

Environmental Product Declaration



In accordance with ISO 14025 and EN 15804:2012+A2:2019 for:

Altech brass and chromated brass clamps (klämringkopplingar)

from

Saint-Gobain Building Distribution (SGDS)



Program:

Program operator:

EPD registration
number:

Publication date:

Valid until:

The International EPD[®] System, www.environdec.com

EPD International AB

S-P-11349

2023-11-13

2028-11-12


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General information

Programme information

Programme:	The International EPD® System
Address:	EPD International AB Box 210 60 SE-100 31 Stockholm Sweden
Website:	www.environdec.com
E-mail:	info@environdec.com

Accountabilities for PCR, LCA and independent, third-party verification
Product Category Rules (PCR): Construction Products PCR 2019:14 version 1.3.1
CEN standard EN 15804 serves as the Core Product Category Rules (PCR)
PCR review was conducted by: The Technical Committee of the International EPD® System.
Life Cycle Assessment (LCA)
LCA accountability: Fanni Végvári, CarbonZero AB
Third-party verification
Independent third-party verification of the declaration and data, according to ISO 14025:2006, via: <input checked="" type="checkbox"/> EPD verification by the individual verifier
Third-party verifier: Vladimír Kočí, LCA Studio s.r.o, Czech Republic 
Approved by: The International EPD® System
Procedure for follow-up of data during EPD validity involves third party verifier: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

The EPD owner has the sole ownership, liability, and responsibility for the EPD.

EPDs within the same product category but from different programmes may not be comparable. EPDs of construction products may not be comparable if they do not comply with EN 15804. For further information about comparability, see EN 15804 and ISO 14025.

Company information

Owner of the EPD	Saint-Gobain Distribution Sweden
Contact	SGDS - Beriar Maroof (beriar.maroof@sgdsgruppen.se)
Description of the organisation	<p>SGDS Gruppen - specialists in collaboration for more efficient business in construction and installation. SGDS Gruppen AB is the head company of some of Sweden's leading trading companies in construction, sheet metal, tiles and installation. All the companies have long and solid industry experience and provide most of Sweden's craftsmen with materials for various projects. Customers in different companies can also buy support items from the sister companies in the group, and in selected cases, we take joint projects to facilitate the logistics of the supply of goods, which is often critical for a smooth construction project.</p> <ul style="list-style-type: none"> • Optimera - construction trade for professional carpenters • Dahl – heat, plumbing and sanitary specialist • Bevego - building sheet metal, ventilation and technical insulation • Kakelspecialisten and Konradsson's Tiles - tiles, tiling and bathroom fittings <p>The company's focus is on sales and services, with direct contact to about 150,000 customers regularly.</p> <p>Saint-Gobain Distribution Sweden group (SGDS) is owned by Saint-Gobain with a presence in 64 countries and over 190 000 employees worldwide.</p>
Name and location of production site	Italy

