

Ejer: Centrum Pæle A/S
Nr.: MD-22034-DA
Udstedt: 11-07-2022
Gyldig til: 11-07-2027

3. PARTS **VERIFICERET**

EPD

VERIFICERET MILJØVAREDEKLARATION I HENHOLD TIL ISO 14025 OG EN 15804



Deklarationens ejer
Centrum Pæle A/S
CVR: 27242561



Udgivet af
EPD Danmark
www.epddanmark.dk



- ☐ Branche EPD
☒ Produkt EPD

Deklareret produkt

Der er deklareret 2 forskellige grundprodukter:

- 1 stk mastfundamentspæl i stålarmet beton
- 1 stk ballastklods til udspænding af kabel

Tilføjelser i form af:

- Forlængelse af mastfundamentspælene med ½ meter.

Antal deklarerede variationer af mastfundamentspæl: 6

- EP-B1, EP-B10, EP-B11, EP-B14, EP-F1, EP-F3

Antal deklarerede variationer af ballastklods: 3

- Ballast 500, Ballast 675, Ballast 1000

Antal tilføjelser: 6

- ½m forlængelse af hhv. EP-B1, EP-B10, EP-B11, EP-B14, EP-F1, EP-F3

Produktionssted

Centrum Pæles produktionssted i Vejle, Danmark

Produktets anvendelse

- Montering af master til f.eks. elektrificering af jernbane
- Ballastklodser til udspænding af elektrificerings-kabel
- Forlængelse af mastfundamentspæle

Deklareret/funktionel enhed

Deklareret enhed er

- 1 stk stålarmet mastfundamentpæl i beton
- 1 stk ballastklods
- ½m forlængelse af mastfundamentspæle

Årstal for data

2020

Udstedt
11-07-2022

Gyldig til:
11-07-2027

Beregningsgrundlag

Denne miljøvaredeklaration er udviklet iht. til kravene i EN 15804+A2.

Sammenlignelighed

Miljøvaredeklarationer for byggevarer er muligvis ikke sammenlignelige hvis ikke de overholder kravene i EN 15804. EPD data er muligvis ikke sammenlignelig med mindre alle anvendte datasæt er udviklet i henhold til EN 15804 og baggrundssystemerne baseres på samme database.

Gyldighed

Denne miljøvaredeklaration er verificeret i henhold til kravene i ISO 14025 og er gyldig i 5 år fra udstedelsesdatoen

Anvendelse

Den tilsigtede anvendelse af miljøvaredeklarationen er, at kommunikere videnskabeligt baserede miljøinformationer for produktet til/fra professionelle aktører med det formål, at kunne vurdere miljøpåvirkninger for bygninger.

EPD type

- ☐ Vugge-til-port med C1-C4 og D
☒ Vugge-til-port med tilvalg, C1-C4 og D
☐ Vugge-til-grav og modul D
☐ Vugge-til-port
☐ Vugge-til-port med tilvalg

CEN standard EN 15804 udgør den grundlæggende PCR

Uafhængig verificering af deklarationen og data, i henhold til EN ISO 14025:2010

- ☐ intern ☒ ekstern

3. parts verifikator:

Ninkie Bendtsen

Ninkie Bendtsen, Niras A/S

Martha Katrine Sørensen

Martha Katrine Sørensen
EPD Danmark

Systemgrænser (MND = module not declared)

Produkt			Bygge- proces		Brug							Endt levetid				Udenfor systemgrænse
Råmaterialer	Transport	Fremstilling	Transport	Indbygning	Brug	Vedligehold	Reparation	Udskiftning	Renovering	Energiforbrug	Vandforbrug	Nedrivning	Transport	Affaldsbehandling	Bortskaffelse	Genbrug og genanvendelse
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
X	X	X	X	MND	X	MND	MND	MND	MND	MND	MND	X	X	X	X	X

Produktinformation

Produktbeskrivelse

Hovedmaterialer til mastfundamentspæle og forlængelser er angivet i tabellen nedenfor. Disse udgør 100 vægt % af det deklarerede produkt.

