

Environmental Product Declaration



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

Altech press fittings (kylpresskopplingar) for air conditioning and refrigeration

from

Saint-Gobain Building Distribution (SGDS)



Program:	The International EPD® System, www.environdec.com
Program operator:	EPD International AB
EPD registration number:	S-P-11819
Publication date:	2023-12-18
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Valid until:	2028-12-17


An EPD should provide current information and may be updated if conditions change. The stated validity is therefore subject to the continued registration and publication at www.environdec.com



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 <div style="text-align: right;">  </div>
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	Poland

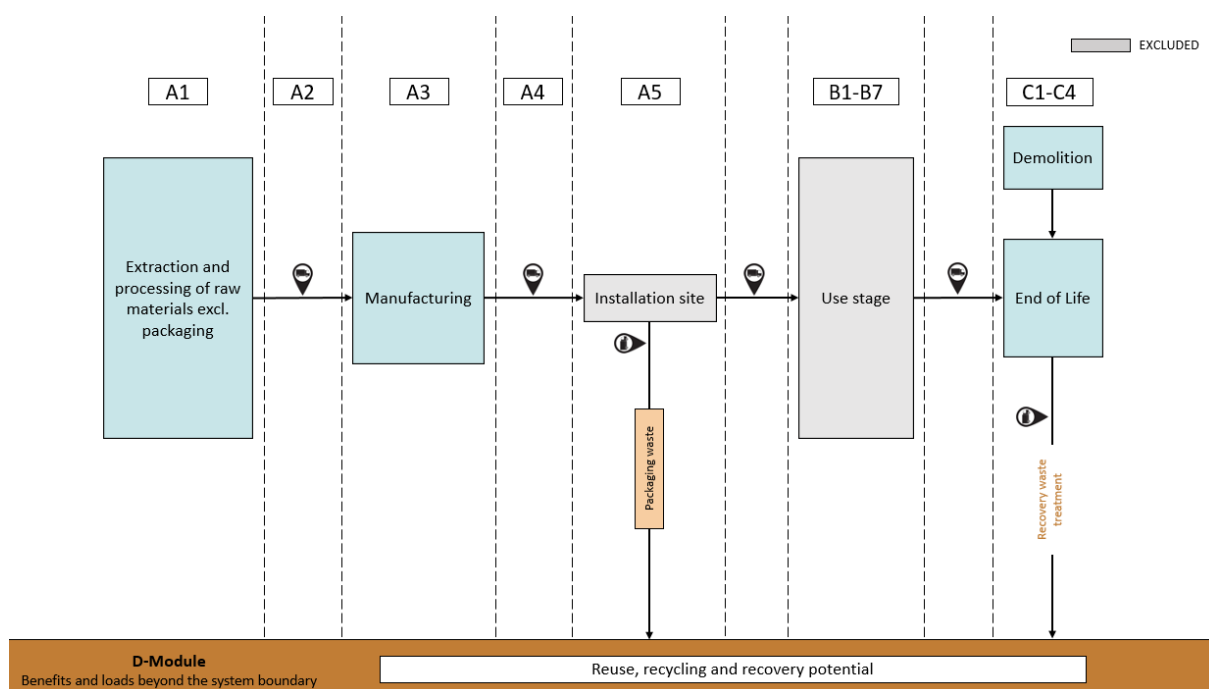


Product information

Product name	Altech press fittings (kylpresskopplingar)
Product identification	Press fittings
Product description	The EPD shows the worst-case results from the products. This product is made of brass and hydrogenated nitrile butadiene rubber (HNBR).
Use	Altech press fittings (kylpresskopplingar) are used to for installation in cooling- and air conditioning facilities and refrigerators.

LCA information

Functional unit / declared unit	1 kg of Altech press fittings (kylpresskopplingar)
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 press fittings (kylpresskopplingar)

Böj 90° 2 muff		
Art nr	Dimension	
1189540	1/4"	
1189541	3/8"	
1189542	1/2"	
1189543	5/8"	
1189544	3/4"	
1189545	7/8"	
1189547	1 1/8"	
1189642	1 3/8"	



Böj 90° 1 muff		
Art nr	Dimension	
1189548	3/8"	
1189549	1/2"	
1189550	5/8"	
1189551	3/4"	
1189552	7/8"	
1189554	1 1/8"	
1189641	1 3/8"	



Böj 45° 2 muff		
Art nr	Dimension	
1189555	1/4"	
1189556	3/8"	
1189557	1/2"	
1189558	5/8"	
1189559	3/4"	
1189560	7/8"	
1189562	1 1/8"	
1189643	1 3/8"	



