials	Allocated by mass or volume
Manufacturing energy and waste	Allocated by mass or volume

AVERAGES AND VARIABILITY

Type of average	Multiple products
Averaging method	Not applicable
Variation in GWP-fossil for A1-A3	<40 %

Primary data represents the manufacturing of STAD balancing valve, DN 25. The data was used to calculate representative impacts for broader STAD products range. Manufacturing process is very similar for all product variants and different dimensions which is covered under this EPD. The differences are within variation of thread types, other type of caps manufacturing or specific surface treatment. The variability of the primary data or the emissions between the products did not amount to more than 40% against representative product (the highest compared to STAD DN 25 and the lowest compared to STAD DN 25). The primary data was averaged by calculating a weighted average of the products consumption of energy and production of wastes. The production amount mass shares per each product type was used in the weighting.

This representative data for similar products is valid for STAD dimension range of DN10-50 (with and without drain); STAD NPT dimension range of DN15-50 (with and without drain); STAD-C dimension range of DN15-50; STAD-R dimension range of DN15-25; STAD-B dimension range of DN10-50; STAD-D dimension range of DN10-50.

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. Ecoinvent 3.6 and One Click LCA databases were used 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	6,5E-1	2,53E-2	5,44E-1	1,22E0	1,42E-1	9,41E-3	MND	MND	MND	MND	MND	MND	MND	0E0	1,39E-2	3,16E-1	4,88E-4	-9,14E-2
GWP – fossil	kg CO_2e	6,51E-1	2,53E-2	5,94E-1	1,27E0	1,42E-1	2,58E-2	MND	MND	MND	MND	MND	MND	MND	0E0	1,38E-2	2,07E-1	4,87E-4	-2,01E-1
GWP – biogenic	kg CO_2e	-1,36E-3	1,83E-5	-6,5E-2	-6,63E-2	8,82E-5	-1,65E-2	MND	MND	MND	MND	MND	MND	MND	0E0	1E-5	1,09E-1	9,65E-7	1,1E-1
GWP – LULUC	kg CO_2e	2,11E-4	7,61E-6	1,51E-2	1,53E-2	4,83E-5	2,47E-5	MND	MND	MND	MND	MND	MND	MND	0E0	4,16E-6	2,4E-5	1,45E-7	1,59E-5
Ozone depletion pot.	kg $CFC_{-11}e$	1,24E-6	5,94E-9	1,76E-7	1,42E-6	3,29E-8	5,98E-9	MND	MND	MND	MND	MND	MND	MND	0E0	3,25E-9	3,47E-9	2E-10	-1,58E-8
Acidification potential	mol H^+e	3,04E-3	1,07E-4	3,99E-3	7,14E-3	1,01E-3	4,29E-4	MND	MND	MND	MND	MND	MND	MND	0E0	5,81E-5	2,93E-4	4,62E-6	-2,01E-3
EP-freshwater[2)]	kg Pe	1,4E-5	2,05E-7	4,15E-5	5,58E-5	1,1E-6	1,68E-6	MND	MND	MND	MND	MND	MND	MND	0E0	1,13E-7	1,44E-6	5,88E-9	-2,11E-5
EP-marine	kg Ne	7,5E-4	3,21E-5	1,23E-3	2,01E-3	2,77E-4	2,37E-4	MND	MND	MND	MND	MND	MND	MND	0E0	1,75E-5	7,6E-5	1,59E-6	-2,69E-4
EP-terrestrial	mol Ne	5,03E-3	3,54E-4	1,37E-2	1,9E-2	3,07E-3	1,68E-3	MND	MND	MND	MND	MND	MND	MND	0E0	1,93E-4	8,57E-4	1,75E-5	-3,01E-3
POCP ("smog")[3)]	kg NMVOCe	1,71E-3	1,14E-4	3,72E-3	5,54E-3	9,07E-4	2,75E-4	MND	MND	MND	MND	MND	MND	MND	0E0	6,22E-5	2,29E-4	5,09E-6	-8,38E-4
ADP-minerals & metals[4)]	kg Sbe	3,6E-5	4,31E-7	9,38E-6	4,58E-5	2,28E-6	9,3E-7	MND	MND	MND	MND	MND	MND	MND	0E0	2,36E-7	1,18E-6	4,45E-9	-1,47E-5
ADP-fossil resources	MJ	9,67E0	3,93E-1	3,09E1	4,1E1	2,17E0	4,95E-1	MND	MND	MND	MND	MND	MND	MND	0E0	2,15E-1	3,23E-1	1,36E-2	-2,49E0
Water use[5)]	m^3e depr.	5,11E-1	1,46E-3	4,03E-1	9,16E-1	7,77E-3	1,86E-1	MND	MND	MND	MND	MND	MND	MND	0E0	8,01E-4	1,06E-2	6,29E-4	-9,27E-2