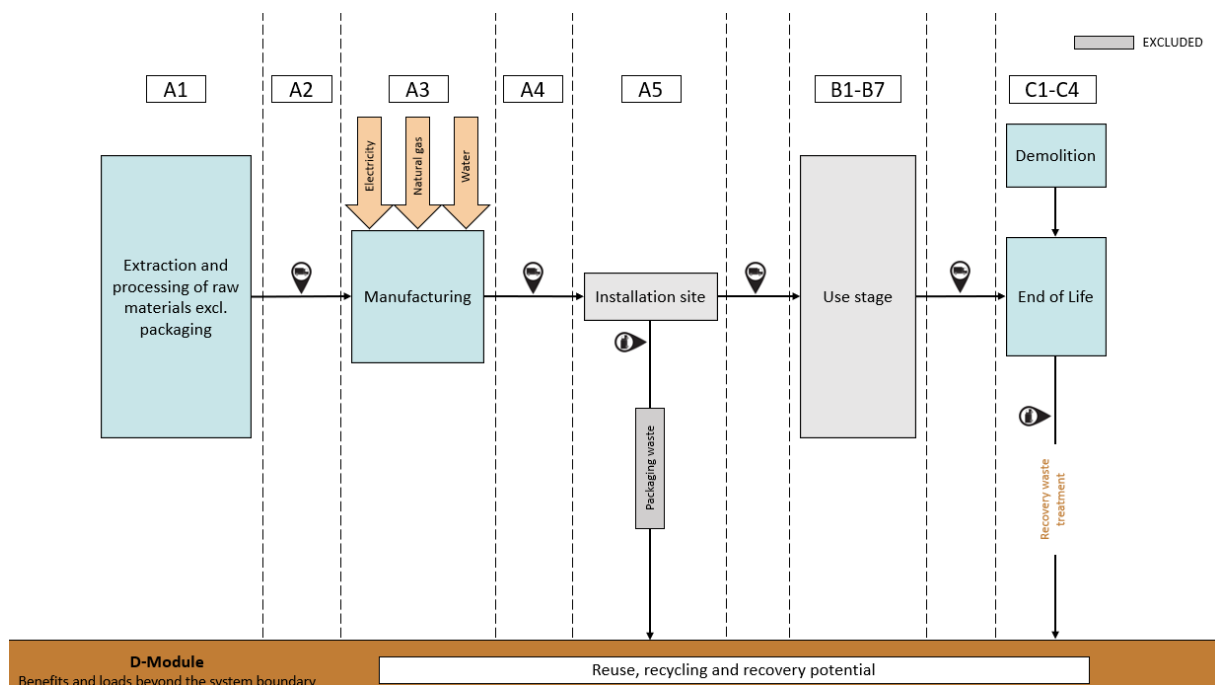


Product information

Product name	Altech brass clamps (klämringkopplingar)
Product identification	Brass clamp The EPD shows the average results from the products.
Product description	This product is made of brass.
Use	Altech brass clamps (klämringkopplingar) are used to conduct and distribute hot and cold water in tap water installations, heating installations and cooling installations. The chromated brass clamps are used for visible installations.

LCA information

Functional unit / declared unit	1 kg of Altech brass clamps (klämringkopplingar)
Reference service life	Not applicable
Database(s) and LCA software used	Calculation completed in LCA for Experts v10.7 with an integrated Ecoinvent database 3.8
System boundaries	Cradle to grave, with options. (A1-A3, A4, C1-C4, D)



More information

The EPD covers the following range of products from Dahl:

- Altech brass and chromated brass clamps (klåmringskopplingar)

Article number Brass clamps	Article number Chromated brass clamps	Dimensions (mm)	Article number Brass clamps	Article number Chromated brass clamps	Dimensions (mm)
1965530	1965549	10	1968263	1968284	12 x 10 x 12
1965531	1965550	12	1968264	1968285	12 x 15 x 12
1965532	1965551	15	1968267		15 x 10 x 15
1965533	1965552	18	1968265	1968286	15 x 12 x 12
1965534	1965553	22	1968268	1968288	15 x 12 x 15
1965535		28	1968266	1968287	15 x 15 x 12
1965536		35	1968269		15 x 22 x 15
1965537		42	1968270		16 x 15 x 16
1965538		54	1968272		18 x 12 x 18
1962010	1965554	10 x 8	1968273	1968290	18 x 15 x 18
1965540	1965555	12 x 8	1968276		22 x 12 x 22
1965541	1965556	12 x 10	1968274	1968291	22 x 15 x 15
1965542	1965557	15 x 12	1968277	1968292	22 x 15 x 22
1965543	1965558	16 x 15	1968275	1968292	22 x 22 x 15
1965546	1965559	18 x 12	1962007		28 x 15 x 28
1962001		18 x 15	1968278		28 x 22 x 28
1965547	1965605	22 x 15	1968294		12 x G15 x 12
1965548	1965604	10 x G10	1962008		15 x G10 x 15
1965587	1965606	10 x G15	1968295		15 x G15 x 15
1965590		12 x G10	1968296		22 x G15 x 22
1965588	1965607	12 x G15	1962009		22 x G20 x 22
1965591		15 x G10	1968299		15 x R15 x 15
1965589		15 x G15		1968301	12 x G15
1965592		15 x G20	1968300	1968302	15 x G15
1965595		18 x G15	1934292		10 x 8
1965593		22 x G15	1934294		12 x 10
1965594		22 x G20	1934293		12 x 8
1965597		22 x G25	1934296		15 x 10
1962002		28 x G25	1934297		15 x 12
1965599		35 x G32	1934295		15 x 8
1965600		42 x G40	1934298		18 x 12
1965601		54 x G50	1934299		18 x 15
1965602		10 x R10	1934300		18 x 16
1965560	1965582	10 x R15	1934301		22 x 12
1965563	1965579	12 x R10	1934302		22 x 15
1965561	1965583	12 x R15	1934303		22 x 18
1965564		15 x R10	1934304		28 x 12
1965562	1965584	15 x R10	1934305		28 x 15
1965565		15 x R20	1934307		28 x 22
1965569		15 x R20	1934308		35 x 22
1965568		16 x R15	1934309		35 x 28
1965566		18 x R15	1934310		42 x 28
1965570		18 x R20	1934311		42 x 35
1965567		22 x R15	1934312		42 x 36
1965571	1962011	22 x R20	1934313		54 x 42

