

Owner: Nilan A/S  
No.: MD-24091-EN  
Issued: 27-08-2024  
Valid to: 27-08-2029

3<sup>rd</sup> PARTY VERIFIED

**EPD**

VERIFIED ENVIRONMENTAL PRODUCT DECLARATION | ISO 14025 & EN 15804



**Owner of declaration**

Nilan A/S  
Nilanvej 2  
DK-8722 Hedensted  
CVR: 11 77 33 97



**Issued:**  
27-08-2024

**Valid to:**  
27-08-2029

**Programme**

EPD Danmark  
[www.epddanmark.dk](http://www.epddanmark.dk)



- Industry EPD
- Product EPD

**Declared product(s)**

- Compact P HMI Køl/Sol
- Compact P2 KSF
- Compact P Køl/Sol incl. AIR9
- Compact P2 KSF AIR incl. AIR9
- Compact P Køl/Sol GEO9
- Compact P2 KSF GEO9
- Compact P Polar Køl/Sol EK9
- Compact P2 KSF Polar EK9
- Compact S Køl/Sol

Number of declared datasets/product variations: 9

**Production site**

The data for the LCA are based on aggregated yearly averages for the manufacture of ventilation units for buildings, assembled at the production facility of Nilan A/S at Hedensted in Denmark.

**Product(s) use**

This EPD is applicable for Nilans Compact series which are ventilation Units (VU) in form of Bidirectional Ventilation Unit (BVU) of the type RVU or MFVU, for connection to duct systems. Unlike other ventilation units, the Compact series recovers 100% of the heat in the extract air. Via the counterflow exchanger, up to 95% of the energy in the extract air is recovered for heating the outdoor air. The compact series recovers the rest of the heat by a heat pump, so that 100% of the heat is recovered. The remaining energy is used by the air-to-air built-in heat pump to produce the hot domestic water or heating/ cooling of air. In addition, the Compact P system can also heat the home through underfloor heating or low-energy radiators when integrated with an air-to-water, electrical or geothermal heat pump.

**Declared/ functional unit**

1 pc of ventilation unit

**Year of production site data (A3)**

The financial year 2022/2023 collected in the period 2024

**EPD version**

1

**Basis of calculation**

This EPD is developed in accordance with the European standard EN 15804+A2.

**Comparability**

EPDs of construction products may not be comparable if they do not comply with the requirements in EN 15804. EPD data may not be comparable if the datasets used are not developed in accordance with EN 15804 and if the background systems are not based on the same database.

**Validity**

This EPD has been verified in accordance with ISO 14025 and is valid for 5 years from the date of issue.

**Use**

The intended use of an EPD is to communicate scientifically based environmental information for construction products, for the purpose of assessing the environmental performance of buildings.

**EPD type**

- Cradle-to-gate with modules C1-C4 and D
- Cradle-to-gate with options, modules C1-C4 and D
- Cradle-to-grave and module D
- Cradle-to-gate
- Cradle-to-gate with options

CEN standard EN 15804 serves as the core PCR

Independent verification of the declaration and data, according to EN ISO 14025

- internal
- external

Third party verifier:



Kim Christiansen



Martha Katrine Sørensen  
EPD Danmark

**Life cycle stages and modules (MND = module not declared)**

Product			Construction process		Use								End of life				Beyond the system boundary
Raw material supply	Transport	Manufacturing	Transport	Installation process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction demolition	Transport	Waste processing	Disposal	Re-use, recovery and recycling potential	
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D	
X	X	X	X	MND	MND	MND	MND	MND	MND	MND	MND	X	X	X	X	X	

# Product information

## Product description

The declared products are small Air Handling Units (AHU) also called Ventilation Units (VU) or Bidirectional Ventilation Units (BVU) declared as either Residential Ventilation Unit (RVU) when only having a passiv Heat Recovering System (HRS) or Multifunctional Units (MFVU) when in addition to the HRS also include a heat pump according to COMMISSION REGULATION (EU) No 1253 and (EU) No 1254 for duct connections with an airflow of maximum 1000 m<sup>3</sup>/h. Defined in the relevant standards, for RVU's EN 13141-7, as ducted mechanical supply and exhaust residential ventilation units and for MFVU's EN 16573 as Multifunctional balanced Units intended for use in a single dwelling).

In addition to an RVU an MFVU acc. to EN 16573 is intended for use in a single family dwelling to primarily provide balanced ventilation and in addition heating and/or cooling and/or hot water production and contains at least, within one or more modular casing supply and exhaust air fans, air filters, common control system and one more of the additional components, air to water heat pump, air to air heat pump, air-to-air heat exchanger

The main product components are shown in the table below for each product.

<b>Material (Weight% of declared product)</b>	Compact P HMI Køl/Sol	Compact P2 KSF	Compact P Køl/Sol incl. AIR9	Compact P2 KSF AIR incl. AIR9	Compact P Køl/Sol GEO9	Compact P2 KSF GEO9	Compact P Polar Køl/Sol EK9	Compact P2 KSF Polar EK9	Compact S Køl/Sol
Unit	Weight% of declared product								
Adhesive	2.18	2.08	2.10	2.31	2.23	2.17	2.00	1.98	1.46
Aluminium	2.59	2.54	5.19	5.27	2.04	2.00	2.46	2.45	3.55
Brass	0.35	0.39	0.69	0.68	1.25	1.18	1.09	1.04	0.32
Cast iron	6.20	6.09	8.13	8.01	11.11	10.89	6.74	6.72	6.69
Copper	3.05	3.29	4.07	4.29	7.16	7.89	2.96	3.28	3.45
Electronics	2.31	2.47	2.41	2.53	2.66	2.23	3.61	3.55	1.92
Plastic	7.79	6.65	5.98	5.29	6.73	5.65	7.66	6.69	6.76
Rubber	0.10	0.18	1.21	0.32	3.26	0.42	2.63	2.66	0.18
Stainless steel	0.94	0.88	2.66	3.64	3.43	6.87	1.14	1.13	1.02
Steel	74.51	75.42	67.56	67.66	60.11	60.70	69.71	70.49	74.66
<b>Sum</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

The BVUs are intended for use in HVAC (Heating, Ventilation and Air-Conditioning) systems for both residential and non-residential applications, as the key component in the HVAC-system responsible for the movement and conditioning of air to and from the conditioned space in the building.

The air flows varies between 275 and 425 m<sup>3</sup>/h between the products. The units have been specified for Nordic climate regarding heating and cooling (which typically for heating mode are with an outdoor air temperature -12°C and a supply air temperature 22°C. In cooling mode typically with an outdoor air temperature 26°C and 60% RH and supply air temperature of 17°C, dimensioned incl. additional energy for condensation of water).

The reference point of the VU's are according to Ecodesign 1253 and 1254 the 'reference flow rate' (expressed in m<sup>3</sup>/s) which is "the abscissa value to a point on a curve in the flow rate/pressure diagram which is on or closest to a reference point at 70 % at least of the maximum flow rate and 50 Pa for ducted units. In contrast to the product definitions given in Ecodesign 1253 and 1254, all parts needed for a fully functional unit are included in this EPD.

The full equipping of the BVU in this EPD includes parts such as casing and frame (incl. insulation), exhaust and supply fans incl. motor and impeller, supply and exhaust filter, heat recovery (HRS), heating coil (HC), cooling coil (CC), controls, bypass, droplet eliminator, drip tray and condensation drain, control, sensors and cables including frequency converters and/or PM control, dampers

on in and outlet if present and assembly parts, screws, sealant and sealing strips, locks and door hinges etc.

### Product packaging:

The composition of the sales- and transport packaging of the product is shown in the table below.

Material	Weight-% of packaging
Corrugated board	6.8%
PE film	2.7%
Steel strips	3.2%
Wooden pallets	87.3%

### Representativity


This declaration, including data collection and the modeled foreground system including results, represents the production of ventilation units on the production site located in Hedensted. Product specific data are based on product specific material composition and annual company data related to waste and energy consumption for the financial year 2022/2023 collected in the period 2024. Background data are based on the LCA for Experts LCA software and are less than 10 years old. Generally, the used background datasets are of high quality, and the majority of the datasets are only a couple of years old.

### Hazardous substances

The BVU's do not contain substances listed on the "Candidate List of Substances of Very High Concern for authorisation"

(<http://echa.europa.eu/candidate-list-table>)

### Picture of products and specifications for each variant

Product variant	Description	Suitable for building types:	Airflow
	<p>Compact P is a multi-unit with several installations combined in one compact installation. Compact P ventilates the home and produces domestic hot water. In addition, the system can be combined with a ground or outdoor air heat pump that can be fully integrated into the Compact P.</p> <p>A major advantage of combining these installations in one installation, in addition to a large space saving in the technical room, is that they work together in terms of control and thus allow for optimized energy consumption and thus an overall energy saving.</p>	Designed for slightly smaller houses with a ventilation requirement of up to 275 m <sup>3</sup> /h.	Max : 275 m <sup>3</sup> /h

### Essential characteristics

The BVU's are covered by technical specifications in the production standard: EN13141-7, EN 13142 and EN 16573. For the EPD it follows EN 15804 version A2: 2019 and NPCR 030:2021 Part B for ventilations components - version 1.1.

Additionally, the VU's comply with the following EU directives:

- 1907/2006/EC REACH-Regulation
- 2009/125/EC Eco Design-directive
- 2011/65/EU RoHS-directive (Restriction of hazardous substances)
- 2014/35/EU Low Voltage Directive
- 2014/30/EU EMC-directive
- 2014/53/EU Radio Equipment Directive (RED)





Declaration of performance according to EU regulation 2009/125/EC - ecodesign requirements for ventilation units is available for all declared product variations which are RVU's.





Further technical information can be obtained by contacting the manufacturer or on the manufacturer's website:

<https://www.nilan.dk/produkter/ventilation-med-opvarmning>

### Reference Service Life (RSL)

The lifetime of the BVU covered by this EPD is estimated to be 25 years, based on [BUILD Report 2021:32](#) by Department of the Built Environment (Aalborg Universitet).

