ENVIRONMENTAL PRODUCT DECLARATION

H1Z2Z2-K - 1x4 mm²

In accordance with: ISO 14025:2006, EN 15804:2012+A2:2019/AC:2021

Products included in the EPD:

H1Z2Z2-K - 1x4 mm²

An EPD may be updated or depublished if conditions change. To find the latest version of the EPD and to confirm its validity, see www.environdec.com

EPD of multiple products, based on a representative product from a manufacturer/service provider.

EPD Owner
SOLEN KABLO SANAYI VE TICARET A.S.

Programme
International EPD System
www.environdec.com

Programme Operator
EPD International AB

Licensee
EPD Türkiye

Registration number
EPD-IES-0027148:001

Version date: 2025-12-25

Validity date: 2030-12-24

TÜRKİYE EPD INTERNATIONAL EPD SYSTEM

ECO PLATFORM EPD VERIFIED

solen CABLE

GENERAL INFORMATION

Programme information

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

Product Category Rules

CEN standard EN 15804 serves as the Core Product Category Rules (PCR)	
Product Category Rules (PCR)	PCR 2019:14 Construction products (EN 15804+A2) (2.0.1)
PCR review was conducted by	The Technical Committee of the International EPD System. See www.environdec.com for a list of members. Review chair: Rob Rouwette (chair), Noa Meron (co-chair). The review panel may be contacted via the Secretariat www.environdec.com/support.
Complementary Product Category Rules (c-PCR)	PCR 2019:14-c-PCR-019 Electrical cables and wires (for construction sector) (c-PCR to PCR 2019:14) (Adopted from EPD Norway)
c-PCR review was conducted by	The Technical Committee of the International EPD System

Verification

LCA accountability	Aysegul Buyukkidik, aysegul.buyukkidik@metsims.com, Metsims Sustainability Consulting, and Jyoti Jyotsana, jyoti.jyotsana@metsims.com, Metsims Sustainability Consulting
Independent third-party verification of the declaration and data, according to ISO 14025:2006, via	☑ EPD verification through an individual EPD verification ☐ EPD verification through EPD Process Certification* ☐ EPD verification through a fully pre-verified tool
Third-party verifier	Vijay Thakur, Approved by International EPD System
Procedure for follow-up of data during EPD validity involves third party verifier	☐ Yes ☑ No

*EPD Process Certification involves an accredited certification body certifying and periodically auditing the EPD process and conducting external and independent verification of EPDs that are regularly published. More information can be found in the General Programme Instructions on www.environdec.com. International EPD System.

Ownership and limitations on use of EPD

Limitations

EPDs within the same product category but published in different EPD programmes, may not be comparable. For two EPDs to be comparable, they shall be based on the same PCR (including the same first-digit version number) or be based on fully aligned PCRs or versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical declared/functional units); have identical scope in terms of included life-cycle stages (unless the excluded life-cycle stage is demonstrated to be insignificant); apply identical impact assessment methods (including the same version of characterisation factors); and be valid at the time of comparison.

Ownership

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

INFORMATION ABOUT EPD OWNER

EPD Owner	SOLEN KABLO SANAYI VE TICARET A.S.
Contact person name	HABIBE CALISKAN
Contact person e-mail	habibe@solenkablo.com
Organisation address	Turkey ISTANBUL 34420 Arap Cami Mah. Arap Kayyum Sok. No:23/5 Beyoglu

Description of the Organisation of the EPD Owner

Solen Kablo, world's leading manufacturer of DC Solar Cables with comprehensive know-how, is young and dynamic company founded in 2021 by very professional team with years of experiences aiming to produce exclusively Solar Cables. Solen Kablo is the first cable factory who has electron-beam facility in Türkiye. The factory is based in Çerkezköy, Tekirdağ located 100 km away from İstanbul and head office is in heart of İstanbul. Solen Kablo is aware of the importance of renewable and sustainable energy for the future of our world. Solen Kablo continues her operations on 10000 m² land space with 6354.8 m² closed area by having 3000 tons copper drawing processing and 60000 km of cable production capacity per year. The production is carried out in high-tech factory 100% integrated with fast and modern state-of-the-art machinery for aiming absolute customer satisfaction. Solen's high quality has been approved by both customers and international certification bodies.