1965572		22 x R25	2164800		10
1965573		28 x R20	2164801		12
1965574		28 x R25	2164802		15
1965575		35 x R25	2164803		18
1965576		35 x R32	2164804		22
1965577		42 x R40	2164805		28
1965578		54 x R50	2164806		35
1966428	1966438	10	2164807		42
1966429	1966439	12	2164808		54
1966430	1966440	15	2164794		10
1966431	1966441	18	2164795		12
1966432	1966442	22	2164796		15
1966433		28	2164797		18
1966434		35	2164798		22
1966435		42	2164799		28
1966436		54	1970111		10
1966437	1966443	15 x 12	1970112		12
1962003		16 x 15	1970113		15
1962004		22 x 15	1970114		16
1966464		15 x G15	1970115		18
1966465		18 x G15	1970116		22
1966468		22 x G20	1970117		28
1966469		28 x G25	1970118		35
1966470		35 x G32	1970119		42
1966471		42 x G40	1970120		54
1966472		54 x G50	2562000	2562012	10
1966445		10 x R15	2562001	2562010	12
1966444	1966456	10 x R15	2562002	2562011	15
1966446	1966458	12 x R15	2562003		16
1966446		15 x R10	2562004	2562013	18
1966447	1966459	15 x R15	2562005	2562014	22
1966449		15 x R20	2562006		28
1966448		18 x R15	2562007		35
1966450		18 x R20	2562008		42
1962006		22 x R15	2562009		54
1966451		22 x R20			
1966452		28 x R25			
1966453		35 x R32			
1966454		42 x R40			
1968254	1968279	10			
1968255	1968280	12			
1968256	1968281	15			
1968257	1968282	18			
1968258	1968283	22			
1968259		28			
1968260		35			
1968261		42			
1968262		54			

A1, Raw material supply

This module considers the extraction and processing of all raw materials, energy, and transportation which occur upstream of the studied manufacturing process.

A2, transport to the manufacturer

This module includes the transportation of raw materials to the manufacturing site.

A3, manufacturing

This module includes all resources used during the production of Altech brass clamps (klämringkopplingar) and waste produced. This also includes additives and packaging material.

A4, Transport

Transportation from the manufacturing site in Sweden to SGDS Gruppen's distribution centre and then from the distribution centre to the building site is included.

A5, Construction installation

This stage is partially included to balance the biogenic content in packaging.

B1-B7 Use stage

This stage is not declared.

C1 Deconstruction/Demolition

This module includes the de-construction and/or demolition of the building. This is not relevant as the product included in this study is not used in the construction process.

C2 Transport

This module represents the transport distance to the waste processing facility.

C3 Waste processing

This module includes any waste treatment needed.

C4 Final disposal

This module includes any material that is landfilled.

D Benefits and loads beyond the system boundary

This module includes emission credits obtained from energy recovery and/or recycling materials.