T-rör		
Art nr	Dimension	
1185672	1/4"	
1185673	3/8"	
1185674	1/2"	
1185675	5/8"	
1185676	3/4"	
1185677	7/8"	
1185679	1 1/8"	
1185720	1 3/8"	



Dubbelmuff		
Art nr	Dimension	
1182892	1/4"	
1182893	3/8"	
1182894	1/2"	
1182895	5/8"	
1182896	3/4"	
1182897	7/8"	
1182899	1 1/8"	
1182960	1 3/8"	



Reducering 2 muff		
Art nr	Dimension	
1752675	1/2 x 3/8"	
1752712	5/8" x 3/8"	
1752713	5/8" x 1/2"	
1752714	3/4" x 3/8"	
1752715	3/4" x 1/2"	
1752716	3/4" x 5/8"	
1752717	7/8" x 1/2"	
1752718	7/8" x 5/8"	
1752719	7/8" x 3/4"	
1752720	1 1/8" x 5/8"	
1752721	1 1/8" x 3/4"	
1752722	1 1/8" x 7/8"	
1752789	1 3/8" x 7/8"	
1752791	1 3/8" x 1 1/8"	



Reducering 1 muff		
Art nr	Dimension	
1752723	3/8" x 1/4"	
1752724	1/2" x 3/8"	
1752725	5/8" x 3/8"	
1752726	5/8" x 1/2"	
1752727	3/4" x 1/2"	
1752728	3/4" x 5/8"	
1752729	7/8" x 1/2"	
1752730	7/8" x 5/8"	
1752731	7/8" x 3/4"	
1752732	1 1/8" x 1/2"	
1752733	1 1/8" x 5/8"	
1752734	1 1/8" x 3/4"	
1752735	1 1/8" x 7/8"	
1752792	1 3/8" x 7/8"	
1752794	1 3/8" x 1 1/8"	



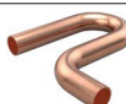
Huv		
Art nr	Dimension	
1757797	1/4"	
1757798	3/8"	
1757799	1/2"	
1757800	5/8"	
1757801	3/4"	
1757802	7/8"	
1757804	1 1/8"	
1757820	1 3/8"	



Flare		
Art nr	Dimension	
1855424	1/4"	
1855425	3/8"	
1855426	1/2"	
1855427	5/8"	
1855429	3/4"	



P-Trap		
Art nr	Dimension	
1753442	5/8"	
1753443	3/4"	
1753444	7/8"	
1753445	1 1/8"	



Reparationskoppling		
Art nr	Dimension	
1182921	1/4"	
1182922	3/8"	
1182923	1/2"	
1182924	5/8"	
1182925	3/4"	
1182926	7/8"	
1182927	1 1/8"	



A1-A3, Product stage

Data on raw materials, transportation and manufacturing have been collected from:

- EPD ITB number 514/2023 https://www.itb.pl/wp-content/uploads/2023/09/ITB-EPD_514_IBP-Instalfittings-Sp.-z-o.o.-BMaxiPro-press-fittings.pdf

Please refer to the EPD for specific information regarding these stages of the life cycle.

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 press fittings (kylpresskopplingar) and waste produced. This also includes additives and packaging material.

A4, Transport

Transportation from the manufacturing site in Poland 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 and considers the waste management of the packaging from the installation site.

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

The content declaration represents the worst-case scenario.

Content declaration	Amount (kg)
Brass	0,95
Hydrogenated nitrile butadiene rubber (HNBR)	0,05
Total	1

Packaging materials	Weight, kg	Weight-% (versus the product)
EU pallet	0,0025	0,25
Cardboard box	0,041	4,1
Plastic film	0,02	2,0
Total	0,0635	6,35%

Dangerous substances from the candidate list of SVHC for Authorisation	EG No.	CAS No.	Weight-% per functional or declared unit
Lead	231-100-4	7439-92-1	2,85