PRODUCT INFORMATION

Product name	H1Z2Z2-K - 1x4 mm²
Product identification	Solen H1Z2Z2-K - 1x4 mm² solar cables conforming to European standard 'EN 50618' and international standard 'IEC 62930' are designed for installations in photovoltaic systems, solar parks, solar farms, rooftop solar systems and in interconnection of solar panels and inverter.
Product description	The Solen H1Z2Z2-K solar cable is a TÜV-certified, cross-linked photovoltaic cable engineered to meet both European EN 50618 and international IEC 62930 standards for renewable energy installations. This double-insulated, halogen-free cable provides exceptional safety and reliability for DC-side interconnections in solar power systems.
Technical purpose of product	The Solen H1Z2Z2-K single-core 4mm² solar cable is engineered for comprehensive photovoltaic applications including solar parks, solar farms, rooftop solar installations, and panel-to-inverter interconnections. This versatile cable accommodates multiple installation methods: permanent outdoor and indoor deployment, free-hanging configurations, movable applications, and fixed mounting. Suitable for installation within conduits, cable trunking systems, on-plaster, in-plaster, or under-plaster applications, as well as integration into electrical equipment and appliances. The robust design supports direct burial applications and is compatible with all major solar connectors.
Manufacturing or service provision description	Cables and wires are produced from copper, tin, and plastic granules through a sequence of processes that include extrusion, crosslinking, and meticulous packaging before they are shipped to customers. This structured approach guarantees that the final products are robust, meet all technical requirements, and are packaged efficiently for end users.
Material properties	Linear mass density: 0.05732 kg/m
Manufacturing site	Solen Kablo Sanayi ve Ticaret A.Ş. Veliköy Organize Sanayi Bölgesi Turkey 12/1 Çerkezköy, Tekirdağ 59500
UN CPC code	463. Insulated wire and cable; optical fibre cables
Geographical scope(s)	Global
Geographical scope description	The product is manufacture in Turkey while the use and end of life of the cables is global.
Actual or technical lifespan	45 year(s) Note: The declared technical lifespan is limited to application areas with a reference service life of 10 years for the cable product.

PRODUCT IMAGES

TECHNICAL CHARACTERISTICS AND PERFORMANCE

c-PCR-019

Technical Characteristics	Range
Operating Range	-40˚C to +90˚C
Max Conductor Temperature	+125°C (20,000h@50% elongation, EN 60216-1)
Installation Range	-25°C to +60°C
Short circuit	+280°C (max 5 sec)
Min Bending Radius	>4xD (EN 50565-1)

Technical Performance

Technical Performance	Range
Rated Voltage	AC 1000V, DC 1500V (Max: AC 1200V, DC 1800V (2000V optional))
Water Submersion	AD8 water submersion compatible (EN 50525-2-21)
Insulation Resistance	Per EN 50395 Clause 8.1, IEC 60227-2 Clause 2.4

CONTENT DECLARATION

Hazardous and toxic substances	The product does not contain any substances from the SVHC candidate list in concentrations exceeding 0.1% of its weight.

PRODUCT CONTENT

Content name	Weight, %	Post-consumer recycled material, mass-% of product	Biogenic material, mass-% of product	Biogenic material[1], kg C/functional unit
Copper	50-60	0	0	0
Tin	0-5	0	0	0
HFFR	40-45	0	0	0
Others	0-5	0	0	0
Total	100	0	0	0
Note 1	1 kg biogenic carbon is equivalent to 44/12 kg of CO_2			

PACKAGING MATERIALS

Material name	Mass, kg	Mass-% (versus the product)	Biogenic material[1], kg C/functional unit
Wooden reel	0.0035	6.1	0
Wooden pallet	0.002	3.49	0
Cardboard	0.00025	0.44	0
Polypropylene stretch	0.00041	0.72	0
Total	0.00616	10.75	0
Note 1	1 kg biogenic carbon is equivalent to 44/12 kg of CO_2		

LCA INFORMATION

EPD based on declared or functional unit	Functional unit
Functional unit and reference flow	H1Z2Z2-K - 1x4 mm² Length: 1 m To transmit energy expressed for 1 A over a distance of 1 m during 10 years of lifetime and a 50% use rate.
Conversion factor to mass	0.05732 kg
Are infrastructure or capital goods included in any upstream, core or downstream processes?	☐ Yes ☑ No
Data sources used for this EPD	ecoinvent database (general) ecoinvent 3.11 database
LCA Software	SimaPro SimaPro 10.2
Version of the EN 15804 reference package	EF Reference Package 3.1
Characterisation methods	EN 15804:2012+A2:2019
Technology description including background system	1 m of H1Z2Z2-K - 1x4 mm². The Solen H1Z2Z2-K solar cable is a TÜV-certified, cross-linked photovoltaic cable engineered using the materials (cu,tin,HFFR and other additives) to meet both European EN 50618 and international IEC 62930 standards for renewable energy installations. For the background datasets the ecoinvent 3.11 databases are used.
Scrap (recycled material) inputs contribution level	Less than 10% of the GWP-GHG results in modules A1-A3 come from scrap inputs

Data Quality Assessment

Description of data quality assessment and reference years	The Life Cycle Assessment (LCA) for this Environmental Product Declaration (EPD) is based on both primary and secondary data. Primary data were collected directly from the manufacturer's production processes and site-specific operations for the reference year 2024. The quality and representativeness of all data used for the EPD have been evaluated in terms of time, geography, and technology according to the principles outlined in EN 15804:2012+A2:2019, Annex E, and the data quality requirements specified in EN 15941:2010 for life cycle data. All relevant datasets were reviewed for completeness, consistency, and reliability, and the assessment confirmed that no data were classified as "poor" or "very poor" in quality.

DATA QUALITY ASSESSMENT

Process name	Source type	Source	Reference year	Data category	Share of primary data, of GWP-GHG results for A1-A3
Generation of electricity used in manufacturing of product	Collected Data	EPD Owner	2024	Primary data	16.23%
Transport of raw material to production site	Collected Data	EPD Owner	2024	Primary data	0.1%
Other processes	Database	Ecoinvent 3.11	2024	Secondary data	
Total share of primary data, of GWP-GHG results for A1-A3					16.33%
Note	The share of primary data is calculated based on GWP-GHG results. It is a simplified indicator for data quality that supports the use of more primary data to increase the representativeness of and comparability between EPDs. Note that the indicator does not capture all relevant aspects of data quality and is not comparable across product categories.				