Cut-off criteria:

All input and output flows in a unit process were considered i.e., taking into account the value of all flows in the unit process and the corresponding LCI where data was available. Data gaps were filled by conservative assumptions with average or generic data. Any assumptions in such cases were documented. The use of cut-off criterion on mass inputs and primary energy at the unit process level (1%) and at the information module level (5%).

Content declaration

Content

Content declaration	Amount (kg)
Chrome coated brass	1
<i>Total</i>	<i>1</i>

Packaging materials	Weight, kg	Weight-% (versus the product)
EU pallet	0,0025	0,25
Cardboard box	0,041	4,1
<i>Total</i>	<i>0,0435</i>	<i>4,35%</i>

Dangerous substances from the candidate list of SVHC for Authorisation	EC No.	CAS No.	Weight-% per functional or declared unit
Lead	231-100-4	7439-92-1	3,0

Modules declared and geographical scope

	Product stage			Assembly stage		Use stage							End of life stage				Benefits & loads beyond system boundary	
	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	
Modules	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D	
Modules declared	X	X	X	X	ND	ND	ND	ND	ND	ND	ND	ND	X	X	X	X	X	
Geography	IT	IT	IT	EU	-	-	-	-	-	-	-	-	SE	SE	SE	SE	SE	
Specific data used	Specific data used in module A3				-	-	-	-	-	-	-	-	-	-	-	-	-	
Variation products	10%				-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation sites	0%				-	-	-	-	-	-	-	-	-	-	-	-	-	-

Environmental Information

Potential environmental impact – indicators according to EN 15804+A2

Indicator	Unit	Results per functional or declared unit: 1 kg						
		A1-A3	A4	A5	C2	C3	C4	D
GWP-total	kg CO2 eq	4,95E-01	1,32E-01	6,75E-02*	3,58E-03	2,95E-04	4,35E-02	-2,51E-02
GWP-fossil	kg CO2 eq	5,61E-01	1,33E-01	0,00E+00	3,60E-03	0,00E+00	4,40E-02	-2,51E-02
GWP-biogenic	kg CO2 eq	-6,74E-02	-1,96E-03	6,75E-02*	-5,30E-05	2,95E-04	-5,45E-04	2,22E-05
GWP-luluc	kg CO2 eq	9,93E-04	1,23E-03	0,00E+00	3,32E-05	0,00E+00	4,47E-05	-4,38E-05
ODP	kg CFC-11 eq	1,34E-09	1,18E-14	0,00E+00	5,32E-16	0,00E+00	7,26E-14	-1,20E-13
AP	mole H+ eq	6,84E-03	2,50E-04	0,00E+00	6,81E-06	0,00E+00	1,41E-04	-3,28E-04
EP-freshwater	kg P eq	1,89E-05	4,83E-07	0,00E+00	1,33E-08	0,00E+00	3,98E-08	-5,54E-08
EP-marine	kg N eq	5,29E-04	1,04E-04	0,00E+00	2,81E-06	0,00E+00	3,55E-05	-2,25E-05
EP-terrestrial	mole N eq	5,67E-03	1,18E-03	0,00E+00	3,21E-05	0,00E+00	3,89E-04	-2,44E-04
POCP	kg NMVOC eq	1,74E-03	2,23E-04	0,00E+00	6,06E-06	0,00E+00	1,11E-04	-7,65E-05
ADP-minerals & metals	kg Sb eq	3,46E-04	8,61E-09	0,00E+00	2,39E-10	0,00E+00	1,21E-09	-1,73E-05
ADP-fossil	MJ	7,61E+00	1,80E+00	0,00E+00	5,00E-02	0,00E+00	6,58E-01	-3,34E-01
WDP	m3	2,38E-01	1,54E-03	0,00E+00	5,12E-05	0,00E+00	-5,97E-04	-1,11E-02
Acronyms	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							

*NOTE: The biogenic content in packaging contributing to the GWP-biogenic is balanced out in A5 as positive as the packaging leaves the system boundary.