<p>Compact P2 KSF</p> 	<p>Compact P2 is a multi-unit with several installations combined in one compact installation. Compact P2 ventilates the home and produces domestic hot water. In addition, the system can be combined with a ground source or outdoor air heat pump that can be fully integrated into the Compact P2.</p> <p>A major advantage of collecting these installations in one installation is that they work together in terms of management and thus provide the opportunity for optimized energy consumption and thus an overall energy saving.</p>	<p>Designed for slightly smaller houses with a ventilation requirement of up to 425 m<sup>3</sup>/h</p>	<p>Max : 425 m<sup>3</sup>/h</p>
<p>Compact P Køl/Sol incl. AIR9</p> 	<p>Compact P AIR9 is a multi-unit with three installations combined in one compact installation. The three installations are ventilation of the home, production of domestic hot water and space heating in the home via an efficient air/water heat pump.</p> <p>A major advantage of combining these three installations in one installation is that they work together in terms of management and thus provide the opportunity for optimized energy consumption and thus an overall energy saving. The advantage of an air/water heat pump is that you do not need to dig underground heating pipes if you e.g. don't have the space or desire for it.</p>	<p>Designed for houses with a ventilation requirement of up to 275 m<sup>3</sup>/h.</p>	<p>Max : 275 m<sup>3</sup>/h</p>
<p>Compact P2 KSF AIR incl. AIR9</p> 	<p>Compact P2 AIR9 is a multi-unit with three installations combined in one compact installation. The three installations are ventilation of the home, production of domestic hot water and space heating in the home via an efficient air/water heat pump.</p> <p>A major advantage of combining these three installations in one installation is that they work together in terms of management and thus provide the opportunity for optimized energy consumption and thus an overall energy saving. The advantage of an air/water heat pump is that you do not need to dig underground heating pipes, if you e.g. don't have the space or desire for it.</p>	<p>Designed for houses with a ventilation requirement of up to 425 m<sup>3</sup>/h.</p>	<p>Max : 425 m<sup>3</sup>/h</p>
<p>Compact P Køl/Sol GEO9</p> 	<p>Compact P GEO9 is a multi-unit with three installations combined in one compact installation. The three installations are ventilation of the home, production of domestic hot water and space heating in the home via an efficient geothermal heat pump.</p> <p>A major advantage of combining these three installations in one installation is that they work together in terms of control and thus enable optimized energy consumption and thus an overall energy saving.</p>	<p>Designed for houses with a ventilation requirement of up to 275 m<sup>3</sup>/h.</p>	<p>Max : 275 m<sup>3</sup>/h</p>

<p>Compact P2 KSF GEO9</p> 	<p>Compact P2 GEO9 is a multi-unit with three installations combined in one compact installation. The three installations are ventilation of the home, production of domestic hot water and space heating in the home via an efficient geothermal heat pump.</p> <p>A major advantage of combining these three installations in one installation is that they work together in terms of control and thus enable optimized energy consumption and thus an overall energy saving.</p>	<p>Designed for houses with a ventilation requirement of up to 425 m<sup>3</sup>/h.</p>	<p>Max : 425 m<sup>3</sup>/h</p>
<p>Compact P Polar Køl/Sol EK9</p> 	<p>Compact P EK is a multi-unit with three installations combined in one compact installation. The three installations are ventilation of the home, production of domestic hot water and space heating in the home via electricity.</p> <p>An advantage of combining these three installations in one installation is that there is no need to dig underground pipes or install an outside air heat pump. This makes installation easier and cheaper.</p> <p>Electric heating is a good solution if the house is very dense and therefore does not have to use as much energy for heating as, for example, is the case with Passive Houses. However, it must be investigated whether the legislation allows electric heating.</p>	<p>Designed for houses with a ventilation requirement of up to 275 m<sup>3</sup>/h.</p>	<p>Max : 275 m<sup>3</sup>/h</p>
<p>Compact P2 KSF Polar EK9</p> 	<p>Compact P2 EK is a multi-unit with three installations combined in one compact installation. The three installations are ventilation of the home, production of domestic hot water and space heating in the home via electricity.</p> <p>An advantage of combining these three installations in one installation is that there is no need to dig underground pipes or install an outside air heat pump. This makes installation easier and cheaper.</p> <p>Electric heating is a good solution if the house is very dense and therefore does not have to use as much energy for heating as, for example, is the case with Passive Houses. However, it must be investigated whether the legislation allows electric heating.</p>	<p>Designed for houses with a ventilation requirement of up to 425 m<sup>3</sup>/h.</p>	<p>Max : 425 m<sup>3</sup>/h</p>
<p>Compact S Køl/Sol</p> 	<p>Compact S is a ventilation unit that can ventilate the home as well as produce domestic hot water in an overall compact installation.</p> <p>A major advantage of Compact S is that ventilation and domestic hot water work together in terms of management, which allows for optimized energy consumption and thus an overall energy saving.</p>	<p>The system is intended for standard single-family houses or apartments with a ventilation requirement of up to 340 m<sup>3</sup>/h.</p>	<p>Max : 340 m<sup>3</sup>/h</p>

# LCA background

## Declared unit

The LCI and LCIA results in this EPD relates to 1 piece of BVU from the Comfort series.

Name	Com- pact P HMI Køl/Sol	Com- pact P2 KSF	Com- pact P Køl/Sol incl. AIR9	Com- pact P2 KSF AIR incl. AIR9	Com- pact P Køl/Sol GEO9	Com- pact P2 KSF GEO9	Com- pact P Polar Køl/Sol EK9	Com- pact P2 KSF Po- lar EK9	Com- pact S Køl/Sol	Unit
Declared unit	1	1	1	1	1	1	1	1	1	pc
Mass	211.6	215.1	398.6	404.7	274.4	280.2	225.2	225.7	196.1	Kg/pc
Conver- sion factor to 1 kg	0.00473	0.00465	0.00251	0.00247	0.00364	0.00357	0.00444	0.00443	0.00510	kg

## Functional unit

The functional unit is not defined as the use stages B1-B7 are not declared

## PCR

This EPD is developed according to the core rules for the product category of construction products in EN 15804 version A2:2019 as well as the NPCR 030:2021 Part B for ventilation components - version 1.1.

## Guarantee of Origin – certificates

Foreground system:

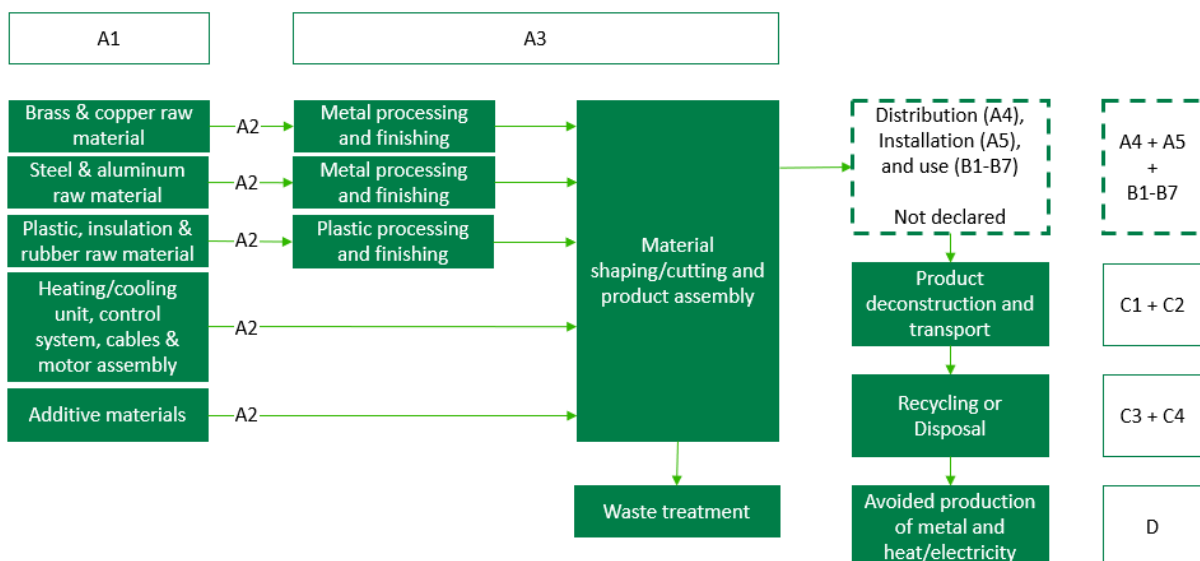
No guarantees of origin or certificated are used for green electricity or energy in the production phase in the foreground system.

Background system:

For modelling energy production, the country specific residual mix is used, in accordance with the recommendations from EPD Denmark

## Flowdiagram

The process diagram below represents the life cycle of a Compact Series BVU product from Nilan A/S.



## System boundary

This EPD is based on a cradle-to-gate LCA with modules C1-C4 and D, in which 100 weight-% has been accounted for.

The general rules for the exclusion of inputs and outputs follows the requirements in EN 15804, 6.3.5, where the total of neglected input flows per module shall be a maximum of 5 % of energy usage and mass and 1 % of energy usage and mass for unit processes.

### Product stage (A1-A3) includes:

A1 – Extraction and processing of raw materials

A2 – Transport to the production site

A3 – Manufacturing processes

The product stage comprises the acquisition of all raw materials, products and energy, transport to the production site, packaging and waste processing up to the “end-of-waste” state or final disposal. The LCA results are declared in aggregated form for the product stage, which means, that the sub-modules A1, A2 and A3 are declared as one module A1-A3.

The production of the ventilation units are equal for each respective model, hence there are not a variation in the dimensions per product model. Initially, the frames are cut and assembled with a machine that runs on electricity. Then manually components are inserted into the unit, while electronics are wired in another area at the factory and later put together with the remaining product parts. Lastly all products undergo quality inspection and are then led to the packaging station, where they are stacked on pallets either as singular products or multiple on the same pallet. The products are secured on the pallets with cardboard. The amount of product on pallets and

cardboard wrapping depends on each product and order.

### Construction process stage (A4-A5) includes:

Installation on construction site is not included in this EPD.

The transport from Nilan to the construction site, is included with a default distance of 300 km modelled as road transport, as defined in the NPCR 030:2021 Part B for ventilation components - version 1.1.

### Use stage (B1-B7) includes:

The use phase has not been included in this EPD.

For more specifications on the use stage, planning data, Ecodesign etc., visit the manufacturers website:

<https://www.nilan.dk/produkter/ventilation>

### End of Life (C1-C4) includes:

The ventilation units are assumed disposed of in Denmark. The ventilation units are assumed dismantled using hand tools (C1) and transported 50 km to a local recycling (C2).

The product is then dismantled in an industrial shredder assuming average recovery of materials (C3). The fluff sorted from the shredded metal is landfilled (C4).

### Re-use, recovery and recycling potential (D) includes:

The recycled metals are credited an avoided production of primary steel, aluminium, copper, brass and other motor components.



# LCA results

## Compact P HMI Køl/Sol

ENVIRONMENTAL IMPACTS PER PIECE								
Parameter	Unit	A1-A3	A4	C1	C2	C3	C4	D
GWP-total	[kg CO <sub>2</sub> eq.]	2,61E+03	6,34E+00	0,00E+00	8,89E-01	1,05E+01	1,57E+00	-3,55E+02
GWP-fossil	[kg CO <sub>2</sub> eq.]	2,60E+03	6,27E+00	0,00E+00	8,79E-01	1,04E+01	1,60E+00	-3,57E+02
GWP-biogenic	[kg CO <sub>2</sub> eq.]	1,18E+01	1,44E-02	0,00E+00	1,93E-03	5,25E-02	2,50E-02	1,71E+00
GWP-luluc	[kg CO <sub>2</sub> eq.]	1,15E+00	5,90E-02	0,00E+00	8,24E-03	2,08E-03	1,87E-03	-1,60E-01
ODP	[kg CFC 11 eq.]	2,19E-03	8,28E-13	0,00E+00	1,16E-13	1,52E-10	2,91E-12	1,41E-10
AP	[mol H <sup>+</sup> eq.]	1,38E+01	9,89E-03	0,00E+00	1,31E-03	1,48E-02	5,81E-03	-1,46E+00
EP-freshwater	[kg P eq.]	4,16E-03	2,33E-05	0,00E+00	3,25E-06	2,63E-05	2,63E-04	-1,53E-04
EP-marine	[kg N eq.]	2,35E+00	3,67E-03	0,00E+00	4,76E-04	4,66E-03	1,38E-03	-1,76E-01
EP-terrestrial	[mol N eq.]	2,54E+01	4,32E-02	0,00E+00	5,63E-03	4,93E-02	1,52E-02	-1,71E+00
POCP	[kg NMVOC eq.]	7,12E+00	8,72E-03	0,00E+00	1,15E-03	1,21E-02	4,31E-03	-6,52E-01
ADPm <sup>1</sup>	[kg Sb eq.]	3,76E-01	4,22E-07	0,00E+00	5,90E-08	2,50E-06	4,72E-08	-2,87E-02
ADPf <sup>1</sup>	[MJ]	3,41E+04	8,67E+01	0,00E+00	1,21E+01	1,61E+02	2,36E+01	-3,75E+03
WDP <sup>1</sup>	[m <sup>3</sup> world eq. deprived]	4,01E+02	7,69E-02	0,00E+00	1,07E-02	5,92E-01	7,38E-03	-4,30E+01
Caption	GWP-total = Global Warming Potential - total; 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 = Ozone Depletion; AP = Acidification; EP-freshwater = Eutrophication – aquatic freshwater; EP-marine = Eutrophication – aquatic marine; EP-terrestrial = Eutrophication – terrestrial; POCP = Photochemical zone formation; ADPm = Abiotic Depletion Potential – minerals and metals; ADPf = Abiotic Depletion Potential – fossil fuels; WDP = water depletion potential							
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: 1,95*10 <sup>2</sup> or 195, while 1,12E-11 is the same as 1,12*10 <sup>-11</sup> or 0,0000000000112.							
Disclaimer	<sup>1</sup> The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.							