Materiale	Produkt											
	EP-B1, 3m	EP-B10, 3m	EP-B11, 3m	EP-B14, 3m	EP-F1, 3m	EP-F3, 3m	EP-B1, 0,5m tillæg	EP-B10, 0,5m tillæg	EP-B11, 0,5m tillæg	EP-B14, 0,5m tillæg	EP-F1, 0,5m tillæg	EP-F3, 0,5m tillæg
Cement	16%	15%	15%	15%	16%	15%	11%	16%	16%	15%	16%	15%
Granitskærver	37%	36%	36%	36%	37%	35%	25%	37%	36%	36%	38%	36%
Sand	29%	29%	29%	28%	29%	28%	20%	29%	29%	29%	30%	28%
Sten	6%	5%	5%	5%	6%	5%	4%	6%	6%	5%	6%	5%
Vand	6%	5%	5%	5%	5%	5%	4%	5%	5%	5%	6%	5%
Tilsætningsstoffer og formolie	Under 1%											
Stål	6%	8%	8%	9%	6%	11%	37%	7%	8%	9%	5%	10%
Rustfrit stål	0,7%	1,0%	1,4%	1,4%	0,4%	0,4%	-	-	-	-	-	-
Beton afstandsstykker	Under 0,1%											
O-ringe og labels	Under 0,1%											
Sum	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Hovedmaterialer til ballastklodser er angivet i tabellen nedenfor. Disse udgør 100 vægt % af det deklarerede produkt.

Materiale	Produkt		
	Vægt 500	Vægt 675	Vægt 1000
Cement	16%	16%	16%
Granitskærver	39%	39%	39%
Sand	31%	31%	31%
Sten	6%	6%	6%
Vand	6%	6%	6%
Tilsætningsstoffer og formolie	Under 1%		
Stål	2%	2%	2%
Rustfrit stål	Under 1%		
Beton afstandsstykker	Under 1%		
O-ringe og labels	Under 0,1%		

Sammensætning af emballage er opgjort i nedenstående tabel. Ballastklodser og ½m forlængelser har ingen emballage.

Materiale	Produkt						Enhed
	EP-B1, 3m	EP-B10, 3m	EP-B11, 3m	EP-B14, 3m	EP-F1, 3m	EP-F3, 3m	
PVC rør	78%	95%	95%	94%	100%	100%	%
Fugebånd	5%	1%	1%	1%	0%	0%	%
Tape	17%	4%	4%	5%	0%	0%	%
Sum emballage	100%	100%	100%	100%	100%	100%	%

Repræsentativitet

Den deklarerede enhed er 1 stk armeret mastfunderingspæl i beton, 1 stk forlængelse med ½m, og 1 stk ballastklods.

Data til den bagvedliggende LCA er baseret på årsgennemsnit for produktionen af funderingspæle i år 2020.

Baggrundsdata er baseret på GaBi databasen version 2021.2. Disse data er for de fleste <5 år gamle, og alle datasæt er <10 år gamle i overensstemmelse med EN15804:2012+A2:2019.

Indhold af farlige stoffer

Produktet indeholder ikke stoffer fra REACH Kandidatlisten, "Candidate List of Substances of Very High Concern for authorisation", hvis indhold overskrider 0,1 vægt % (<http://echa.europa.eu/candidate-list-table>).

Væsentlige egenskaber

Mastfundamentspælene inkl forlængelser skal følge nedenstående standarder:

DS/EN 1990:2007	Eurocode 0: Projekteringsgrundlag for bærende konstruktioner
DS/EN 1992-1-1	Eurocode 2: Betonkonstruktioner – Del 1-1: Generelle regler samt regler for bygningskonstruktioner
DS/EN 206:2013	Beton – Specifikation, egenskaber, produktion og overensstemmelse
DS/EN 13369:2018	Almindelige regler for præfabrikerede betonelementer
DS/EN 12794	Præfabrikerede betonelementer – Funderingspæle
DS/EN 10080:2006	Armeringsstål til beton – Svejselige armeringsstål - Generelt
DS/EN 10088-1:2014	Rustfrie stål - Del 1: Liste over rustfrie stål

Ballastklodser skal følge nedenstående standarder:

DS/EN 1992-1-1	Eurocode 2: Betonkonstruktioner – Del 1-1: Generelle regler samt regler for bygningskonstruktioner
DS/EN 206:2013	Beton – Specifikation, egenskaber, produktion og overensstemmelse
DS/EN 12794	Præfabrikerede betonelementer – Funderingspæle
DS/EN 10080:2006	Armeringsstål til beton – Svejselige armeringsstål - Generelt

Ydeevnedeklarationer på de enkelte pæle kan findes her: <https://www.centrumpaele.dk/paele.aspx>

Levetid (RSL)

Levetiden regnes som 100 år (RSL) jf. Annex AA i "DS/EN 16757:2017 – "Bæredygtighed inden for byggeri og anlæg – miljøvaredeklarationer – Produktkategoriregler for beton og betonelementer".