ELECTRICITY USED IN THE MANUFACTURING PROCESS IN A3 (A5 FOR SERVICES)

Type of electricity mix	Residual electricity market mix and renewable electricity	
Energy sources	Hydro	0%
	Wind	0%
	Solar	28%
	Biomass	0%
	Geothermal	0%
	Waste	0%
	Nuclear	0%

	Natural gas	22%
	Coal	50%
	Oil	0%
	Peat	0%
	Other	0%
Climate impact (GWP-GHG):	0.66 kg CO_2 eq./kWh	

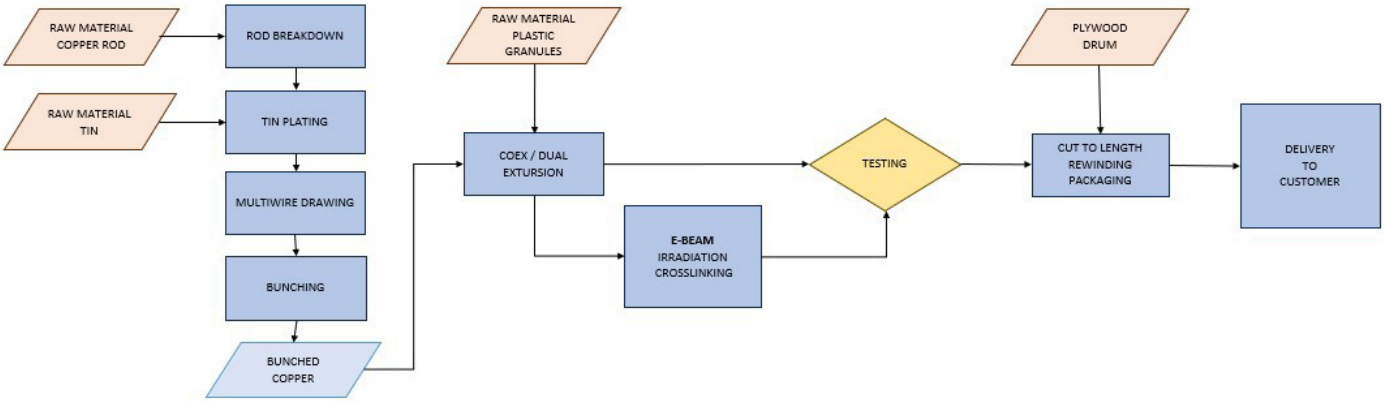
Method used to calculate residual electricity mix	The market consumption data for Türkiye is modified to exclude all the renewable sources as there is no 'secondary data' on the residual market mix for Türkiye.

SYSTEM BOUNDARY

Description of the System boundary	c) Cradle to grave and module D (A + B + C + D).
Excluded modules	No, there is no excluded module, or there are no excluded modules

	Product stage			Construction process stage		Use stage							End of life stage				Beyond product life cycle
	Raw material supply	Transport	Manufacturing	Transport to site	Construction installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling-potential
Module	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Modules declared	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Geography	Türkiye	Türkiye	Türkiye	Global	Global	Global	Global	Global	Global	Global	Global	Global	Global	Global	Global	Global	Global
Share of specific data	16.33%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation - products	<10%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation - sites	0%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Disclaimer	The share of specific/primary data and both variations (products and sites) refer to GWP-GHG results only.																

Process Flow Diagram



DEFAULT SCENARIO

Name of the default scenario	Cradle to grave scenario with material wise EOL treatment
Description of the default scenario	The copper is 95% recycled while remaining is incinerated. 100% of insulation materials in the product are incinerated. C4 stage only accounts the landfilling of ashes out of the incineration.

Module A4: Transport to the building site

Explanatory name of the default scenario in module A4	Global transport
Description of the default scenario in module A4	For module A4 (downstream transport), the distance was calculated based on the shipment locations of the product. The final A4 distance represents a weighted average according to the production volume of each respective location. Additionally, the transportation distance after shipment and within the installation site is assumed to be 100 km.

Module A5: Installation in the building

Explanatory name of the default scenario in module A5	Installation
Description of the default scenario in module A5	Installation losses estimated at 1%. Cardboard and polypropylene stretch film are landfilled, while wooden pallets and reels are incinerated.

Module B1: Use

Explanatory name of the default scenario in module B1	Use
Description of the default scenario in module B1	No impact in this module.

Module B2: Maintenance

Explanatory name of the default scenario in module B2	Maintenance
Description of the default scenario in module B2	No impact

Module B3: Repair

Explanatory name of the default scenario in module B3	Repair
Description of the default scenario in module B3	Repairing this product is not required.

Module B4: Replacement

Explanatory name of the default scenario in module B4	Replacement
Description of the default scenario in module B4	Replacement with cable is not required.

Module B5: Refurbishment

Explanatory name of the default scenario in module B5	Refurbishment
Description of the default scenario in module B5	No impact

Reference service life

Description of the default scenario in reference service life	The RSL of the product is 10 years and use rate of 50%.