ADDITIONAL ENVIRONMENTAL IMPACTS PER PIECE								
Parameter	Unit	A1-A3	A4	C1	C2	C3	C4	D
PM	[Disease incidence]	1,84E-04	8,33E-08	0,00E+00	1,13E-08	1,20E-07	6,08E-08	-1,31E-05
IRP <sup>2</sup>	[kBq U235 eq.]	2,10E+02	2,43E-02	0,00E+00	3,39E-03	2,78E+00	3,99E-02	-8,05E+00
ETP-fw <sup>1</sup>	[CTUe]	1,15E+04	6,21E+01	0,00E+00	8,68E+00	3,31E+01	1,91E+01	-6,44E+02
HTP-c <sup>1</sup>	[CTUh]	7,59E-06	1,26E-09	0,00E+00	1,76E-10	3,95E-09	1,16E-09	5,55E-08
HTP-nc <sup>1</sup>	[CTUh]	2,77E-05	5,61E-08	0,00E+00	7,84E-09	4,72E-08	9,98E-08	-6,10E-07
SQP <sup>1</sup>	-	9,42E+03	3,62E+01	0,00E+00	5,06E+00	4,72E+01	2,55E+00	-4,96E+02
Caption	PM = Particulate Matter emissions; IRP = Ionizing radiation – human health; ETP-fw = Eco toxicity – freshwater; HTP-c = Human toxicity – cancer effects; HTP-nc = Human toxicity – non cancer effects; SQP = Soil Quality (dimensionless)							
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: 1,95*10 <sup>2</sup> or 195, while 1,12E-11 is the same as 1,12*10 <sup>-11</sup> or 0,0000000000112.							
Disclaimers	<sup>1</sup> The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.							
	<sup>2</sup> 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 PER PIECE								
Parameter	Unit	A1-A3	A4	C1	C2	C3	C4	D
PERE	[MJ]	8,16E+03	6,31E+00	0,00E+00	8,82E-01	6,35E+01	2,36E+00	-2,93E+02
PERM	[MJ]	1,25E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	8,28E+03	6,31E+00	0,00E+00	8,82E-01	6,35E+01	2,36E+00	-2,93E+02
PENRE	[MJ]	3,36E+04	8,70E+01	0,00E+00	1,22E+01	1,61E+02	2,36E+01	-3,75E+03
PENRM	[MJ]	5,91E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	3,42E+04	8,70E+01	0,00E+00	1,22E+01	1,61E+02	2,36E+01	-3,75E+03
SM	[kg]	4,35E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	[MJ]	2,95E-23	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	[MJ]	3,46E-22	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	[m <sup>3</sup> ]	1,90E+01	6,91E-03	0,00E+00	9,66E-04	4,48E-02	1,02E-03	-2,71E+01
Caption	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 resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non renewable secondary fuels; FW = Net use of fresh water							
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: 1,95*10 <sup>2</sup> or 195, while 1,12E-11 is the same as 1,12*10 <sup>-11</sup> or 0,0000000000112.							

WASTE CATEGORIES AND OUTPUT FLOWS PER PIECE								
Parameter	Unit	A1-A3	A4	C1	C2	C3	C4	D
HWD	[kg]	1,70E-04	2,70E-10	0,00E+00	3,77E-11	1,22E-08	1,78E-09	-1,93E-05
NHWD	[kg]	3,39E+02	1,33E-02	0,00E+00	1,85E-03	1,78E-01	3,59E+01	3,74E+01
RWD	[kg]	1,47E+00	1,63E-04	0,00E+00	2,28E-05	2,04E-02	2,78E-04	-5,88E-02
CRU	[kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	[kg]	7,54E+01	0,00E+00	0,00E+00	0,00E+00	1,74E+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
Caption	HWD = Hazardous waste disposed; NHWD = Non hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy							
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: 1,95*10 <sup>2</sup> or 195, while 1,12E-11 is the same as 1,12*10 <sup>-11</sup> or 0,0000000000112.							

BIOGENIC CARBON CONTENT PER PIECE		
Parameter	Unit	At the factory gate
Biogenic carbon content in product	[kg C]	0,00E+00
Biogenic carbon content in accompanying packaging	[kg C]	5,64E+00
Note	1 kg biogenic carbon is equivalent to 44/12 kg of CO <sub>2</sub>	

**Compact P2 KSF**

ENVIRONMENTAL IMPACTS PER PIECE								
Parameter	Unit	A1-A3	A4	C1	C2	C3	C4	D
GWP-total	[kg CO <sub>2</sub> eq.]	2,60E+03	6,45E+00	0,00E+00	9,04E-01	1,08E+01	1,45E+00	-3,64E+02
GWP-fossil	[kg CO <sub>2</sub> eq.]	2,59E+03	6,37E+00	0,00E+00	8,94E-01	1,07E+01	1,47E+00	-3,65E+02
GWP-biogenic	[kg CO <sub>2</sub> eq.]	1,19E+01	1,46E-02	0,00E+00	1,96E-03	5,40E-02	2,35E-02	1,76E+00
GWP-luluc	[kg CO <sub>2</sub> eq.]	1,12E+00	5,99E-02	0,00E+00	8,38E-03	2,14E-03	1,77E-03	-1,70E-01
ODP	[kg CFC 11 eq.]	2,19E-03	8,42E-13	0,00E+00	1,18E-13	1,56E-10	2,70E-12	1,40E-10
AP	[mol H <sup>+</sup> eq.]	1,34E+01	1,01E-02	0,00E+00	1,33E-03	1,52E-02	5,44E-03	-1,52E+00
EP-freshwater	[kg P eq.]	3,98E-03	2,37E-05	0,00E+00	3,31E-06	2,70E-05	2,39E-04	-1,59E-04
EP-marine	[kg N eq.]	2,34E+00	3,73E-03	0,00E+00	4,84E-04	4,81E-03	1,30E-03	-1,81E-01
EP-terrestrial	[mol N eq.]	2,52E+01	4,39E-02	0,00E+00	5,73E-03	5,09E-02	1,42E-02	-1,75E+00
POCP	[kg NMVOC eq.]	7,09E+00	8,86E-03	0,00E+00	1,17E-03	1,25E-02	4,05E-03	-6,70E-01
ADPm <sup>1</sup>	[kg Sb eq.]	3,83E-01	4,29E-07	0,00E+00	6,00E-08	2,57E-06	4,40E-08	-3,08E-02
ADPf <sup>1</sup>	[MJ]	3,37E+04	8,82E+01	0,00E+00	1,23E+01	1,65E+02	2,17E+01	-3,84E+03
WDP <sup>1</sup>	[m <sup>3</sup> world eq. deprived]	4,03E+02	7,82E-02	0,00E+00	1,09E-02	6,14E-01	9,11E-03	-4,51E+01
Caption	GWP-total = Global Warming Potential - total; 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 = Ozone Depletion; AP = Acidification; EP-freshwater = Eutrophication – aquatic freshwater; EP-marine = Eutrophication – aquatic marine; EP-terrestrial = Eutrophication – terrestrial; POCP = Photochemical zone formation; ADPm = Abiotic Depletion Potential – minerals and metals; ADPf = Abiotic Depletion Potential – fossil fuels; WDP = water depletion potential The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: 1,95*10 <sup>2</sup> or 195, while 1,12E-11 is the same as 1,12*10 <sup>-11</sup> or 0,0000000000112.							
Disclaimer	<sup>1</sup> The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.							

ADDITIONAL ENVIRONMENTAL IMPACTS PER PIECE								
Parameter	Unit	A1-A3	A4	C1	C2	C3	C4	D
PM	[Disease incidence]	1,81E-04	8,47E-08	0,00E+00	1,15E-08	1,24E-07	5,72E-08	-1,36E-05
IRP <sup>2</sup>	[kBq U235 eq.]	2,15E+02	2,47E-02	0,00E+00	3,45E-03	2,86E+00	3,67E-02	-7,75E+00
ETP-fw <sup>1</sup>	[CTUe]	1,12E+04	6,32E+01	0,00E+00	8,83E+00	3,41E+01	1,75E+01	-6,68E+02
HTP-c <sup>1</sup>	[CTUh]	7,76E-06	1,28E-09	0,00E+00	1,79E-10	4,07E-09	1,08E-09	5,65E-08
HTP-nc <sup>1</sup>	[CTUh]	2,77E-05	5,70E-08	0,00E+00	7,97E-09	4,86E-08	9,34E-08	-6,40E-07
SQP <sup>1</sup>	-	9,34E+03	3,68E+01	0,00E+00	5,15E+00	4,85E+01	2,39E+00	-5,27E+02
Caption	PM = Particulate Matter emissions; IRP = Ionizing radiation – human health; ETP-fw = Eco toxicity – freshwater; HTP-c = Human toxicity – cancer effects; HTP-nc = Human toxicity – non cancer effects; SQP = Soil Quality (dimensionless) The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: 1,95*10 <sup>2</sup> or 195, while 1,12E-11 is the same as 1,12*10 <sup>-11</sup> or 0,0000000000112.							
Disclaimers	<sup>1</sup> The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator. <sup>2</sup> 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 PER PIECE								
Parameter	Unit	A1-A3	A4	C1	C2	C3	C4	D
PERE	[MJ]	8,39E+03	6,42E+00	0,00E+00	8,97E-01	6,53E+01	2,20E+00	-2,96E+02
PERM	[MJ]	1,25E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	8,51E+03	6,42E+00	0,00E+00	8,97E-01	6,53E+01	2,20E+00	-2,96E+02
PENRE	[MJ]	3,33E+04	8,85E+01	0,00E+00	1,24E+01	1,65E+02	2,17E+01	-3,84E+03
PENRM	[MJ]	5,20E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	3,38E+04	8,85E+01	0,00E+00	1,24E+01	1,65E+02	2,17E+01	-3,84E+03
SM	[kg]	4,47E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	[MJ]	2,95E-23	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	[MJ]	3,46E-22	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	[m <sup>3</sup> ]	1,94E+01	7,03E-03	0,00E+00	9,82E-04	4,61E-02	9,98E-04	-2,78E+01
Caption	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 resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non renewable secondary fuels; FW = Net use of fresh water							
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: 1,95*10 <sup>2</sup> or 195, while 1,12E-11 is the same as 1,12*10 <sup>-11</sup> or 0,0000000000112.							