Use of resources

		Results per functional or declared unit: 1 kg						
Indicator	Unit	A1-A3	A4	A5	C2	C3	C4	D
PERE	MJ	3,35E+00	1,29E-01	0,00E+00	4,59E-03	0,00E+00	5,90E-02	-9,88E-02
PERM	MJ	4,35E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	3,39E+00	1,29E-01	0,00E+00	4,59E-03	0,00E+00	5,90E-02	-9,88E-02
PENRE	MJ	7,62E+00	1,81E+00	0,00E+00	5,01E-02	0,00E+00	6,58E-01	-3,34E-01
PENRM	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	MJ	7,62E+00	1,81E+00	0,00E+00	5,01E-02	0,00E+00	6,58E-01	-3,34E-01
SM	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	m3	4,58E-03	1,42E-04	0,00E+00	5,46E-06	0,00E+00	7,41E-06	-2,06E-04
Acronyms	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 re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water							

Additional voluntary indicators

		Results per functional or declared unit: 1 kg						
Indicator	Unit	A1-A3	A4	A5	C2	C3	C4	D
GWP-GHG ¹	kg CO2 eq	5,63E-01	1,34E-01	0,00E+00	3,64E-03	0,00E+00	4,41E-02	-2,52E-02
Acronyms	GWP-GHG global warming potential - greenhouse gases							

Waste and output flows

Waste

		Results per functional or declared unit: 1 kg						
Indicator	Unit	A1-A3	A4	A5	C2	C3	C4	D
HWD	kg	-1,72E-08	6,44E-12	0,00E+00	-6,15E-14	0,00E+00	5,43E-11	-6,82E-13
NHWD	kg	1,09E-01	2,62E-04	0,00E+00	8,52E-06	0,00E+00	9,42E-01	-5,41E-03
RWD	kg	3,14E-04	2,77E-06	0,00E+00	4,96E-07	0,00E+00	7,64E-06	-1,49E-05
Acronyms	HW Hazardous waste disposed; NHW Non-hazardous waste disposed; RW Radioactive waste disposed							

¹ The indicator includes all greenhouse gases included in GWP-total but excludes biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. This indicator is thus almost equal to the GWP indicator originally defined in EN 15804:2012+A1:2013.

Output flows

		Results per functional or declared unit: 1 kg						
Indicator	Unit	A1-A3	A4	A5	C2	C3	C4	D
CRU	kg	0,00E+00	0,00E+00	2,50E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	kg	6,05E-04	0,00E+00	0,00E+00	0,00E+00	4,95E-02	0,00E+00	0,00E+00
MER	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EEE	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EET	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Acronyms	CRU Components for reuse; MR Materials for recycling; MER Materials for energy recovery; EEE Exported electric energy; ETE Exported thermal energy							

Information on biogenic carbon content

Biogenic carbon content	Unit per DU	Amount
Biogenic carbon content in product	kg C	0
Biogenic carbon content in packaging	kg C	1,81E-02

1 kg biogenic carbon is equivalent to 44/12 kg CO₂.