Reference service life information	Value	Unit
Reference service life	10	year(s)

Module B6: Operational energy use

Explanatory name of the default scenario in module B6	Operational use energy
Description of the default scenario in module B6	The impact of the Joule effect is calculated according to the formula using the linear resistivity of 4.99 Ω/km, current 1 A, RSL 10 years and use rate of 50%.

Module B7: Operational water use

Explanatory name of the default scenario in module B7	Operational water use
Description of the default scenario in module B7	No impact

Module C: End-of-life

Explanatory name of the default scenario in module C	End of Life
Description of the default scenario in module C	C1, C2: Standard assumptions according to PCR 2019:14 v2.0.1 C3: Recycling of copper and incineration of plastics. C4: Landfilling of ashes out of the incineration.

Module D: Beyond product life cycle

Explanatory name of the default scenario in module D	Module D
Description of the default scenario in module D	The benefits and loads from the incineration of packaging waste incineration and the recycling of copper is included in this module.

Additional Scenarios

Scenario 1: 100% Recycle	All others module remains the same except C3, C4 and D module.
Scenario 2: 100% Landfill	All others module remains the same except C3, C4 and D module.

ENVIRONMENTAL PERFORMANCE

The estimated impact results are only relative statements, which do not indicate the endpoints of the impact categories, exceeding threshold values, safety margins and/or risks.

Mandatory environmental performance indicators according to EN 15804

Impact category	Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Climate change - total	GWP-total	kg CO_2 eq.	2.95E-01	1.80E-02	2.84E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.78E-02	0.00E+00	1.04E-03	1.91E-03	6.00E-02	1.58E-02	-2.45E-01
Climate change - fossil	GWP-fossil	kg CO_2 eq.	2.96E-01	1.80E-02	2.34E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.76E-02	0.00E+00	1.04E-03	1.91E-03	6.00E-02	1.18E-03	-2.42E-01
Climate change - biogenic	GWP-biogenic	kg CO_2 eq.	-1.62E-03	6.26E-07	2.60E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.55E-04	0.00E+00	4.37E-07	3.45E-07	4.23E-06	1.46E-02	-2.69E-03
Climate change - land use and land-use change	GWP-luluc	kg CO_2 eq.	7.50E-04	2.86E-07	5.46E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.06E-04	0.00E+00	5.53E-07	9.75E-08	3.48E-07	2.38E-07	-4.33E-04
Ozone depletion	ODP	kg CFC-11 eq.	4.93E-09	4.09E-10	3.01E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.02E-09	0.00E+00	2.22E-11	2.26E-11	2.65E-11	7.02E-12	-3.44E-09
Acidification	AP	mol H^+ eq.	1.80E-02	2.42E-05	1.10E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.29E-04	0.00E+00	1.93E-06	5.40E-06	1.60E-05	3.40E-06	-1.68E-02
Eutrophication aquatic freshwater	EP-freshwater	kg P eq.	8.30E-05	1.11E-08	1.79E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.76E-06	0.00E+00	1.83E-08	1.33E-08	1.24E-08	2.71E-07	-7.54E-05
Eutrophication aquatic marine	EP-marine	kg N eq.	8.73E-04	5.46E-06	3.34E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.30E-05	0.00E+00	3.53E-07	1.87E-06	7.68E0-6	1.05E-05	-7.84E-04
Eutrophication terrestrial	EP-terrestrial	mol N eq.	1.26E-02	5.96E-05	2.34E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.83E-04	0.00E+00	3.88E-06	2.06E-05	7.98E-05	1.03E-05	-1.15E-02
Photochemical ozone formation	POCP	kg NMVOC eq.	3.76E-03	4.51E-05	8.21E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.56E-04	0.00E+00	2.50E-06	7.69E-06	2.06E-05	8.30E-06	-3.26E-03
Depletion of abiotic resources - minerals and metals	ADP-minerals&metals[1]	kg Sb eq.	2.32E-04	4.69E-10	1.71E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.49E-09	0.00E+00	3.42E-11	1.56E-10	7.34E-10	6.08E-11	-2.15E-04
Depletion of abiotic resources - fossil fuels	ADP-fossil[1]	MJ, net calorific value	4.82E+00	2.39E-01	4.47E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.61E+00	0.00E+00	1.56E-02	2.50E-02	1.51E-02	6.76E-03	-3.47E+00
Water use	WDP[1]	m^3 world eq. deprived	2.72E-01	1.90E-04	-4.74E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.57E-20	0.00E+00	1.03E-04	4.66E-05	2.83E-03	-4.34E-03	-2.45E-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																
General disclaimer	The results of the end-of-life stage (modules C1-C4) should be considered when using the results of the product stage (modules A1-A3/A1-A5 for services).																
Disclaimer 1	The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator																

Additional mandatory environmental performance indicators

Impact category	Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Climate change - GWP-GHG	GWP-GHG[1]	kg CO_2 eq.	2.95E-01	1.80E-02	2.48E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.76E-02	0.00E+00	1.04E-03	1.91E-03	6.00E-02	1.18E-03	-2.42E-01
Acronyms	GWP-GHG = Global warming potential greenhouse gas.																
General disclaimer	The results of the end-of-life stage (modules C1-C4) should be considered when using the results of the product stage (modules A1-A3/A1-A5 for services).																
Disclaimer 1	The GWP-GHG indicator is termed GWP-IOBC/GHG in the ILCD+EPD+ data format. The indicator accounts for all greenhouse gases except biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. As such, the indicator is identical to GWP-total except that the CF for biogenic CO_2 is set to zero.																