WASTE CATEGORIES AND OUTPUT FLOWS PER PIECE								
Parameter	Unit	A1-A3	A4	C1	C2	C3	C4	D
HWD	[kg]	1,54E-04	2,74E-10	0,00E+00	3,83E-11	1,25E-08	1,63E-09	-1,98E-05
NHWD	[kg]	3,52E+02	1,35E-02	0,00E+00	1,89E-03	1,88E-01	3,41E+01	3,98E+01
RWD	[kg]	1,48E+00	1,66E-04	0,00E+00	2,31E-05	2,10E-02	2,56E-04	-5,78E-02
CRU	[kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	[kg]	7,67E+01	0,00E+00	0,00E+00	0,00E+00	1,79E+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
Caption	HWD = Hazardous waste disposed; NHWD = Non hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy							
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: 1,95*10 <sup>2</sup> or 195, while 1,12E-11 is the same as 1,12*10 <sup>-11</sup> or 0,0000000000112.							

BIOGENIC CARBON CONTENT PER PIECE		
Parameter	Unit	At the factory gate
Biogenic carbon content in product	[kg C]	0,00E+00
Biogenic carbon content in accompanying packaging	[kg C]	5,64E+00
Note	1 kg biogenic carbon is equivalent to 44/12 kg of CO <sub>2</sub>	

**Compact P Køl/Sol incl. AIR9**

ENVIRONMENTAL IMPACTS PER PIECE								
Parameter	Unit	A1-A3	A4	C1	C2	C3	C4	D
GWP-total	[kg CO <sub>2</sub> eq.]	5,37E+03	1,19E+01	0,00E+00	1,67E+00	1,96E+01	2,91E+00	-7,69E+02
GWP-fossil	[kg CO <sub>2</sub> eq.]	5,35E+03	1,18E+01	0,00E+00	1,66E+00	1,95E+01	2,95E+00	-7,72E+02
GWP-biogenic	[kg CO <sub>2</sub> eq.]	2,12E+01	2,71E-02	0,00E+00	3,64E-03	9,89E-02	4,62E-02	3,09E+00
GWP-luluc	[kg CO <sub>2</sub> eq.]	2,31E+00	1,11E-01	0,00E+00	1,55E-02	3,90E-03	3,47E-03	-3,82E-01
ODP	[kg CFC 11 eq.]	5,33E-03	1,56E-12	0,00E+00	2,18E-13	2,84E-10	5,38E-12	-2,86E-11
AP	[mol H <sup>+</sup> eq.]	2,86E+01	1,86E-02	0,00E+00	2,47E-03	2,76E-02	1,07E-02	-3,44E+00
EP-freshwater	[kg P eq.]	7,96E-03	4,38E-05	0,00E+00	6,13E-06	4,93E-05	4,86E-04	-3,75E-04
EP-marine	[kg N eq.]	4,79E+00	6,91E-03	0,00E+00	8,96E-04	8,73E-03	2,56E-03	-4,16E-01
EP-terrestrial	[mol N eq.]	5,18E+01	8,14E-02	0,00E+00	1,06E-02	9,22E-02	2,81E-02	-4,15E+00
POCP	[kg NMVOC eq.]	1,45E+01	1,64E-02	0,00E+00	2,16E-03	2,26E-02	7,99E-03	-1,47E+00
ADPm <sup>1</sup>	[kg Sb eq.]	7,53E-01	7,95E-07	0,00E+00	1,11E-07	4,71E-06	8,74E-08	-7,03E-02
ADPf <sup>1</sup>	[MJ]	6,86E+04	1,63E+02	0,00E+00	2,28E+01	2,98E+02	4,36E+01	-8,50E+03
WDP <sup>1</sup>	[m <sup>3</sup> world eq. deprived]	8,66E+02	1,45E-01	0,00E+00	2,02E-02	1,12E+00	1,39E-02	-9,83E+01
Caption	GWP-total = Global Warming Potential - total; 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 = Ozone Depletion; AP = Acidification; EP-freshwater = Eutrophication – aquatic freshwater; EP-marine = Eutrophication – aquatic marine; EP-terrestrial = Eutrophication – terrestrial; POCP = Photochemical zone formation; ADPm = Abiotic Depletion Potential – minerals and metals; ADPf = Abiotic Depletion Potential – fossil fuels; WDP = water depletion potential							
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: 1,95*10 <sup>2</sup> or 195, while 1,12E-11 is the same as 1,12*10 <sup>-11</sup> or 0,0000000000112.							
Disclaimer	<sup>1</sup> The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.							

ADDITIONAL ENVIRONMENTAL IMPACTS PER PIECE								
Parameter	Unit	A1-A3	A4	C1	C2	C3	C4	D
PM	[Disease incidence]	4,10E-04	1,57E-07	0,00E+00	2,13E-08	2,24E-07	1,13E-07	-3,12E-05
IRP <sup>2</sup>	[kBq U235 eq.]	4,13E+02	4,58E-02	0,00E+00	6,39E-03	5,17E+00	7,38E-02	-4,37E+01
ETP-fw <sup>1</sup>	[CTUe]	2,32E+04	1,17E+02	0,00E+00	1,64E+01	6,20E+01	3,53E+01	-1,79E+03
HTP-c <sup>1</sup>	[CTUh]	2,80E-05	2,37E-09	0,00E+00	3,32E-10	7,43E-09	2,15E-09	2,48E-08
HTP-nc <sup>1</sup>	[CTUh]	5,79E-05	1,06E-07	0,00E+00	1,48E-08	8,85E-08	1,85E-07	-2,64E-06
SQP <sup>1</sup>	-	1,87E+04	6,82E+01	0,00E+00	9,54E+00	8,85E+01	4,71E+00	-1,28E+03
Caption	PM = Particulate Matter emissions; IRP = Ionizing radiation – human health; ETP-fw = Eco toxicity – freshwater; HTP-c = Human toxicity – cancer effects; HTP-nc = Human toxicity – non cancer effects; SQP = Soil Quality (dimensionless)							
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: 1,95*10 <sup>2</sup> or 195, while 1,12E-11 is the same as 1,12*10 <sup>-11</sup> or 0,0000000000112.							
Disclaimers	<sup>1</sup> The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.							
	<sup>2</sup> 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 PER PIECE								
Parameter	Unit	A1-A3	A4	C1	C2	C3	C4	D
PERE	[MJ]	1,63E+04	1,19E+01	0,00E+00	1,66E+00	1,19E+02	4,37E+00	-1,19E+03
PERM	[MJ]	2,76E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	1,66E+04	1,19E+01	0,00E+00	1,66E+00	1,19E+02	4,37E+00	-1,19E+03
PENRE	[MJ]	6,78E+04	1,64E+02	0,00E+00	2,29E+01	2,98E+02	4,36E+01	-8,51E+03
PENRM	[MJ]	9,55E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	6,88E+04	1,64E+02	0,00E+00	2,29E+01	2,98E+02	4,36E+01	-8,51E+03
SM	[kg]	7,99E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	[MJ]	2,95E-23	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	[MJ]	3,47E-22	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	[m <sup>3</sup> ]	3,85E+01	1,30E-02	0,00E+00	1,82E-03	8,39E-02	1,89E-03	-4,82E+01
Caption	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 resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non renewable secondary fuels; FW = Net use of fresh water							
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: 1,95*10 <sup>2</sup> or 195, while 1,12E-11 is the same as 1,12*10 <sup>-11</sup> or 0,0000000000112.							

WASTE CATEGORIES AND OUTPUT FLOWS PER PIECE								
Parameter	Unit	A1-A3	A4	C1	C2	C3	C4	D
HWD	[kg]	3,19E-04	5,08E-10	0,00E+00	7,09E-11	2,28E-08	3,30E-09	-3,33E-05
NHWD	[kg]	6,82E+02	2,50E-02	0,00E+00	3,49E-03	3,47E-01	6,65E+01	4,97E+01
RWD	[kg]	2,88E+00	3,07E-04	0,00E+00	4,29E-05	3,80E-02	5,14E-04	-2,35E-01
CRU	[kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	[kg]	1,43E+02	0,00E+00	0,00E+00	0,00E+00	3,29E+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
Caption	HWD = Hazardous waste disposed; NHWD = Non hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy							
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: 1,95*10 <sup>2</sup> or 195, while 1,12E-11 is the same as 1,12*10 <sup>-11</sup> or 0,0000000000112.							

BIOGENIC CARBON CONTENT PER PIECE		
Parameter	Unit	At the factory gate
Biogenic carbon content in product	[kg C]	0,00E+00
Biogenic carbon content in accompanying packaging	[kg C]	9,46E+00
Note	1 kg biogenic carbon is equivalent to 44/12 kg of CO <sub>2</sub>	

**Compact P2 KSF AIR incl. AIR3**

ENVIRONMENTAL IMPACTS PER PIECE								
Parameter	Unit	A1-A3	A4	C1	C2	C3	C4	D
GWP-total	[kg CO <sub>2</sub> eq.]	5,50E+03	1,21E+01	0,00E+00	1,70E+00	2,03E+01	2,38E+00	-7,97E+02
GWP-fossil	[kg CO <sub>2</sub> eq.]	5,48E+03	1,20E+01	0,00E+00	1,68E+00	2,02E+01	2,41E+00	-7,99E+02
GWP-biogenic	[kg CO <sub>2</sub> eq.]	2,11E+01	2,75E-02	0,00E+00	3,70E-03	1,02E-01	4,02E-02	3,20E+00
GWP-luluc	[kg CO <sub>2</sub> eq.]	2,40E+00	1,13E-01	0,00E+00	1,58E-02	4,04E-03	3,10E-03	-4,01E-01
ODP	[kg CFC 11 eq.]	5,33E-03	1,58E-12	0,00E+00	2,21E-13	2,94E-10	4,49E-12	-3,37E-11
AP	[mol H <sup>+</sup> eq.]	2,97E+01	1,89E-02	0,00E+00	2,51E-03	2,87E-02	9,25E-03	-3,58E+00
EP-freshwater	[kg P eq.]	8,21E-03	4,45E-05	0,00E+00	6,22E-06	5,11E-05	3,75E-04	-3,91E-04
EP-marine	[kg N eq.]	4,94E+00	7,01E-03	0,00E+00	9,10E-04	9,06E-03	2,22E-03	-4,31E-01
EP-terrestrial	[mol N eq.]	5,34E+01	8,26E-02	0,00E+00	1,08E-02	9,58E-02	2,44E-02	-4,30E+00
POCP	[kg NMVOC eq.]	1,50E+01	1,67E-02	0,00E+00	2,20E-03	2,35E-02	6,91E-03	-1,52E+00
ADPm <sup>1</sup>	[kg Sb eq.]	7,70E-01	8,07E-07	0,00E+00	1,13E-07	4,88E-06	7,37E-08	-7,42E-02
ADPf <sup>1</sup>	[MJ]	7,00E+04	1,66E+02	0,00E+00	2,32E+01	3,09E+02	3,54E+01	-8,80E+03
WDP <sup>1</sup>	[m <sup>3</sup> world eq. deprived]	8,97E+02	1,47E-01	0,00E+00	2,06E-02	1,16E+00	2,54E-02	-1,03E+02
Caption	GWP-total = Global Warming Potential - total; 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 = Ozone Depletion; AP = Acidification; EP-freshwater = Eutrophication – aquatic freshwater; EP-marine = Eutrophication – aquatic marine; EP-terrestrial = Eutrophication – terrestrial; POCP = Photochemical zone formation; ADPm = Abiotic Depletion Potential – minerals and metals; ADPf = Abiotic Depletion Potential – fossil fuels; WDP = water depletion potential							
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: 1,95*10 <sup>2</sup> or 195, while 1,12E-11 is the same as 1,12*10 <sup>-11</sup> or 0,0000000000112.							
Disclaimer	<sup>1</sup> The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.							