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	3,13E-8	2,28E-9	7,34E-8	1,07E-7	1,2E-8	4,56E-9	MND	MND	MND	MND	MND	MND	MND	0E0	1,25E-9	3,52E-9	8,98E-11	-2,32E-8
Ionizing radiation[6)]	kBq U235e	1,41E-2	1,72E-3	8,83E-1	8,99E-1	9,46E-3	1,92E-3	MND	MND	MND	MND	MND	MND	MND	0E0	9,41E-4	1,51E-3	5,58E-5	-2,74E-2
Ecotoxicity (freshwater)	CTUe	7,76E0	3E-1	3,58E1	4,39E1	1,63E0	8,89E-1	MND	MND	MND	MND	MND	MND	MND	0E0	1,64E-1	1,49E0	8,59E-3	-1,31E1
Human toxicity, cancer	CTUh	1,5E-9	7,69E-12	5,31E-10	2,03E-9	4,69E-11	1,86E-10	MND	MND	MND	MND	MND	MND	MND	0E0	4,21E-12	4,27E-11	2,03E-13	-4,87E-11
Human tox. non-cancer	CTUh	9,74E-9	3,56E-10	1,43E-8	2,44E-8	1,89E-9	-7,09E-10	MND	MND	MND	MND	MND	MND	MND	0E0	1,95E-10	1,93E-9	6,27E-12	-1,85E-9
SQP[7)]	-	4,29E-1	5,93E-1	4,13E0	5,15E0	3E0	1,6E-1	MND	MND	MND	MND	MND	MND	MND	0E0	3,25E-1	8,04E-2	2,31E-2	-3,29E-1

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	5,8E-1	4,94E-3	1,53E1	1,59E1	2,62E-2	1,06E0	MND	MND	MND	MND	MND	MND	MND	0E0	2,71E-3	4,51E-2	1,1E-4	-2,65E0
Renew. PER as material	MJ	0E0	0E0	3E0	3E0	0E0	-2,76E0	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	-2E-1	0E0	1,16E0
Total use of renew. PER	MJ	5,8E-1	4,94E-3	1,83E1	1,89E1	2,62E-2	-1,7E0	MND	MND	MND	MND	MND	MND	MND	0E0	2,71E-3	-1,55E-1	1,1E-4	-1,49E0
Non-re. PER as energy	MJ	8,82E0	3,93E-1	3,09E1	4,01E1	2,17E0	4,95E-1	MND	MND	MND	MND	MND	MND	MND	0E0	2,15E-1	3,23E-1	1,36E-2	-2,47E0
Non-re. PER as material	MJ	8,5E-1	0E0	4,49E-2	8,95E-1	0E0	-7E-2	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	-8,5E-1	0E0	3,17E-3
Total use of non-re. PER	MJ	9,67E0	3,93E-1	3,09E1	4,1E1	2,17E0	4,25E-1	MND	MND	MND	MND	MND	MND	MND	0E0	2,15E-1	-5,27E-1	1,36E-2	-2,47E0
Secondary materials	kg	9,1E-1	0E0	1,14E-1	1,02E0	0E0	4,8E-2	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	0E0	0E0	7,32E-2
Renew. secondary fuels	MJ	0E0	0E0	0E0	0E0	0E0	0E0	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	0E0	0E0	0E0
Non-ren. secondary fuels	MJ	0E0	0E0	0E0	0E0	0E0	0E0	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	0E0	0E0	0E0
Use of net fresh water	m^3	6,73E-3	8,18E-5	1,11E-2	1,79E-2	4,3E-4	1,09E-2	MND	MND	MND	MND	MND	MND	MND	0E0	4,48E-5	3,56E-4	1,49E-5	-1,82E-3