Additional voluntary environmental performance indicators according to EN 15804

Impact category	Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Particulate matter emissions	PM	Disease incidence	4.04E-08	1.08E-09	4.63E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.43E-10	0.00E+00	5.34E-11	1.22E-10	1.57E-10	4.89E-11	-3.63E-08
Ionizing radiation - human health	IRP[1]	kBq U235 eq.	1.05E-02	2.30E-05	3.80E-05	0.00E+00	0.00E+000	0.00E+00	0.00E+00	0.00E+00	1.45E-02	0.00E+00	3.90E-05	1.94E-06	6.32E-06	3.28E-06	-1.39E-02
Eco-toxicity - freshwater	ETP-fw[2]	CTUe	1.97E+01	8.63E-03	1.10E-02	0.00E+00	0.00E+0	0.00E+00	0.00E+00	0.00E+00	1.30E-01	0.00E+00	7.52E-04	2.52E-03	1.17E-01	2.52E-01	-1.85E+01
Human toxicity - cancer effects	HTP-c[2]	CTUh	1.82E-09	1.13E-12	5.61E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.70E-12	0.00E+00	7.63E-14	1.37E-13	5.15E-12	4.23E-13	-1.72E-09
Human toxicity - non-cancer effects	HTP-nc[2]	CTUh	1.86E-07	1.20E-10	4.38E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.97E-10	0.00E+00	6.79E-12	1.23E-11	1.79E-10	7.19E-11	-1.76E-07
Land-use related impacts/soil quality	SQP[2]	Dimensionless	5.05E+00	3.04E-04	8.48E-04	0.00E+00	0.00E+0	0.00E+00	0.00E+00	0.00E+00	1.83E-01	0.00E+00	4.95E-04	2.63E-04	5.78E-03	1.46E-02	-4.61E+00
Acronyms	PM = Potential incidence of disease due to particulate matter emissions; IRP = Potential human exposure efficiency relative to U235; ETP-fw = Potential comparative toxic unit for ecosystems; HTP-c = Potential comparative toxic unit for humans; HTP-nc = Potential comparative toxic unit for humans; SQP = Potential soil quality index.																
General disclaimer	The results of the end-of-life stage (modules C1-C4) should be considered when using the results of the product stage (modules A1-A3/A1-A5 for services).																
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 of these results are high or as there is limited experience with the indicator.																

Resource use indicators according to EN 15804

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PERE	MJ, net calorific value	1.03E+00	5.97E-04	2.05E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.32E-10	0.00E+00	1.16E-03	5.06E-05	3.55E-04	1.13E-04	-7.94E-01
PERM	MJ, net calorific value	1.94E-02	0.00E+00	-1.94E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	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, net calorific value	1.04E+00	5.97E-04	1.14E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.32E-01	0.00E+00	1.16E-03	5.06E-05	3.55E-04	1.13E-04	-7.94E-01
PENRE	MJ, net calorific value	3.40E+00	2.39E-01	1.87E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.61E+00	0.00E+00	1.56E-02	2.50E-02	1.43E+00	6.76E-03	-3.47E+00
PENRM	MJ, net calorific value	1.42E+00	0.00E+00	-1.42E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-1.41E+00	0.00E+00	0.00E+00
PENRT	MJ, net calorific value	4.82E+00	2.39E-01	4.47E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.61E+00	0.00E+00	1.56E-02	2.50E-02	1.51E-02	6.76E-03	-3.47E+00
SM	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	MJ, net calorific value	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ, net calorific value	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+000	0.00E+00	0.00E+00	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	m^3	6.74E-03	4.64E-06	2.45E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.66E-04	0.00E+00	2.75E-06	1.11E-06	6.62E-05	-1.01E-04	-6.07E-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.															
General disclaimer	The results of the end-of-life stage (modules C1-C4) should be considered when using the results of the product stage (modules A1-A3/A1-A5 for services).															

Waste indicators according to EN 15804

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
HWD	kg	5.38E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NHWD	kg	2.03E-03	0.00E+00	3.97E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.60E-03	0.00E+00
RWD	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Acronyms	HWD = Hazardous waste disposed; NHWD = Non-hazardous waste disposed; RWD = Radioactive waste disposed.															
General disclaimer	The results of the end-of-life stage (modules C1-C4) should be considered when using the results of the product stage (modules A1-A3/A1-A5 for services).															

Output flow indicators according to EN 15804

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
CRU	kg	0.00E+0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MFR	kg	0.00E+0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.04E-02	0.00E+00	0.00E+00
MER	kg	0.00E+0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EEE	MJ, net calorific value	0.00E+0	0.00E+00	4.99E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.67E-01	0.00E+00	0.00E+00
EET	MJ, net calorific value	0.00E+0	0.00E+00	7.48E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.50E-01	0.00E+00	0.00E+00
Acronyms	CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy.															
General disclaimer	The results of the end-of-life stage (modules C1-C4) should be considered when using the results of the product stage (modules A1-A3/A1-A5 for services).															