ADDITIONAL ENVIRONMENTAL IMPACTS PER PIECE								
Parameter	Unit	A1-A3	A4	C1	C2	C3	C4	D
PM	[Disease incidence]	4,26E-04	1,59E-07	0,00E+00	2,16E-08	2,32E-07	9,86E-08	-3,25E-05
IRP <sup>2</sup>	[kBq U235 eq.]	4,19E+02	4,65E-02	0,00E+00	6,49E-03	5,35E+00	5,93E-02	-4,48E+01
ETP-fw <sup>1</sup>	[CTUe]	2,37E+04	1,19E+02	0,00E+00	1,66E+01	6,42E+01	2,83E+01	-1,87E+03
HTP-c <sup>1</sup>	[CTUh]	3,70E-05	2,41E-09	0,00E+00	3,37E-10	7,70E-09	1,81E-09	2,51E-08
HTP-nc <sup>1</sup>	[CTUh]	6,10E-05	1,07E-07	0,00E+00	1,50E-08	9,17E-08	1,58E-07	-2,74E-06
SQP <sup>1</sup>	-	1,92E+04	6,93E+01	0,00E+00	9,68E+00	9,16E+01	4,07E+00	-1,35E+03
Caption	PM = Particulate Matter emissions; IRP = Ionizing radiation – human health; ETP-fw = Eco toxicity – freshwater; HTP-c = Human toxicity – cancer effects; HTP-nc = Human toxicity – non cancer effects; SQP = Soil Quality (dimensionless)							
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: 1,95*10 <sup>2</sup> or 195, while 1,12E-11 is the same as 1,12*10 <sup>-11</sup> or 0,0000000000112.							
Disclaimers	<sup>1</sup> The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.							
	<sup>2</sup> 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 PER PIECE								
Parameter	Unit	A1-A3	A4	C1	C2	C3	C4	D
PERE	[MJ]	1,66E+04	1,21E+01	0,00E+00	1,69E+00	1,24E+02	3,67E+00	-1,23E+03
PERM	[MJ]	2,76E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	1,68E+04	1,21E+01	0,00E+00	1,69E+00	1,24E+02	3,67E+00	-1,23E+03
PENRE	[MJ]	6,95E+04	1,66E+02	0,00E+00	2,33E+01	3,09E+02	3,55E+01	-8,80E+03
PENRM	[MJ]	7,73E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	7,03E+04	1,66E+02	0,00E+00	2,33E+01	3,09E+02	3,55E+01	-8,80E+03
SM	[kg]	8,45E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	[MJ]	2,95E-23	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	[MJ]	3,47E-22	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	[m <sup>3</sup> ]	3,94E+01	1,32E-02	0,00E+00	1,85E-03	8,71E-02	1,91E-03	-4,99E+01
Caption	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 resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non renewable secondary fuels; FW = Net use of fresh water							
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: 1,95*10 <sup>2</sup> or 195, while 1,12E-11 is the same as 1,12*10 <sup>-11</sup> or 0,0000000000112.							

WASTE CATEGORIES AND OUTPUT FLOWS PER PIECE								
Parameter	Unit	A1-A3	A4	C1	C2	C3	C4	D
HWD	[kg]	3,33E-04	5,15E-10	0,00E+00	7,20E-11	2,36E-08	2,59E-09	-3,45E-05
NHWD	[kg]	6,91E+02	2,54E-02	0,00E+00	3,55E-03	3,64E-01	6,02E+01	5,30E+01
RWD	[kg]	2,93E+00	3,12E-04	0,00E+00	4,35E-05	3,94E-02	4,17E-04	-2,41E-01
CRU	[kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	[kg]	1,45E+02	0,00E+00	0,00E+00	0,00E+00	3,41E+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
Caption	HWD = Hazardous waste disposed; NHWD = Non hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy							
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: 1,95*10 <sup>2</sup> or 195, while 1,12E-11 is the same as 1,12*10 <sup>-11</sup> or 0,0000000000112.							

BIOGENIC CARBON CONTENT PER PIECE		
Parameter	Unit	At the factory gate
Biogenic carbon content in product	[kg C]	0,00E+00
Biogenic carbon content in accompanying packaging	[kg C]	9,46E+00
Note	1 kg biogenic carbon is equivalent to 44/12 kg of CO <sub>2</sub>	



**Compact P Køl/Sol GEO9**

ENVIRONMENTAL IMPACTS PER PIECE								
Parameter	Unit	A1-A3	A4	C1	C2	C3	C4	D
GWP-total	[kg CO <sub>2</sub> eq.]	3,32E+03	8,23E+00	0,00E+00	1,15E+00	1,30E+01	2,88E+00	-4,45E+02
GWP-fossil	[kg CO <sub>2</sub> eq.]	3,30E+03	8,13E+00	0,00E+00	1,14E+00	1,30E+01	2,92E+00	-4,46E+02
GWP-biogenic	[kg CO <sub>2</sub> eq.]	1,43E+01	1,87E-02	0,00E+00	2,51E-03	6,35E-02	4,29E-02	2,15E+00
GWP-luluc	[kg CO <sub>2</sub> eq.]	1,75E+00	7,65E-02	0,00E+00	1,07E-02	2,52E-03	3,14E-03	-4,08E-01
ODP	[kg CFC 11 eq.]	3,73E-03	1,07E-12	0,00E+00	1,50E-13	1,83E-10	5,21E-12	-1,13E-10
AP	[mol H <sup>+</sup> eq.]	1,86E+01	1,28E-02	0,00E+00	1,70E-03	1,82E-02	1,01E-02	-2,77E+00
EP-freshwater	[kg P eq.]	5,61E-03	3,02E-05	0,00E+00	4,22E-06	3,18E-05	5,05E-04	-2,89E-04
EP-marine	[kg N eq.]	2,96E+00	4,76E-03	0,00E+00	6,17E-04	5,81E-03	2,38E-03	-2,53E-01
EP-terrestrial	[mol N eq.]	3,20E+01	5,60E-02	0,00E+00	7,30E-03	6,15E-02	2,61E-02	-2,49E+00
POCP	[kg NMVOC eq.]	9,01E+00	1,13E-02	0,00E+00	1,49E-03	1,50E-02	7,46E-03	-9,25E-01
ADPm <sup>1</sup>	[kg Sb eq.]	5,04E-01	5,47E-07	0,00E+00	7,65E-08	3,03E-06	8,39E-08	-8,67E-02
ADPf <sup>1</sup>	[MJ]	4,35E+04	1,12E+02	0,00E+00	1,57E+01	1,94E+02	4,33E+01	-4,62E+03
WDP <sup>1</sup>	[m <sup>3</sup> world eq. deprived]	5,41E+02	9,98E-02	0,00E+00	1,39E-02	7,60E-01	-2,43E-03	-9,03E+01
Caption	GWP-total = Global Warming Potential - total; 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 = Ozone Depletion; AP = Acidification; EP-freshwater = Eutrophication – aquatic freshwater; EP-marine = Eutrophication – aquatic marine; EP-terrestrial = Eutrophication – terrestrial; POCP = Photochemical zone formation; ADPm = Abiotic Depletion Potential – minerals and metals; ADPf = Abiotic Depletion Potential – fossil fuels; WDP = water depletion potential							
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: 1,95*10 <sup>2</sup> or 195, while 1,12E-11 is the same as 1,12*10 <sup>-11</sup> or 0,0000000000112.							
Disclaimer	<sup>1</sup> The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.							

ADDITIONAL ENVIRONMENTAL IMPACTS PER PIECE								
Parameter	Unit	A1-A3	A4	C1	C2	C3	C4	D
PM	[Disease incidence]	2,34E-04	1,08E-07	0,00E+00	1,47E-08	1,46E-07	1,04E-07	-2,37E-05
IRP <sup>2</sup>	[kBq U235 eq.]	2,53E+02	3,15E-02	0,00E+00	4,40E-03	3,36E+00	7,41E-02	-8,38E+00
ETP-fw <sup>1</sup>	[CTUe]	1,56E+04	8,06E+01	0,00E+00	1,13E+01	4,01E+01	3,57E+01	-1,27E+03
HTP-c <sup>1</sup>	[CTUh]	2,38E-05	1,63E-09	0,00E+00	2,28E-10	4,78E-09	2,07E-09	1,49E-08
HTP-nc <sup>1</sup>	[CTUh]	3,88E-05	7,27E-08	0,00E+00	1,02E-08	5,74E-08	1,74E-07	-1,92E-06
SQP <sup>1</sup>	-	1,26E+04	4,70E+01	0,00E+00	6,57E+00	5,70E+01	4,41E+00	-1,36E+03
Caption	PM = Particulate Matter emissions; IRP = Ionizing radiation – human health; ETP-fw = Eco toxicity – freshwater; HTP-c = Human toxicity – cancer effects; HTP-nc = Human toxicity – non cancer effects; SQP = Soil Quality (dimensionless)							
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: 1,95*10 <sup>2</sup> or 195, while 1,12E-11 is the same as 1,12*10 <sup>-11</sup> or 0,0000000000112.							
Disclaimers	<sup>1</sup> The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.							
	<sup>2</sup> 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 PER PIECE								
Parameter	Unit	A1-A3	A4	C1	C2	C3	C4	D
PERE	[MJ]	1,01E+04	8,18E+00	0,00E+00	1,14E+00	7,68E+01	4,21E+00	-5,37E+02
PERM	[MJ]	1,25E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	1,03E+04	8,18E+00	0,00E+00	1,14E+00	7,68E+01	4,21E+00	-5,37E+02
PENRE	[MJ]	4,28E+04	1,13E+02	0,00E+00	1,58E+01	1,94E+02	4,34E+01	-4,62E+03
PENRM	[MJ]	8,87E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	4,37E+04	1,13E+02	0,00E+00	1,58E+01	1,94E+02	4,34E+01	-4,62E+03
SM	[kg]	5,70E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	[MJ]	2,95E-23	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	[MJ]	3,46E-22	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	[m <sup>3</sup> ]	2,33E+01	8,96E-03	0,00E+00	1,25E-03	5,51E-02	1,45E-03	-2,96E+01
Caption	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 resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non renewable secondary fuels; FW = Net use of fresh water							
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: 1,95*10 <sup>2</sup> or 195, while 1,12E-11 is the same as 1,12*10 <sup>-11</sup> or 0,0000000000112.							