Foto af produkt (mastfundamentspæl herunder, ballastklodser næste side)





LCA baggrund

Deklareret enhed

LCI og LCIA resultater i denne EPD relaterer til 1 stk mastfunderingspæl, 1 stk forlængelse med ½m, og 1 stk ballastklods, som angivet i tabellerne nedenfor, med angivelse af vægt per enhed og en omregningsfaktor til 1 kg.

Navn	Produkt						Enhed
	EP-B1	EP-B10	EP-B11	EP-B14	EP-F1	EP-F3	
Deklareret enhed	1						stk
Masse per stk	1,14E+03	1,57E+03	1,58E+03	2,06E+03	1,23E+03	1,29E+03	kg
Omregningsfaktor til 1 kg.	8,77E-04	6,37E-04	6,35E-04	4,86E-04	8,15E-04	7,72E-04	-

Navn	Produkt						Enhed
	EP-B1	EP-B10	EP-B11	EP-B14	EP-F1	EP-F3	
Deklareret enhed	0,5						m
Masse per 0,5m	2,17E+02	2,04E+02	2,06E+02	2,65E+02	2,00E+02	2,11E+02	kg
Omregningsfaktor til 1 kg.	4,61E-03	4,89E-03	4,85E-03	3,77E-03	4,99E-03	4,73E-03	-

Navn	Produkt			Enhed
	Vægt 500	Vægt 675	Vægt 1000	
Deklareret enhed	1			stk
Masse per stk	5,18E+02	6,98E+02	1,03E+03	kg
Omregningsfaktor til 1 kg.	1,93E-03	1,43E-03	9,70E-04	-

Funktionel enhed

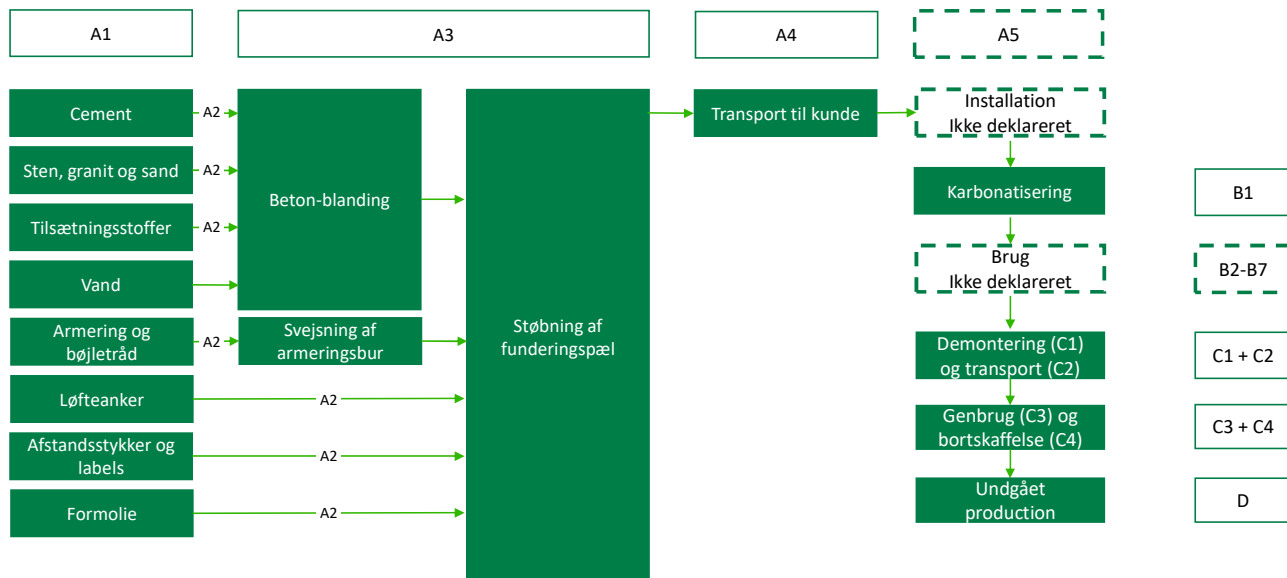
Ikke defineret.