Results for additional scenarios for End of life

Scenario 1	**100% Recycling of product**

Core environmental impact indicators (Mandatory)	Indicator	Unit	C3	C4	D
Climate change - total	GWP-total	kg CO_2 eq.	6.00E-02	0.00E+00	-3.07E-01
Climate change - fossil	GWP-fossil	kg CO_2 eq.	6.00E-02	0.00E+00	-3.04E-01
Climate change - biogenic	GWP-biogenic	kg CO_2 eq.	4.23E-06	0.00E+00	-3.04E-03
Climate change - land use and land-use change	GWP-luluc	kg CO_2 eq.	3.48E-07	0.00E+00	-4.74E-04
Ozone depletion	ODP	kg CFC-11 eq.	2.65E-11	0.00E+00	-6.28E-09
Acidification	AP	mol H^+ eq.	1.60E-05	0.00E+00	-1.78E-02
Eutrophication aquatic freshwater	EP-freshwater	kg P eq.	1.24E-08	0.00E+00	-8.00E-05
Eutrophication aquatic marine	EP-marine	kg N eq.	7.68E-06	0.00E+00	-8.51E-04
Eutrophication terrestrial	EP-terrestrial	mol N eq.	7.98E-05	0.00E+00	-1.23E-02
Photochemical ozone formation	POCP	kg NMVOC eq.	2.06E-05	0.00E+00	-3.71E-03
Depletion of abiotic resources - minerals and metals	ADP-minerals&metals[1]	kg Sb eq.	7.34E-10	0.00E+00	-2.27E-04
Depletion of abiotic resources - fossil fuels	ADP-fossil[1]	MJ, net calorific value	1.51E-02	0.00E+00	-5.40E+00
Water use	WDP[1]	m^3 world eq. deprived	2.83E-03	0.00E+00	-2.70E-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				
Disclaimer 1	The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator.				
General disclaimer	The results of the end-of-life stage (modules C1-C4) should be considered when using the results of the product stage (modules A1-A3/A1-A5 for services).				

Additional mandatory environmental performance indicators	Indicator	Unit	C3	C4	D
Climate change - GWP-GHG	GWP-GHG[1]	kg CO_2 eq.	6.00E-02	0.00E+00	-3.04E-01
Acronyms	GWP-GHG = Global warming potential greenhouse gas.				
General disclaimer	The results of the end-of-life stage (modules C1-C4) should be considered when using the results of the product stage (modules A1-A3/A1-A5 for services).				
Disclaimer 1	The GWP-GHG indicator is termed GWP-IOBC/GHG in the ILCD+EPD+ data format. The indicator accounts for all greenhouse gases except biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. As such, the indicator is identical to GWP-total except that the CF for biogenic CO_2 is set to zero.				

Core environmental impact indicators (Mandatory)	Indicator	Unit	C3	C4	D
Particulate matter emissions	PM	Disease incidence	1.57E-10	0.00E+00	-3.89E-08
Ionizing radiation - human health	IRP[1]	kBq U235 eq.	6.32E-06	0.00E+00	-1.57E-02
Eco-toxicity - freshwater	ETP-fw[2]	CTUe	1.17E-01	0.00E+00	-1.96E+01
Human toxicity - cancer effects	HTP-c[2]	CTUh	5.15E-12	0.00E+00	-1.82E-09
Human toxicity - non-cancer effects	HTP-nc[2]	CTUh	1.79E-10	0.00E+00	-1.85E-07
Land-use related impacts/soil quality	SQP[2]	Dimensionless	5.78E-03	0.00E+00	-4.87E+00
Acronyms	PM = Potential incidence of disease due to particulate matter emissions; IRP = Potential human exposure efficiency relative to U235; ETP-fw = Potential comparative toxic unit for ecosystems; HTP-c = Potential comparative toxic unit for humans; HTP-nc = Potential comparative toxic unit for humans; SQP = Potential soil quality index.				
General disclaimer	The results of the end-of-life stage (modules C1-C4) should be considered when using the results of the product stage (modules A1-A3/A1-A5 for services).				
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.				

Resource use indicators	Unit	C3	C4	D
PERE	MJ, net calorific value	3.55E-04	0.00E+00	-8.64E-01
PERM	MJ, net calorific value	0.00E+00	0.00E+00	0.00E+00
PERT	MJ, net calorific value	3.55E-04	0.00E+00	-8.64E-01
PENRE	MJ, net calorific value	1.43E+00	0.00E+00	-5.40E+00
PENRM	MJ, net calorific value	-1.41E+00	0.00E+00	0.00E+00
PENRT	MJ, net calorific value	1.51E-02	0.00E+00	-5.40E+00
SM	kg	0.00E+00	0.00E+00	0.00E+00
RSF	MJ, net calorific value	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ, net calorific value	0.00E+00	0.00E+00	0.00E+00
FW	m^3	6.62E-05	0.00E+00	-6.69E-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.			
General disclaimer	The results of the end-of-life stage (modules C1-C4) should be considered when using the results of the product stage (modules A1-A3/A1-A5 for services).			