WASTE CATEGORIES AND OUTPUT FLOWS PER PIECE								
Parameter	Unit	A1-A3	A4	C1	C2	C3	C4	D
HWD	[kg]	2,32E-04	3,50E-10	0,00E+00	4,88E-11	1,47E-08	3,39E-09	-2,05E-05
NHWD	[kg]	4,03E+02	1,72E-02	0,00E+00	2,40E-03	2,54E-01	5,90E+01	8,07E+01
RWD	[kg]	1,83E+00	2,11E-04	0,00E+00	2,95E-05	2,46E-02	5,11E-04	-5,16E-02
CRU	[kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	[kg]	9,81E+01	0,00E+00	0,00E+00	0,00E+00	2,13E+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
Caption	HWD = Hazardous waste disposed; NHWD = Non hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy							
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: 1,95*10 <sup>2</sup> or 195, while 1,12E-11 is the same as 1,12*10 <sup>-11</sup> or 0,0000000000112.							

BIOGENIC CARBON CONTENT PER PIECE		
Parameter	Unit	At the factory gate
Biogenic carbon content in product	[kg C]	0,00E+00
Biogenic carbon content in accompanying packaging	[kg C]	5,64E+00
Note	1 kg biogenic carbon is equivalent to 44/12 kg of CO <sub>2</sub>	

**Compact P2 KSF GE09**

ENVIRONMENTAL IMPACTS PER PIECE								
Parameter	Unit	A1-A3	A4	C1	C2	C3	C4	D
GWP-total	[kg CO <sub>2</sub> eq.]	3,21E+03	8,40E+00	0,00E+00	1,18E+00	1,40E+01	1,85E+00	-4,84E+02
GWP-fossil	[kg CO <sub>2</sub> eq.]	3,19E+03	8,30E+00	0,00E+00	1,16E+00	1,39E+01	1,88E+00	-4,86E+02
GWP-biogenic	[kg CO <sub>2</sub> eq.]	1,39E+01	1,91E-02	0,00E+00	2,56E-03	7,04E-02	3,03E-02	2,39E+00
GWP-luluc	[kg CO <sub>2</sub> eq.]	1,70E+00	7,81E-02	0,00E+00	1,09E-02	2,78E-03	2,30E-03	-4,44E-01
ODP	[kg CFC 11 eq.]	3,72E-03	1,10E-12	0,00E+00	1,53E-13	2,03E-10	3,46E-12	-1,03E-10
AP	[mol H <sup>+</sup> eq.]	1,79E+01	1,31E-02	0,00E+00	1,74E-03	1,97E-02	7,01E-03	-3,01E+00
EP-freshwater	[kg P eq.]	5,19E-03	3,08E-05	0,00E+00	4,31E-06	3,52E-05	3,01E-04	-3,13E-04
EP-marine	[kg N eq.]	2,87E+00	4,86E-03	0,00E+00	6,30E-04	6,23E-03	1,67E-03	-2,73E-01
EP-terrestrial	[mol N eq.]	3,10E+01	5,72E-02	0,00E+00	7,46E-03	6,58E-02	1,84E-02	-2,69E+00
POCP	[kg NMVOC eq.]	8,74E+00	1,15E-02	0,00E+00	1,52E-03	1,61E-02	5,22E-03	-1,00E+00
ADPm <sup>1</sup>	[kg Sb eq.]	5,02E-01	5,59E-07	0,00E+00	7,81E-08	3,35E-06	5,64E-08	-9,46E-02
ADPf <sup>1</sup>	[MJ]	4,16E+04	1,15E+02	0,00E+00	1,60E+01	2,14E+02	2,76E+01	-5,00E+03
WDP <sup>1</sup>	[m <sup>3</sup> world eq. deprived]	5,35E+02	1,02E-01	0,00E+00	1,42E-02	7,93E-01	1,41E-02	-9,84E+01
Caption	GWP-total = Global Warming Potential - total; 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 = Ozone Depletion; AP = Acidification; EP-freshwater = Eutrophication – aquatic freshwater; EP-marine = Eutrophication – aquatic marine; EP-terrestrial = Eutrophication – terrestrial; POCP = Photochemical zone formation; ADPm = Abiotic Depletion Potential – minerals and metals; ADPf = Abiotic Depletion Potential – fossil fuels; WDP = water depletion potential							
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: 1,95*10 <sup>2</sup> or 195, while 1,12E-11 is the same as 1,12*10 <sup>-11</sup> or 0,0000000000112.							
Disclaimer	<sup>1</sup> The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.							

ADDITIONAL ENVIRONMENTAL IMPACTS PER PIECE								
Parameter	Unit	A1-A3	A4	C1	C2	C3	C4	D
PM	[Disease incidence]	2,29E-04	1,10E-07	0,00E+00	1,50E-08	1,60E-07	7,40E-08	-2,57E-05
IRP <sup>2</sup>	[kBq U235 eq.]	2,53E+02	3,22E-02	0,00E+00	4,50E-03	3,71E+00	4,65E-02	-7,28E+00
ETP-fw <sup>1</sup>	[CTUe]	1,45E+04	8,23E+01	0,00E+00	1,15E+01	4,43E+01	2,22E+01	-1,36E+03
HTP-c <sup>1</sup>	[CTUh]	4,31E-05	1,67E-09	0,00E+00	2,33E-10	5,29E-09	1,39E-09	2,46E-08
HTP-nc <sup>1</sup>	[CTUh]	3,84E-05	7,43E-08	0,00E+00	1,04E-08	6,32E-08	1,20E-07	-2,00E-06
SQP <sup>1</sup>	-	1,24E+04	4,80E+01	0,00E+00	6,71E+00	6,31E+01	3,08E+00	-1,48E+03
Caption	PM = Particulate Matter emissions; IRP = Ionizing radiation – human health; ETP-fw = Eco toxicity – freshwater; HTP-c = Human toxicity – cancer effects; HTP-nc = Human toxicity – non cancer effects; SQP = Soil Quality (dimensionless)							
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: 1,95*10 <sup>2</sup> or 195, while 1,12E-11 is the same as 1,12*10 <sup>-11</sup> or 0,0000000000112.							
Disclaimers	<sup>1</sup> The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.							
	<sup>2</sup> 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 PER PIECE								
Parameter	Unit	A1-A3	A4	C1	C2	C3	C4	D
PERE	[MJ]	1,02E+04	8,36E+00	0,00E+00	1,17E+00	8,50E+01	2,81E+00	-5,48E+02
PERM	[MJ]	1,25E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	1,04E+04	8,36E+00	0,00E+00	1,17E+00	8,50E+01	2,81E+00	-5,48E+02
PENRE	[MJ]	4,12E+04	1,15E+02	0,00E+00	1,61E+01	2,14E+02	2,77E+01	-5,00E+03
PENRM	[MJ]	5,69E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	4,18E+04	1,15E+02	0,00E+00	1,61E+01	2,14E+02	2,77E+01	-5,00E+03
SM	[kg]	6,83E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	[MJ]	2,94E-23	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	[MJ]	3,46E-22	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	[m <sup>3</sup> ]	2,33E+01	9,15E-03	0,00E+00	1,28E-03	5,98E-02	1,33E-03	-3,30E+01
Caption	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 resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non renewable secondary fuels; FW = Net use of fresh water							
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: 1,95*10 <sup>2</sup> or 195, while 1,12E-11 is the same as 1,12*10 <sup>-11</sup> or 0,0000000000112.							

WASTE CATEGORIES AND OUTPUT FLOWS PER PIECE								
Parameter	Unit	A1-A3	A4	C1	C2	C3	C4	D
HWD	[kg]	1,97E-04	3,57E-10	0,00E+00	4,99E-11	1,63E-08	2,06E-09	-2,29E-05
NHWD	[kg]	4,20E+02	1,76E-02	0,00E+00	2,46E-03	2,41E-01	4,45E+01	9,10E+01
RWD	[kg]	1,79E+00	2,16E-04	0,00E+00	3,01E-05	2,72E-02	3,26E-04	-4,83E-02
CRU	[kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	[kg]	9,93E+01	0,00E+00	0,00E+00	0,00E+00	2,33E+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
Caption	HWD = Hazardous waste disposed; NHWD = Non hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy							
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: 1,95*10 <sup>2</sup> or 195, while 1,12E-11 is the same as 1,12*10 <sup>-11</sup> or 0,0000000000112.							

BIOGENIC CARBON CONTENT PER PIECE		
Parameter	Unit	At the factory gate
Biogenic carbon content in product	[kg C]	0,00E+00
Biogenic carbon content in accompanying packaging	[kg C]	5,64E+00
Note	1 kg biogenic carbon is equivalent to 44/12 kg of CO <sub>2</sub>	

**Compact P Polar Køl/Sol EK9**

ENVIRONMENTAL IMPACTS PER PIECE								
Parameter	Unit	A1-A3	A4	C1	C2	C3	C4	D
GWP-total	[kg CO <sub>2</sub> eq.]	3,25E+03	6,75E+00	0,00E+00	9,46E-01	1,11E+01	2,22E+00	-3,55E+02
GWP-fossil	[kg CO <sub>2</sub> eq.]	3,24E+03	6,67E+00	0,00E+00	9,36E-01	1,11E+01	2,25E+00	-3,56E+02
GWP-biogenic	[kg CO <sub>2</sub> eq.]	1,34E+01	1,53E-02	0,00E+00	2,06E-03	5,23E-02	3,30E-02	1,68E+00
GWP-luluc	[kg CO <sub>2</sub> eq.]	1,56E+00	6,27E-02	0,00E+00	8,77E-03	2,08E-03	2,41E-03	-1,71E-01
ODP	[kg CFC 11 eq.]	2,19E-03	8,82E-13	0,00E+00	1,23E-13	1,51E-10	4,01E-12	1,14E-10
AP	[mol H <sup>+</sup> eq.]	1,86E+01	1,05E-02	0,00E+00	1,40E-03	1,54E-02	7,77E-03	-1,51E+00
EP-freshwater	[kg P eq.]	5,89E-03	2,48E-05	0,00E+00	3,46E-06	2,62E-05	3,90E-04	-1,60E-04
EP-marine	[kg N eq.]	2,95E+00	3,90E-03	0,00E+00	5,06E-04	4,96E-03	1,83E-03	-1,79E-01
EP-terrestrial	[mol N eq.]	3,19E+01	4,60E-02	0,00E+00	5,99E-03	5,26E-02	2,01E-02	-1,74E+00
POCP	[kg NMVOC eq.]	8,98E+00	9,28E-03	0,00E+00	1,22E-03	1,28E-02	5,75E-03	-6,58E-01
ADPm <sup>1</sup>	[kg Sb eq.]	4,66E-01	4,49E-07	0,00E+00	6,28E-08	2,49E-06	6,46E-08	-3,13E-02
ADPf <sup>1</sup>	[MJ]	4,32E+04	9,23E+01	0,00E+00	1,29E+01	1,60E+02	3,34E+01	-3,75E+03
WDP <sup>1</sup>	[m <sup>3</sup> world eq. deprived]	5,05E+02	8,19E-02	0,00E+00	1,14E-02	6,66E-01	-2,21E-03	-4,50E+01
Caption	GWP-total = Global Warming Potential - total; 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 = Ozone Depletion; AP = Acidification; EP-freshwater = Eutrophication – aquatic freshwater; EP-marine = Eutrophication – aquatic marine; EP-terrestrial = Eutrophication – terrestrial; POCP = Photochemical zone formation; ADPm = Abiotic Depletion Potential – minerals and metals; ADPf = Abiotic Depletion Potential – fossil fuels; WDP = water depletion potential							
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: 1,95*10 <sup>2</sup> or 195, while 1,12E-11 is the same as 1,12*10 <sup>-11</sup> or 0,0000000000112.							
Disclaimer	<sup>1</sup> The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.							