PCR

Denne miljøvaredeklaration er baseret på kravene i EN 15804:2012+A2:2019. Desuden er der hentet informationer fra den produktspecifikke PCR: "DS/EN 16757:2017 – "Bæredygtighed inden for byggeri og anlæg – miljøvaredeklarationer – Produktkategoriregler for beton og betonelementer".

Flowdiagram

Nedenstående flowdiagram dækker råmaterialer (A1), produktion (A3) og udgående transport (A4) hos Centrum Pæle i Vejle. Indgående og intern transport (A2) sker ved pilene. Desuden er vist karbonatisering i modul B1, samt demontering (C1), transport til bortskaffelse (C2), genbrug (C3), bortskaffelse (C4), samt undgået produktion (D).



Systemgrænse

EPD'en er baseret på vugge-til-port med udvidelser, modul C1-C4 og modul D. Udvidelser består i, at modulerne A4 og B1 er medregnet.

Alle relevante og afgørende processer fra de omfattede moduler er medregnet.

Brugsfaserne (B2-B7) er vurderet til ikke at have relevans for EPD'en, da der ikke forekommer bidrag så længe produktet er installeret i en given bygning/konstruktion i henhold til gældende anvisninger og standarder.

De generelle regler for udeladelse af inputs og outputs i LCA'en følger bestemmelserne i EN 15804:2012+A2:2019, 6.3.5, hvor den totale udeladelse af input flow pr. modul højst må være 5 % af energiforbrug og masse og max 1% per enhedsproces.

Nøgleantagelser for systemgrænsen er beskrevet for hvert livscyklusstadium nedenfor.

Produktfasen (A1-A3):

Produktfasen omfatter tilvejebringelsen af alle råmaterialer, produkter og energi, transport til produktionen, blandingsproces, intern transport samt affaldsbehandling frem til "end-of-waste" eller endelig bortskaffelse.

LCA-resultaterne er angivet i aggregeret form for produktfasen, hvilket betyder, at modulerne A1, A2 og A3 betragtes som et samlet modul A1-A3.

Pælen og klodser fremstilles ved, at beton blandes på et blandedanlæg og udstøbes i forme hvor der er ilagt den nødvendige armering, indstøbningsdele mm. efter gældende standarder.

Formene er udformet i stål, således at de kan genbruges efter rengøring. Formene påføres slipmiddel (formolie). Betonelementerne afformes dagen efter støbningen, hvorefter de køres til lagerplads, hvor de efter hærdetid køres til byggepladsen

Byggeprocesfasen (A4-A5):

Byggeprocesfasen omfatter transport fra fabriksporten til byggepladsen i Danmark/Nordtyskland (300km med lastbil).

Installation af funderingspæle (modul A5) er ikke inkluderet, men skal tillægges ved LCA beregninger på komplet bygning eller anlæg.

Brugsfasen (B1-B7):

Betonen vil karbonatisere i hele produktets levetid (B1).

Når funderingspæle først er installeret i bygning eller anlæg, i henhold til gældende anvisninger og standarder, vil der under normale brugsforhold ikke være behov for vedligehold, reparationer, udskiftninger eller renovering. Ligeledes er der heller ikke hverken energi- eller vandforbrug forbundet med produktet i brugsfasen.

Endt levetid (C1-C4):

Det er antaget at regulære mastfundamentspæle knuses og fjernes til ½m under terræn. Resten af mastfundamentspælene efterlades i jorden inkl. ½m forlængelser af pæle. Funderingspæle efterladt i jorden er specifikt nævnt som eksempel i PCRen EN 16757:2017, kapitel 6.3.8.4.2: "The EPD may specify a scenario whether no deconstruction/demolition or disposal takes place (e.g. disused underground foundation piles left without being exhumed)".