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	GLO	GLO	PL	EU	-	-	-	-	-	-	-	-	SE	SE	SE	SE	SE
Specific data used	>90%				-	-	-	-	-	-	-	-	-	-	-	-	-
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	C1	C2	C3	C4	D
GWP-total	kg CO ₂ eq	5,04E+00	1,18E-01	3,97E-02	0,00E+00	3,76E-03	-4,92E-02*	2,36E-03	-6,72E-01
GWP-fossil	kg CO ₂ eq	4,99E+00	1,18E-01	3,69E-02	0,00E+00	3,60E-03	0,00E+00	2,39E-03	-6,71E-01
GWP-biogenic	kg CO ₂ eq	4,81E-02	1,75E-03	2,75E-03	0,00E+00	1,61E-04	-4,92E-02*	-2,96E-05	-4,46E-04
GWP-luluc	kg CO ₂ eq	1,12E-02	1,09E-03	6,13E-07	0,00E+00	2,06E-07	0,00E+00	2,40E-06	-1,10E-03
ODP	kg CFC-11 eq	4,07E-07	1,06E-14	7,23E-15	0,00E+00	8,37E-10	0,00E+00	3,95E-15	-2,63E-12
AP	mole H ⁺ eq	2,47E-01	2,23E-04	4,60E-06	0,00E+00	1,06E-05	0,00E+00	7,64E-06	-7,49E-03
EP-freshwater	kg P eq	9,08E-04	4,31E-07	1,94E-09	0,00E+00	3,85E-08	0,00E+00	3,51E-08	-1,33E-06
EP-marine	kg N eq	1,26E-02	9,24E-05	1,25E-06	0,00E+00	3,14E-06	0,00E+00	1,91E-06	-5,84E-04
EP-terrestrial	mole N eq	1,69E-01	1,05E-03	2,11E-05	0,00E+00	3,44E-05	0,00E+00	2,10E-05	-6,21E-03
POCP	kg NMVOC eq	4,91E-02	1,99E-04	3,59E-06	0,00E+00	7,82E-06	0,00E+00	5,98E-06	-1,99E-03
ADP-minerals & metals	kg Sb eq	6,12E-03	7,68E-09	6,41E-11	0,00E+00	6,56E-10	0,00E+00	6,54E-11	-3,11E-04
ADP-fossil	MJ	7,39E+01	1,61E+00	1,65E-02	0,00E+00	5,24E-02	0,00E+00	3,58E-02	-1,08E+01
WDP	m ³	1,10E-02	1,37E-03	3,50E-03	0,00E+00	6,39E-05	0,00E+00	-3,26E-05	-2,37E-01
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 value represents the balancing out of the biogenic content of the product.

		Results per functional or declared unit: 1 kg							
Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
PERE	MJ	4,52E+01	1,15E-01	3,96E-03	0,00E+00	1,28E-03	0,00E+00	3,21E-03	-2,00E+00
PERM	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	4,52E+01	1,15E-01	3,96E-03	0,00E+00	1,28E-03	0,00E+00	3,21E-03	-2,00E+00
PENRE	MJ	7,34E+01	1,61E+00	1,65E-02	0,00E+00	5,24E-02	0,00E+00	3,58E-02	-1,08E+01
PENRM	MJ	5,28E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	MJ	7,39E+01	1,61E+00	1,65E-02	0,00E+00	5,24E-02	0,00E+00	3,58E-02	-1,08E+01
SM	kg	2,13E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	MJ	1,33E-03	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	0,00E+00
FW	m3	2,72E-01	1,27E-04	8,35E-05	0,00E+00	2,91E-06	0,00E+00	3,99E-07	-4,77E-03
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							

		Results per functional or declared unit: 1 kg							
Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
GWP-GHG ¹	kg CO2 eq	2,24E+01	1,20E-01	3,69E-02	0,00E+00	3,60E-03	0,00E+00	2,40E-03	-6,73E-01
Acronyms		GWP-GHG global warming potential - greenhouse gases							

		Results per functional or declared unit: 1 kg							
Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
HWD	kg	2,19E+00	5,72E-12	1,31E-13	0,00E+00	-2,42E-13	0,00E+00	2,96E-12	-5,73E-10
NHWD	kg	7,41E+01	2,34E-04	3,36E-03	0,00E+00	1,49E-06	0,00E+00	1,00E-01	-1,32E-01
RWD	kg	4,06E-04	2,52E-06	5,90E-07	0,00E+00	4,33E-07	0,00E+00	4,16E-07	-2,40E-04
Acronyms	HW Hazardous waste disposed; NHW Non-hazardous waste disposed; RW Radioactive waste disposed								

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	7,27E-01	0,00E+00	5,20E-03	0,00E+00	9,50E-01	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	-6,71E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EET	MJ	0,00E+00	0,00E+00	-1,20E-01	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