ADDITIONAL ENVIRONMENTAL IMPACTS PER PIECE								
Parameter	Unit	A1-A3	A4	C1	C2	C3	C4	D
PM	[Disease incidence]	2,31E-04	8,87E-08	0,00E+00	1,20E-08	1,22E-07	7,98E-08	-1,36E-05
IRP <sup>2</sup>	[kBq U235 eq.]	2,47E+02	2,59E-02	0,00E+00	3,61E-03	2,77E+00	5,71E-02	-8,61E+00
ETP-fw <sup>1</sup>	[CTUe]	1,58E+04	6,61E+01	0,00E+00	9,24E+00	3,32E+01	2,75E+01	-6,87E+02
HTP-c <sup>1</sup>	[CTUh]	8,99E-06	1,34E-09	0,00E+00	1,87E-10	3,95E-09	1,59E-09	4,59E-08
HTP-nc <sup>1</sup>	[CTUh]	3,53E-05	5,97E-08	0,00E+00	8,34E-09	4,77E-08	1,34E-07	-7,51E-07
SQP <sup>1</sup>	-	1,15E+04	3,86E+01	0,00E+00	5,39E+00	4,70E+01	3,39E+00	-5,36E+02
Caption	PM = Particulate Matter emissions; IRP = Ionizing radiation – human health; ETP-fw = Eco toxicity – freshwater; HTP-c = Human toxicity – cancer effects; HTP-nc = Human toxicity – non cancer effects; SQP = Soil Quality (dimensionless)							
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: 1,95*10 <sup>2</sup> or 195, while 1,12E-11 is the same as 1,12*10 <sup>-11</sup> or 0,0000000000112.							
Disclaimers	<sup>1</sup> The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.							
	<sup>2</sup> 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 PER PIECE								
Parameter	Unit	A1-A3	A4	C1	C2	C3	C4	D
PERE	[MJ]	9,45E+03	6,72E+00	0,00E+00	9,39E-01	6,33E+01	3,25E+00	-3,17E+02
PERM	[MJ]	1,25E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	9,57E+03	6,72E+00	0,00E+00	9,39E-01	6,33E+01	3,25E+00	-3,17E+02
PENRE	[MJ]	4,27E+04	9,26E+01	0,00E+00	1,29E+01	1,60E+02	3,34E+01	-3,76E+03
PENRM	[MJ]	7,78E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	4,35E+04	9,26E+01	0,00E+00	1,29E+01	1,60E+02	3,34E+01	-3,76E+03
SM	[kg]	4,62E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	[MJ]	2,95E-23	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	[MJ]	3,46E-22	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	[m <sup>3</sup> ]	2,23E+01	7,36E-03	0,00E+00	1,03E-03	4,64E-02	1,11E-03	-2,64E+01
Caption	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 resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non renewable secondary fuels; FW = Net use of fresh water							
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: 1,95*10 <sup>2</sup> or 195, while 1,12E-11 is the same as 1,12*10 <sup>-11</sup> or 0,0000000000112.							

WASTE CATEGORIES AND OUTPUT FLOWS PER PIECE								
Parameter	Unit	A1-A3	A4	C1	C2	C3	C4	D
HWD	[kg]	2,82E-04	2,87E-10	0,00E+00	4,01E-11	1,22E-08	2,61E-09	-1,87E-05
NHWD	[kg]	3,58E+02	1,41E-02	0,00E+00	1,97E-03	2,42E-01	4,53E+01	3,70E+01
RWD	[kg]	1,82E+00	1,73E-04	0,00E+00	2,42E-05	2,04E-02	3,94E-04	-6,07E-02
CRU	[kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	[kg]	8,02E+01	0,00E+00	0,00E+00	0,00E+00	1,78E+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
Caption	HWD = Hazardous waste disposed; NHWD = Non hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy							
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: 1,95*10 <sup>2</sup> or 195, while 1,12E-11 is the same as 1,12*10 <sup>-11</sup> or 0,0000000000112.							

BIOGENIC CARBON CONTENT PER PIECE		
Parameter	Unit	At the factory gate
Biogenic carbon content in product	[kg C]	0,00E+00
Biogenic carbon content in accompanying packaging	[kg C]	5,64E+00
Note	1 kg biogenic carbon is equivalent to 44/12 kg of CO <sub>2</sub>	

### Compact P2 KSF Polar EK9

ENVIRONMENTAL IMPACTS PER PIECE								
Parameter	Unit	A1-A3	A4	C1	C2	C3	C4	D
GWP-total	[kg CO <sub>2</sub> eq.]	3,28E+03	6,77E+00	0,00E+00	9,48E-01	1,12E+01	2,07E+00	-3,59E+02
GWP-fossil	[kg CO <sub>2</sub> eq.]	3,27E+03	6,69E+00	0,00E+00	9,38E-01	1,12E+01	2,09E+00	-3,61E+02
GWP-biogenic	[kg CO <sub>2</sub> eq.]	1,34E+01	1,54E-02	0,00E+00	2,06E-03	5,33E-02	3,10E-02	1,71E+00
GWP-luluc	[kg CO <sub>2</sub> eq.]	1,59E+00	6,29E-02	0,00E+00	8,79E-03	2,12E-03	2,28E-03	-1,81E-01
ODP	[kg CFC 11 eq.]	2,19E-03	8,84E-13	0,00E+00	1,23E-13	1,54E-10	3,74E-12	1,08E-10
AP	[mol H <sup>+</sup> eq.]	1,88E+01	1,06E-02	0,00E+00	1,40E-03	1,56E-02	7,29E-03	-1,56E+00
EP-freshwater	[kg P eq.]	5,96E-03	2,48E-05	0,00E+00	3,47E-06	2,67E-05	3,59E-04	-1,65E-04
EP-marine	[kg N eq.]	2,99E+00	3,91E-03	0,00E+00	5,07E-04	5,02E-03	1,72E-03	-1,82E-01
EP-terrestrial	[mol N eq.]	3,22E+01	4,61E-02	0,00E+00	6,01E-03	5,32E-02	1,89E-02	-1,77E+00
POCP	[kg NMVOC eq.]	9,08E+00	9,30E-03	0,00E+00	1,23E-03	1,30E-02	5,39E-03	-6,70E-01
ADPm <sup>1</sup>	[kg Sb eq.]	4,74E-01	4,50E-07	0,00E+00	6,29E-08	2,54E-06	6,04E-08	-3,35E-02
ADPf <sup>1</sup>	[MJ]	4,35E+04	9,25E+01	0,00E+00	1,29E+01	1,63E+02	3,10E+01	-3,80E+03
WDP <sup>1</sup>	[m <sup>3</sup> world eq. deprived]	5,12E+02	8,21E-02	0,00E+00	1,15E-02	6,71E-01	-2,75E-05	-4,68E+01
Caption	GWP-total = Global Warming Potential - total; 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 = Ozone Depletion; AP = Acidification; EP-freshwater = Eutrophication – aquatic freshwater; EP-marine = Eutrophication – aquatic marine; EP-terrestrial = Eutrophication – terrestrial; POCP = Photochemical zone formation; ADPm = Abiotic Depletion Potential – minerals and metals; ADPf = Abiotic Depletion Potential – fossil fuels; WDP = water depletion potential							
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: 1,95*10 <sup>2</sup> or 195, while 1,12E-11 is the same as 1,12*10 <sup>-11</sup> or 0,0000000000112.							
Disclaimer	<sup>1</sup> The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.							

ADDITIONAL ENVIRONMENTAL IMPACTS PER PIECE								
Parameter	Unit	A1-A3	A4	C1	C2	C3	C4	D
PM	[Disease incidence]	2,34E-04	8,89E-08	0,00E+00	1,21E-08	1,24E-07	7,51E-08	-1,40E-05
IRP <sup>2</sup>	[kBq U235 eq.]	2,49E+02	2,59E-02	0,00E+00	3,62E-03	2,82E+00	5,29E-02	-8,41E+00
ETP-fw <sup>1</sup>	[CTUe]	1,59E+04	6,63E+01	0,00E+00	9,26E+00	3,38E+01	2,55E+01	-7,08E+02
HTP-c <sup>1</sup>	[CTUh]	8,27E-06	1,34E-09	0,00E+00	1,88E-10	4,02E-09	1,49E-09	4,59E-08
HTP-nc <sup>1</sup>	[CTUh]	3,59E-05	5,98E-08	0,00E+00	8,36E-09	4,85E-08	1,26E-07	-7,82E-07
SQP <sup>1</sup>	-	1,16E+04	3,87E+01	0,00E+00	5,40E+00	4,79E+01	3,18E+00	-5,68E+02
Caption	PM = Particulate Matter emissions; IRP = Ionizing radiation – human health; ETP-fw = Eco toxicity – freshwater; HTP-c = Human toxicity – cancer effects; HTP-nc = Human toxicity – non cancer effects; SQP = Soil Quality (dimensionless)							
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: 1,95*10 <sup>2</sup> or 195, while 1,12E-11 is the same as 1,12*10 <sup>-11</sup> or 0,0000000000112.							
Disclaimers	<sup>1</sup> The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.							
	<sup>2</sup> 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 PER PIECE								
Parameter	Unit	A1-A3	A4	C1	C2	C3	C4	D
PERE	[MJ]	9,54E+03	6,73E+00	0,00E+00	9,41E-01	6,45E+01	3,03E+00	-3,22E+02
PERM	[MJ]	1,25E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	9,67E+03	6,73E+00	0,00E+00	9,41E-01	6,45E+01	3,03E+00	-3,22E+02
PENRE	[MJ]	4,31E+04	9,29E+01	0,00E+00	1,30E+01	1,63E+02	3,10E+01	-3,80E+03
PENRM	[MJ]	7,07E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	4,38E+04	9,29E+01	0,00E+00	1,30E+01	1,63E+02	3,10E+01	-3,80E+03
SM	[kg]	4,63E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	[MJ]	2,94E-23	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	[MJ]	3,46E-22	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	[m <sup>3</sup> ]	2,25E+01	7,37E-03	0,00E+00	1,03E-03	4,71E-02	1,08E-03	-2,67E+01
Caption	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 resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non renewable secondary fuels; FW = Net use of fresh water							
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: 1,95*10 <sup>2</sup> or 195, while 1,12E-11 is the same as 1,12*10 <sup>-11</sup> or 0,0000000000112.							

WASTE CATEGORIES AND OUTPUT FLOWS PER PIECE								
Parameter	Unit	A1-A3	A4	C1	C2	C3	C4	D
HWD	[kg]	2,86E-04	2,88E-10	0,00E+00	4,02E-11	1,24E-08	2,41E-09	-1,89E-05
NHWD	[kg]	3,62E+02	1,42E-02	0,00E+00	1,98E-03	2,40E-01	4,30E+01	3,92E+01
RWD	[kg]	1,84E+00	1,74E-04	0,00E+00	2,43E-05	2,07E-02	3,66E-04	-5,96E-02
CRU	[kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	[kg]	7,99E+01	0,00E+00	0,00E+00	0,00E+00	1,81E+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
Caption	HWD = Hazardous waste disposed; NHWD = Non hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy							
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: 1,95*10 <sup>2</sup> or 195, while 1,12E-11 is the same as 1,12*10 <sup>-11</sup> or 0,0000000000112.							