Waste indicators	Unit	C3	C4	D
HWD	kg	0.00E+00	0.00E+00	0.00E+00
NHWD	kg	0.00E+00	0.00E+00	0.00E+00
RWD	kg	0.00E+00	0.00E+00	0.00E+00
Acronyms	HWD = Hazardous waste disposed; NHWD = Non-hazardous waste disposed; RWD = Radioactive waste disposed.			
General disclaimer	The results of the end-of-life stage (modules C1-C4) should be considered when using the results of the product stage (modules A1-A3/A1-A5 for services).			

Output flow indicators	Unit	C3	C4	D
CRU	kg	0.00E+00	0.00E+00	0.00E+00
MFR	kg	3.04E-02	0.00E+00	0.00E+00
MER	kg	0.00E+00	0.00E+00	0.00E+00
EEE	MJ, net calorific value	3.67E-01	0.00E+00	0.00E+00
EET	MJ, net calorific value	5.50E-01	0.00E+00	0.00E+00
Acronyms	CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy.			
General disclaimer	The results of the end-of-life stage (modules C1-C4) should be considered when using the results of the product stage (modules A1-A3/A1-A5 for services).			

Scenario 2	100% Landfill of product

Impact category	Indicator	Unit	C3	C4	D
Climate change - total	GWP-total	kg CO_2 eq.	0.00E+00	4.19E-02	0.00E+00
Climate change - fossil	GWP-fossil	kg CO_2 eq.	0.00E+00	2.52E-03	0.00E+00
Climate change - biogenic	GWP-biogenic	kg CO_2 eq.	0.00E+00	3.93E-02	0.00E+00
Climate change - land use and land-use change	GWP-luluc	kg CO_2 eq.	0.00E+00	5.08E-07	0.00E+00
Ozone depletion	ODP	kg CFC-11 eq.	0.00E+00	1.50E-11	0.00E+00
Acidification	AP	mol H^+ eq.	0.00E+00	7.27E-06	0.00E+00
Eutrophication aquatic freshwater	EP-freshwater	kg P eq.	0.00E+00	5.80E-07	0.00E+00
Eutrophication aquatic marine	EP-marine	kg N eq.	0.00E+00	2.24E-05	0.00E+00
Eutrophication terrestrial	EP-terrestrial	mol N eq.	0.00E+00	2.20E-05	0.00E+00
Photochemical ozone formation	POCP	kg NMVOC eq.	0.00E+00	1.78E-05	0.00E+00
Depletion of abiotic resources - minerals and metals	ADP-minerals&metals[1]	kg Sb eq.	0.00E+00	1.30E-10	0.00E+00
Depletion of abiotic resources - fossil fuels	ADP-fossil[1]	MJ, net calorific value	0.00E+00	1.45E-02	0.00E+00
Water use	WDP[1]	m^3 world eq. deprived	0.00E+00	-9.27E-03	0.00E+00
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				
Disclaimer 1	The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator.				
General disclaimer	The results of the end-of-life stage (modules C1-C4) should be considered when using the results of the product stage (modules A1-A3/A1-A5 for services).				

Additional mandatory environmental performance indicators	Indicator	Unit	C3	C4	D
Climate change - GWP-GHG	GWP-GHG[1]	kg CO_2 eq.	0.00E+00	2.52E-03	0.00E+00
Acronyms	GWP-GHG = Global warming potential greenhouse gas.				
General disclaimer	The results of the end-of-life stage (modules C1-C4) should be considered when using the results of the product stage (modules A1-A3/A1-A5 for services).				
Disclaimer 1	The GWP-GHG indicator is termed GWP-IOBC/GHG in the ILCD+EPD+ data format. The indicator accounts for all greenhouse gases except biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. As such, the indicator is identical to GWP-total except that the CF for biogenic CO_2 is set to zero.				

Core environmental impact indicators (Mandatory)	Indicator	Unit	C3	C4	D
Particulate matter emissions	PM	Disease incidence	0.00E+00	1.05E-10	0.00E+00
Ionizing radiation - human health	IRP[1]	kBq U235 eq.	0.00E+00	7.01E-06	0.00E+00
Eco-toxicity - freshwater	ETP-fw[2]	CTUe	0.00E+00	5.40E-01	0.00E+00
Human toxicity - cancer effects	HTP-c[2]	CTUh	0.00E+00	9.05E-13	0.00E+00
Human toxicity - non-cancer effects	HTP-nc[2]	CTUh	0.00E+00	1.54E-10	0.00E+00
Land-use related impacts/soil quality	SQP[2]	Dimensionless	0.00E+00	3.12E-02	0.00E+00
Acronyms	PM = Potential incidence of disease due to particulate matter emissions; IRP = Potential human exposure efficiency relative to U235; ETP-fw = Potential comparative toxic unit for ecosystems; HTP-c = Potential comparative toxic unit for humans; HTP-nc = Potential comparative toxic unit for humans; SQP = Potential soil quality index.				
General disclaimer	The results of the end-of-life stage (modules C1-C4) should be considered when using the results of the product stage (modules A1-A3/A1-A5 for services).				
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.				