Hele ballastklodserne indsamles og bortskaffes.

Det forknuste materiale transporteres 100km til behandlingssted, hvor det nedknuses.

Potentiale for genbrug, genanvendelse og energigenvinding (D):

Ved anvendelse af knust beton i forbindelse med opbygning af veje og pladser vil betonen oftest erstatte anvendelsen af stabilgrus fra grusgrav. Genanvendelsen af knust beton reducerer derved forbruget af stabilgrus.

Genanvendelse af stål og rustfrit stål undgår produktionen af primært metal.

LCA resultater

Til beregning af LCIA resultater er anvendt karakteriseringsmodellen noteret i GaBi 10.6 som EN15804+A2 med database version 2021.2, til klassificering og karakterisering af input- og output flows.

Resultaterne er angivet for regulære mastfundamentspæle og tilføjelser af ekstra længde af ½m (som kan tillægges flere gange), og herefter ballastklodser.

EP-B1

EP-B1

ENVIRONMENTAL EFFECTS PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
GWP-total	[kg CO ₂ eq.]	2,46E+02	2,28E+01	-3,70E+00	1,47E+00	4,56E+00	1,03E+00	0,00E+00	-1,19E+01
GWP-fossil	[kg CO ₂ eq.]	2,46E+02	2,26E+01	-3,70E+00	1,52E+00	4,52E+00	1,07E+00	0,00E+00	-1,20E+01
GWP-bio	[kg CO ₂ eq.]	2,85E-01	-2,69E-02	0,00E+00	-6,60E-02	-5,38E-03	-4,65E-02	0,00E+00	6,43E-02
GWP-luluc	[kg CO ₂ eq.]	2,52E-01	1,85E-01	0,00E+00	1,20E-02	3,69E-02	8,43E-03	0,00E+00	-3,28E-02
ODP	[kg CFC 11 eq.]	1,01E-08	4,46E-15	0,00E+00	2,89E-16	8,92E-16	2,04E-16	0,00E+00	-1,35E-14
AP	[mol H ⁺ eq.]	6,82E-01	2,40E-02	0,00E+00	7,34E-03	4,81E-03	5,17E-03	0,00E+00	-7,36E-02
EP-fw	[kg P eq.]	2,09E-04	6,72E-05	0,00E+00	4,35E-06	1,34E-05	3,06E-06	0,00E+00	-1,90E-05
EP-mar	[kg N eq.]	2,02E-01	7,67E-03	0,00E+00	3,44E-03	1,53E-03	2,42E-03	0,00E+00	-1,17E-02
EP-ter	[mol N eq.]	2,19E+00	9,12E-02	0,00E+00	3,81E-02	1,82E-02	2,68E-02	0,00E+00	-1,27E-01
POCP	[kg NMVOC eq.]	5,90E-01	2,09E-02	0,00E+00	9,64E-03	4,17E-03	6,79E-03	0,00E+00	-3,54E-02
ADP-mm ¹	[kg Sb eq.]	9,38E-04	2,00E-06	0,00E+00	1,30E-07	4,01E-07	9,14E-08	0,00E+00	-1,67E-05
ADP-fos ¹	[MJ]	1,99E+03	3,01E+02	0,00E+00	1,95E+01	6,02E+01	1,37E+01	0,00E+00	-1,48E+02
WDP ¹	[m ³]	2,09E+01	2,10E-01	0,00E+00	1,36E-02	4,19E-02	9,57E-03	0,00E+00	-4,66E+00
Caption	GWP-total = Globale Warming Potential - total; GWP-fossil = Global Warming Potential - fossil fuels; GWP-bio = 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 use								
Disclaimer	¹ 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.								

EP-B1

ADDITIONAL ENVIRONMENTAL EFFECTS PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
PM	[Disease incidence]	9,57E-06	1,65E-07	0,00E+00	8,34E-08	3,30E-08	5,87E-08	0,00E+00	-1,72E-06
IRP2	[kBq U235 eq.]	1,65E+01	8,02E-02	0,00E+00	5,19E-03	1,60E-02	3,66E-03	0,00E+00	-2,00E-01
ETP-fw1	[CTUe]	8,11E+02	2,23E+02	0,00E+00	1,45E+01	4,47E+01	1,02E+01	0,00E+00	-8,82E+01
HTP-c1	[CTUh]	1,25E-05	4,52E-09	0,00E+00	2,93E-10	9,03E-10	2,06E-10	0,00E+00	-1,69E-07
HTP-nc1	[CTUh]	3,93E-06	2,34E-07	0,00E+00	1,76E-08	4,69E-08	1,24E-08	0,00E+00	-1,27E-07
SQP1	-	3,16E+02	1,03E+02	0,00E+00	6,70E+00	2,07E+01	4,72E+00	0,00E+00	-2,15E+01
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)								
Disclaimers	¹ 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.								
	² 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.								