BIOGENIC CARBON CONTENT PER PIECE		
Parameter	Unit	At the factory gate
Biogenic carbon content in product	[kg C]	0,00E+00
Biogenic carbon content in accompanying packaging	[kg C]	5,64E+00
Note	1 kg biogenic carbon is equivalent to 44/12 kg of CO <sub>2</sub>	



**Compact S Køl/Sol**

ENVIRONMENTAL IMPACTS PER PIECE								
Parameter	Unit	A1-A3	A4	C1	C2	C3	C4	D
GWP-total	[kg CO <sub>2</sub> eq.]	2,40E+03	5,88E+00	0,00E+00	8,24E-01	9,89E+00	1,21E+00	-3,58E+02
GWP-fossil	[kg CO <sub>2</sub> eq.]	2,38E+03	5,81E+00	0,00E+00	8,15E-01	9,84E+00	1,23E+00	-3,59E+02
GWP-biogenic	[kg CO <sub>2</sub> eq.]	1,03E+01	1,33E-02	0,00E+00	1,79E-03	5,06E-02	1,95E-02	1,62E+00
GWP-luluc	[kg CO <sub>2</sub> eq.]	1,04E+00	5,46E-02	0,00E+00	7,63E-03	2,00E-03	1,47E-03	-1,63E-01
ODP	[kg CFC 11 eq.]	2,19E-03	7,68E-13	0,00E+00	1,07E-13	1,46E-10	2,25E-12	9,42E-11
AP	[mol H <sup>+</sup> eq.]	1,26E+01	9,17E-03	0,00E+00	1,22E-03	1,41E-02	4,52E-03	-1,49E+00
EP-freshwater	[kg P eq.]	3,64E-03	2,16E-05	0,00E+00	3,01E-06	2,53E-05	2,00E-04	-1,59E-04
EP-marine	[kg N eq.]	2,14E+00	3,40E-03	0,00E+00	4,41E-04	4,41E-03	1,08E-03	-1,82E-01
EP-terrestrial	[mol N eq.]	2,32E+01	4,00E-02	0,00E+00	5,22E-03	4,66E-02	1,18E-02	-1,78E+00
POCP	[kg NMVOC eq.]	6,51E+00	8,08E-03	0,00E+00	1,06E-03	1,14E-02	3,36E-03	-6,64E-01
ADPm <sup>1</sup>	[kg Sb eq.]	3,37E-01	3,91E-07	0,00E+00	5,47E-08	2,41E-06	3,66E-08	-2,92E-02
ADPf <sup>1</sup>	[MJ]	3,09E+04	8,04E+01	0,00E+00	1,12E+01	1,55E+02	1,81E+01	-3,84E+03
WDP <sup>1</sup>	[m <sup>3</sup> world eq. deprived]	3,71E+02	7,13E-02	0,00E+00	9,96E-03	5,51E-01	7,04E-03	-4,34E+01
Caption	GWP-total = Global Warming Potential - total; 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 = Ozone Depletion; AP = Acidification; EP-freshwater = Eutrophication – aquatic freshwater; EP-marine = Eutrophication – aquatic marine; EP-terrestrial = Eutrophication – terrestrial; POCP = Photochemical zone formation; ADPm = Abiotic Depletion Potential – minerals and metals; ADPf = Abiotic Depletion Potential – fossil fuels; WDP = water depletion potential							
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: 1,95*10 <sup>2</sup> or 195, while 1,12E-11 is the same as 1,12*10 <sup>-11</sup> or 0,0000000000112.							
Disclaimer	<sup>1</sup> The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.							

ADDITIONAL ENVIRONMENTAL IMPACTS PER PIECE								
Parameter	Unit	A1-A3	A4	C1	C2	C3	C4	D
PM	[Disease incidence]	1,76E-04	7,72E-08	0,00E+00	1,05E-08	1,15E-07	4,74E-08	-1,35E-05
IRP <sup>2</sup>	[kBq U235 eq.]	1,87E+02	2,25E-02	0,00E+00	3,15E-03	2,68E+00	3,06E-02	-1,24E+01
ETP-fw <sup>1</sup>	[CTUe]	1,03E+04	5,76E+01	0,00E+00	8,04E+00	3,19E+01	1,47E+01	-7,02E+02
HTP-c <sup>1</sup>	[CTUh]	7,37E-06	1,17E-09	0,00E+00	1,63E-10	3,81E-09	9,00E-10	4,28E-08
HTP-nc <sup>1</sup>	[CTUh]	2,50E-05	5,20E-08	0,00E+00	7,26E-09	4,54E-08	7,76E-08	-7,97E-07
SQP <sup>1</sup>	-	8,52E+03	3,36E+01	0,00E+00	4,69E+00	4,54E+01	1,98E+00	-5,19E+02
Caption	PM = Particulate Matter emissions; IRP = Ionizing radiation – human health; ETP-fw = Eco toxicity – freshwater; HTP-c = Human toxicity – cancer effects; HTP-nc = Human toxicity – non cancer effects; SQP = Soil Quality (dimensionless)							
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: 1,95*10 <sup>2</sup> or 195, while 1,12E-11 is the same as 1,12*10 <sup>-11</sup> or 0,0000000000112.							
Disclaimers	<sup>1</sup> The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.							
	<sup>2</sup> 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 PER PIECE								
Parameter	Unit	A1-A3	A4	C1	C2	C3	C4	D
PERE	[MJ]	7,33E+03	5,85E+00	0,00E+00	8,17E-01	6,12E+01	1,83E+00	-3,82E+02
PERM	[MJ]	1,16E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	7,44E+03	5,85E+00	0,00E+00	8,17E-01	6,12E+01	1,83E+00	-3,82E+02
PENRE	[MJ]	3,05E+04	8,07E+01	0,00E+00	1,13E+01	1,55E+02	1,81E+01	-3,84E+03
PENRM	[MJ]	4,80E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	3,10E+04	8,07E+01	0,00E+00	1,13E+01	1,55E+02	1,81E+01	-3,84E+03
SM	[kg]	3,91E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	[MJ]	2,94E-23	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	[MJ]	3,46E-22	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	[m <sup>3</sup> ]	1,73E+01	6,41E-03	0,00E+00	8,95E-04	4,27E-02	8,18E-04	-2,58E+01
Caption	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 resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non renewable secondary fuels; FW = Net use of fresh water							
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: 1,95*10 <sup>2</sup> or 195, while 1,12E-11 is the same as 1,12*10 <sup>-11</sup> or 0,0000000000112.							

WASTE CATEGORIES AND OUTPUT FLOWS PER PIECE								
Parameter	Unit	A1-A3	A4	C1	C2	C3	C4	D
HWD	[kg]	1,52E-04	2,50E-10	0,00E+00	3,49E-11	1,17E-08	1,36E-09	-1,82E-05
NHWD	[kg]	3,19E+02	1,23E-02	0,00E+00	1,72E-03	1,55E-01	2,82E+01	3,22E+01
RWD	[kg]	1,31E+00	1,51E-04	0,00E+00	2,11E-05	1,97E-02	2,14E-04	-7,70E-02
CRU	[kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	[kg]	6,98E+01	0,00E+00	0,00E+00	0,00E+00	1,66E+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
Caption	HWD = Hazardous waste disposed; NHWD = Non hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy							
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: 1,95*10 <sup>2</sup> or 195, while 1,12E-11 is the same as 1,12*10 <sup>-11</sup> or 0,0000000000112.							

BIOGENIC CARBON CONTENT PER PIECE		
Parameter	Unit	At the factory gate
Biogenic carbon content in product	[kg C]	0,00E+00
Biogenic carbon content in accompanying packaging	[kg C]	4,66E+00
Note	1 kg biogenic carbon is equivalent to 44/12 kg of CO <sub>2</sub>	

# Additional information

## LCA interpretation

The results show that the production of steel and aluminum (A1) are the dominating process in most of the environmental impact categories and to some extent the corresponding avoided production of materials beyond the system boundary (D). This stems especially from the metal content that is costly to produce but which, even combined with the other sealant materials, can be recycled at the end-of-life. The packaging materials (pallets and cardboard) contribute to a biogenic CO<sub>2</sub> uptake.

## Technical information on scenarios

### Reference service life

RSL information		Unit
Reference service Life	25 Years	Reference service Life
Declared product properties	Technical specifications and guidance can be obtained from direct contact to Nilan A/S at +45 7675 2500 or <a href="mailto:nilan@nilan.dk">nilan@nilan.dk</a>	
Design application parameters		
Assumed quality of work		
Outdoor environment		
Indoor environment		
Usage conditions		
Maintenance		

### Transport to the building site (A4)

Scenario information	Value	Unit
Fuel type	Diesel	-
Vehicle type	Truck, Euro 6, 26 - 28t gross weight / 18.4t payload capacity	-
Transport distance	300	km
Capacity utilisation (including empty runs)	55	%
Gross density of products transported	253 - 537	kg/m <sup>3</sup>

### End of life (C1-C4)

Scenario information	Value	Unit
Collected separately	0	kg
Collected with mixed waste	196.1 - 404.7	kg
For reuse	0	kg
For recycling	168.5 - 349.5	kg
For energy recovery	16.5 - 37.0	kg
For final disposal	11.1 - 23.1	kg
Assumptions for scenario development	Products are shredded as mixed waste at an appropriate metal recycler in Denmark	

### Re-use, recovery and recycling potential (D)

Scenario information/Materiel	Value	Unit
Steel	140 - 266	kg
Aluminium	7.51 - 29.90	kg
Copper	8.93 - 32.10	kg
Brass	0.87 - 5.12	kg
Electronics	5.63 - 15.30	kg

### Indoor air

The EPD does not give information on release of dangerous substances to indoor air because the horizontal standards on the relevant measurements are not available. Read more in EN15804+A2 chapter 7.4.1.

### Soil and water

The EPD does not give information on release of dangerous substances to soil and water because the horizontal standards on the relevant measurements are not available. Read more in EN15804+A2 chapter 7.4.2.

# References

<b>Publisher</b>	 epddanmark <a href="http://www.epddanmark.dk">www.epddanmark.dk</a> <small>Template version 2023.1</small>
<b>Programme operator</b>	Danish Technological Institute Buildings & Environment Gregersensvej DK-2630 Taastrup <a href="http://www.teknologisk.dk">www.teknologisk.dk</a>
<b>LCA-practitioner</b>	Maria Preilev Hansen Danish Technological Institute Buildings & Environment Gregersensvej DK-2630 Taastrup <a href="http://www.teknologisk.dk">www.teknologisk.dk</a>
<b>LCA software / background data</b>	Thinkstep GaBi 10.6 Database version 2021.2 <a href="http://www.gabi-software.com">www.gabi-software.com</a>
<b>3<sup>rd</sup> party verifier</b>	Kim Christensen Kimconsult DK

## General programme instructions

General Programme Instructions, version 2.0, spring 2020  
[www.epddanmark.dk](http://www.epddanmark.dk)

### EN 15804

DS/EN 15804 + A2:2019 - "Sustainability of construction works – Environmental product declarations – Core rules for the product category of construction products"

### EN 15942

DS/EN 15942:2011 – " Sustainability of construction works – Environmental product declarations – Communication format business-to-business"

### ISO 14025

DS/EN ISO 14025:2010 – " Environmental labels and declarations – Type III environmental declarations – Principles and procedures"

### ISO 14040

DS/EN ISO 14040:2008 – " Environmental management – Life cycle assessment – Principles and framework"

### ISO 14044

DS/EN ISO 14044:2008 – " Environmental management – Life cycle assessment – Requirements and guidelines"