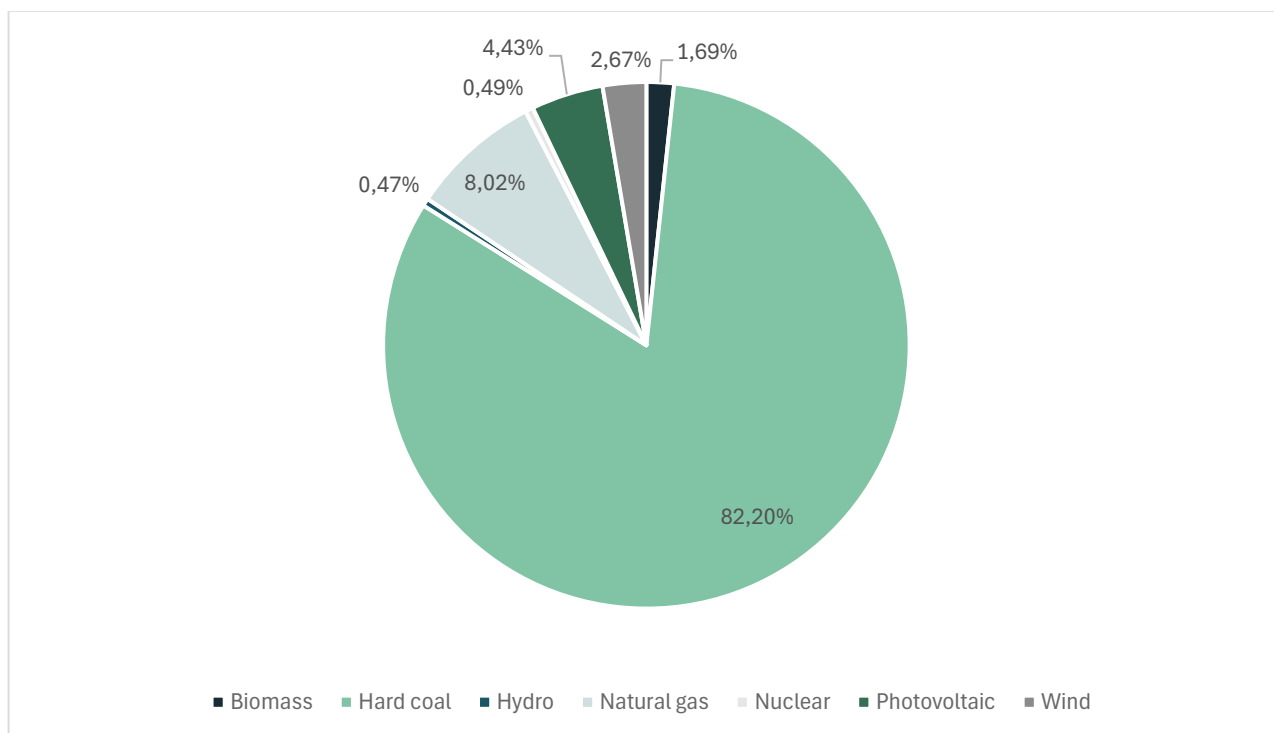
Biogenic carbon content	Unit per DU	Amount
Biogenic carbon content in product	kg C	0
Biogenic carbon content in packaging	kg C	1,04E-03

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

Additional environmental information

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

Residual mix	Unit	Value
Location		Poland
Electricity mix		Biomass: 1,69% Hard coal: 82,2% Hydro: 0,47% Natural gas: 8,02% Nuclear: 0,49% Photovoltaic: 4,43% Wind: 2,67%
Reference year		2022
Source		European Residual Mixes 2022 (AIB, 2023)
GWP excl. Biogenic	kg CO ₂ -eq. /kWh	0,067



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
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 (SQP)	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.		

Differences Versus Previous Versions

2023 Version 1

2024-05-31 Version 2

New Verification: Added missing GWP-GHG value and additional environmental information about the energy source used during manufacturing.

References

Association of Issuing Bodies.	European Residual Mixes 2022. Version 1.0. (2023) https://www.aib-net.org/sites/default/files/assets/facts/residual-mix/2022/AIB_2022_Residual_Mix_Results_inclAnnex.pdf
Construction Products PCR 2019:14 version 1.3.1	EPD International 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.
Instytut Techniki Budowlanej (ITB)	>B<MaxiPro press fittings. https://www.itb.pl/wp-content/uploads/2023/09/ITB-EPD_514_IBP-Instalfittings-Sp.-z-o.o.-BMaxiPro-press-fittings.pdf
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.