Resource use indicators	Unit	C3	C4	D
PERE	MJ, net calorific value	0.00E+00	2.42E-04	0.00E+00
PERM	MJ, net calorific value	0.00E+00	0.00E+00	0.00E+00
PERT	MJ, net calorific value	0.00E+00	2.42E-04	0.00E+00
PENRE	MJ, net calorific value	0.00E+00	1.45E-02	0.00E+00
PENRM	MJ, net calorific value	0.00E+00	-1.41E+00	0.00E+00
PENRT	MJ, net calorific value	0.00E+00	-1.39E+00	0.00E+00
SM	kg	0.00E+00	0.00E+00	0.00E+00
RSF	MJ, net calorific value	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ, net calorific value	0.00E+00	0.00E+00	0.00E+00
FW	m^3	0.00E+00	-2.16E-04	0.00E+00
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.			
General disclaimer	The results of the end-of-life stage (modules C1-C4) should be considered when using the results of the product stage (modules A1-A3/A1-A5 for services).			

Waste indicators	Unit	C3	C4	D
HWD	kg	0.00E+00	0.00E+00	0.00E+00
NHWD	kg	0.00E+00	5.73E-02	0.00E+00
RWD	kg	0.00E+00	0.00E+00	0.00E+00
Acronyms	HWD = Hazardous waste disposed; NHWD = Non-hazardous waste disposed; RWD = Radioactive waste disposed.			
General disclaimer	The results of the end-of-life stage (modules C1-C4) should be considered when using the results of the product stage (modules A1-A3/A1-A5 for services).			

Output flow indicators	Unit	C3	C4	D
CRU	kg	0.00E+00	0.00E+00	0.00E+00
MFR	kg	0.00E+00	0.00E+00	0.00E+00
MER	kg	0.00E+00	0.00E+00	0.00E+00
EEE	MJ, net calorific value	0.00E+00	0.00E+00	0.00E+00
EET	MJ, net calorific value	0.00E+00	0.00E+00	0.00E+00
Acronyms	CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy.			
General disclaimer	The results of the end-of-life stage (modules C1-C4) should be considered when using the results of the product stage (modules A1-A3/A1-A5 for services).			

ABBREVIATIONS

ADP: Abiotic depletion potential
ADP-fossil: Abiotic depletion potential for non-fossil resources (MJ)
ADP-minerals&metals: Abiotic depletion potential for minerals & metals (kg Sb eq.)
AP: Acidification Potential (mol H+ eq.)
CAS No.: Chemical Abstracts Service Number
CEN: European Committee for Standardization
CFC-11 eq.: Chlorofluorocarbon-11 Equivalents
CFR: Components for Reuse (kg)
CLC: Co-location centre
CO_2 eq.: Carbon Dioxide Equivalents
CPC: Central product classification
EC No.: European Community Number
EEE: Exported Energy, Electricity (MJ)
EET: Exported Energy, Thermal (MJ)
EF: Environmental Footprint
EN: European Norm (Standard)
EP: Eutrophication Potential
EP-freshwater: Freshwater eutrophication potential (kg P eq.)
EP-marine: Marine eutrophication potential (kg N eq.)
EP-terrestrial: Terrestrial eutrophication potential (mol N eq.)
FW: Use of net fresh water (m^3)
GHG: Greenhouse gas
GHS: Globally harmonized system of classification and labelling of chemicals
GLO: Global
GPI: General Programme Instructions
GRI: Global Reporting Initiative
GWP: Global Warming Potential (kg CO_2 eq.)
GWP-biogenic: Global Warming Potential from biogenic sources (kg CO_2 eq.)
GWP-fossil: Global Warming Potential from fossil sources (kg CO_2 eq.)
GWP-GHG: Global Warming Potential for greenhouse gases (kg CO_2 eq.)
GWP-luluc: Global Warming Potential from land use and land use change (kg CO_2 eq.)
GWP-total: Total Global Warming Potential (kg CO_2 eq.)
HW: Hazardous Waste (disposed) (kg)
ISO: International Organization for Standardization
kg: Kilogram
kg C: Kilograms of Carbon
kg CO_2 eq.: Kilograms of Carbon Dioxide Equivalent
m^3: Cubic Meter
MER: Materials for Energy Recovery (kg) MJ: Megajoule
MR: Material for Recycling (kg)

N eq.: Nitrogen Equivalents
ND: Not Declared
NHW: Non-Hazardous Waste (disposed) (kg)
NMVOC: Non-Methane Volatile Organic Compounds
NRSF: Use of non-renewable secondary fuels (MJ)
ODP: Ozone Depletion Potential (kg CFC-11 eq.)
P eq.: Phosphorus Equivalents
PENRE: Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials (MJ)
PENRM: Use of non-renewable primary energy resources used as raw materials (MJ)
PENRT: Total use of non-renewable primary energy resources (MJ)
PERE: Use of renewable primary energy excluding renewable primary energy resources used as raw materials (MJ)
PERM: Use of renewable primary energy resources used as raw materials (MJ)
PERT: Total use of renewable primary energy resources (MJ)
POCP: Photochemical Ozone Creation Potential (kg NMVOC eq.)
RSF: Use of renewable secondary fuels (MJ)
RW: Radioactive Waste (disposed) (kg)
Sb eq.: Antimony Equivalents
SM: Use of secondary material (kg) SVHC: Substances of Very High Concern
TR: Türkiye
WDP: Water Deprivation Potential (m^3)

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