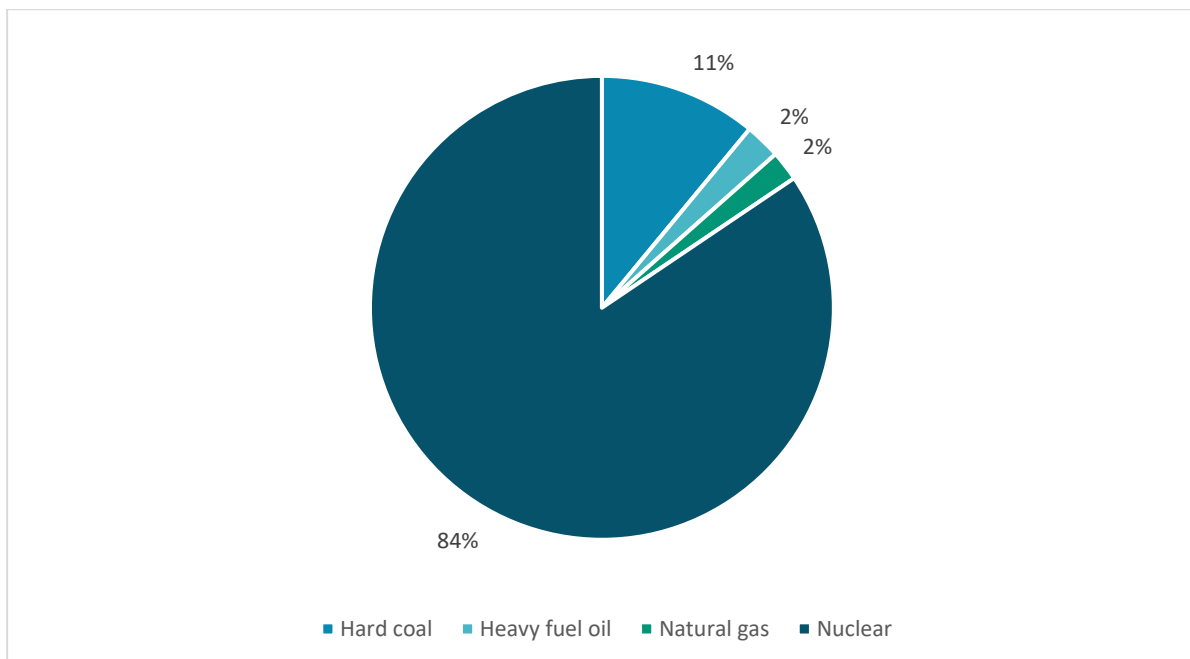
Disclaimers

ILCD classification	Indicator	Disclaimer
ILCD Type 1	Global warming potential (GWP)	None
	Depletion potential of the stratospheric ozone layer (ODP)	None
	Potential incidence of disease due to PM emissions (PM)	None
ILCD Type 2	Acidification potential, Accumulated Exceedance (AP)	None
	Eutrophication potential, Fraction of nutrients reaching freshwater end compartment (EP-freshwater)	None
	Eutrophication potential, Fraction of nutrients reaching marine end compartment (EP-marine)	None
	Eutrophication potential, Accumulated Exceedance (EP-terrestrial)	None
	Formation potential of tropospheric ozone (POCP)	None
	Potential Human exposure efficiency relative to U235 (IRP)	1
	Potential Soil quality index (SQI)	2
ILCD Type 3	Abiotic depletion potential for non-fossil resources (ADP-minerals&metals)	2
	Abiotic depletion potential for fossil resources (ADP-fossil)	2
	Water (user) deprivation potential, deprivation-weighted water consumption (WDP)	2
	Potential Comparative Toxic Unit for ecosystems (ETP-fw)	2
	Potential Comparative Toxic Unit for humans (HTP-c)	2
	Potential Comparative Toxic Unit for humans (HTP-nc)	2
	Potential Soil quality index (SQI)	2
	Disclaimer 1 – 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.	
Disclaimer 2 – 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 experience with the indicator.		

Additional information

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

Residual mix	Unit	Value
Location		Italy
Electricity mix		Nuclear: 84% Hard coal: 11% Heavy fuel oil: 2% Natural gas: 2%
Reference year		2021
Source		European Residual Mixes 2021 - Association of Issuing Bodies
GWP excl. Biogenic	kg CO ₂ -eq. /kWh	0,037



References

Association of Issuing Bodies	AIB (2022) European Residual Mixes 2021. Ver. 1.0.
Construction Products PCR 2019:14 version 1.3.1	EPD International (2021) PCR 2019:14 Construction products and construction services, version 1.3.1
EN 15804:2012+A2:2019	Sustainability of construction works - Environmental product declaration - Core rules for the product category of construction products
GPI	General Programme Instructions of the International EPD® System. Version 4.
ISO 14020:2000	Environmental labels and declarations — General principles
ISO 14025:2010	Environmental labels and declarations - Type III environmental declarations - Principles and procedures
ISO 14044:2006	Environmental management - Life cycle assessment - Requirements and guidelines
SCB – Swedish Statistics	(2020) Treated waste by treatment category and waste category. Every second year 2010 - 2020 https://www.statistikdatabasen.scb.se/pxweb/en/ssd/START_MI_MI0305/MI0305T003/ Assessed 2023-10-19.