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	9,07E-2	3,82E-4	4,72E-2	1,38E-1	2,14E-3	1,98E-3	MND	MND	MND	MND	MND	MND	MND	0E0	2,09E-4	0E0	1,27E-5	-8,05E-3
Non-hazardous waste	kg	6,78E-1	4,22E-2	1,17E0	1,89E0	2,16E-1	1,12E-1	MND	MND	MND	MND	MND	MND	MND	0E0	2,31E-2	0E0	9,24E-2	-4,05E-1
Radioactive waste	kg	1,27E-5	2,7E-6	3,81E-4	3,96E-4	1,49E-5	2,7E-6	MND	MND	MND	MND	MND	MND	MND	0E0	1,48E-6	0E0	9E-8	-1,6E-5

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	0E0	0E0	1,06E-1	1,06E-1	0E0	0E0	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	0E0	0E0	0E0
Materials for recycling	kg	0E0	0E0	1,75E-2	1,75E-2	0E0	8,81E-2	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	8,32E-1	0E0	0E0
Materials for energy rec	kg	0E0	0E0	4,05E-2	4,05E-2	0E0	3,7E-2	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	8,52E-2	0E0	0E0
Exported energy	MJ	0E0	0E0	7,73E-1	7,73E-1	0E0	5,32E-1	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	2,76E0	0E0	0E0

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	6,16E-1	2,5E-2	6,05E-1	1,25E0	1,41E-1	5,68E-2	MND	MND	MND	MND	MND	MND	MND	0E0	1,37E-2	2,07E-1	4,78E-4	-1,96E-1
Ozone depletion Pot.	kg CFC_{-11}e	1,77E-6	4,72E-9	2,29E-7	2E-6	2,61E-8	4,93E-9	MND	MND	MND	MND	MND	MND	MND	0E0	2,59E-9	3,02E-9	1,59E-10	-1,42E-8
Acidification	kg SO_2e	2,58E-3	5,18E-5	2,78E-3	5,41E-3	6,37E-4	2,76E-4	MND	MND	MND	MND	MND	MND	MND	0E0	2,82E-5	1,81E-4	1,93E-6	-1,76E-3
Eutrophication	kg PO_4^3e	7,29E-4	1,04E-5	1,21E-3	1,95E-3	9,44E-5	3,39E-4	MND	MND	MND	MND	MND	MND	MND	0E0	5,69E-6	8,26E-5	3,73E-7	-4,5E-4
POCP (“smog”)	kg C_2H_4e	1,31E-4	3,27E-6	1,27E-4	2,61E-4	2,63E-5	1,73E-5	MND	MND	MND	MND	MND	MND	MND	0E0	1,78E-6	7,85E-6	1,41E-7	-7,7E-5
ADP-elements	kg Sbe	3,6E-5	4,31E-7	9,38E-6	4,58E-5	2,28E-6	9,3E-7	MND	MND	MND	MND	MND	MND	MND	0E0	2,36E-7	1,18E-6	4,45E-9	-1,47E-5
ADP-fossil	MJ	9,67E0	3,93E-1	3,09E1	4,1E1	2,17E0	4,95E-1	MND	MND	MND	MND	MND	MND	MND	0E0	2,15E-1	3,23E-1	1,36E-2	-2,49E0

VERIFICATION STATEMENT

VERIFICATION PROCESS FOR THIS EPD

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

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

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

THIRD-PARTY VERIFICATION STATEMENT

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

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

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

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

Magaly González Vázquez, as an authorized verifier acting for EPD Hub Limited
01.09.2023