EP-B1

RESSOURCE CONSUMPTION PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
PERE	[MJ]	3,59E+02	1,73E+01	0,00E+00	1,12E+00	3,46E+00	7,90E-01	0,00E+00	-2,84E+01
PERM	[MJ]	9,99E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	3,69E+02	1,73E+01	0,00E+00	1,12E+00	3,46E+00	7,90E-01	0,00E+00	-2,84E+01
PENRE	[MJ]	1,87E+03	3,02E+02	0,00E+00	1,96E+01	6,04E+01	1,38E+01	0,00E+00	-1,48E+02
PENRM	[MJ]	1,21E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	1,99E+03	3,02E+02	0,00E+00	1,96E+01	6,04E+01	1,38E+01	0,00E+00	-1,48E+02
SM	[kg]	7,41E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	[m ³]	7,37E-01	1,98E-02	0,00E+00	1,29E-03	3,97E-03	9,05E-04	0,00E+00	-1,91E-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								

EP-B1

WASTE CATEGORIES AND OUTPUT FLOWS PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
HWD	[kg]	2,18E-04	1,59E-08	0,00E+00	1,03E-09	3,18E-09	7,26E-10	0,00E+00	-1,26E-03
NHWD	[kg]	2,21E+01	4,74E-02	0,00E+00	3,07E-03	9,48E-03	2,16E-03	0,00E+00	-1,28E+01
RWD	[kg]	1,04E-01	5,48E-04	0,00E+00	3,55E-05	1,10E-04	2,50E-05	0,00E+00	-1,54E-03
CRU	[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
MFR	[kg]	4,07E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,42E+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	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	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	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								

EP-B1

BIOGENIC CARBON CONTENT PER PER PRODUCT		
Parameter	Unit	At the factory gate
Biogenic carbon content in product	kg C	1,05E-01
Biogenic carbon content in accompanying packaging	kg C	0,00E+00

EP-B1, 0,5m

EP-B1, 0,5m

ENVIRONMENTAL EFFECTS PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
GWP-total	[kg CO ₂ eq.]	6,69E+01	4,33E+00	-4,80E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
GWP-fossil	[kg CO ₂ eq.]	6,66E+01	4,30E+00	-4,80E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
GWP-bio	[kg CO ₂ eq.]	2,36E-01	-5,12E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
GWP-luluc	[kg CO ₂ eq.]	9,19E-02	3,51E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
ODP	[kg CFC 11 eq.]	1,29E-09	8,48E-16	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
AP	[mol H ⁺ eq.]	1,58E-01	4,57E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EP-fw	[kg P eq.]	1,13E-04	1,28E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EP-mar	[kg N eq.]	4,62E-02	1,46E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EP-ter	[mol N eq.]	4,99E-01	1,73E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
POCP	[kg NMVOC eq.]	1,51E-01	3,97E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
ADP-mm ¹	[kg Sb eq.]	1,02E-05	3,81E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
ADP-fos ¹	[MJ]	8,11E+02	5,72E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
WDP ¹	[m ³]	9,63E+00	3,99E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Caption	GWP-total = Globale Warming Potential - total; GWP-fossil = Global Warming Potential - fossil fuels; GWP-bio = 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 use								
Disclaimer	¹ 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.								

EP-B1, 0,5m

ADDITIONAL ENVIRONMENTAL EFFECTS PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
PM	[Disease incidence]	2,04E-06	3,13E-08	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
IRP2	[kBq U235 eq.]	1,07E+01	1,52E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
ETP-fw1	[CTUe]	2,98E+02	4,25E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
HTP-c1	[CTUh]	1,62E-08	8,59E-10	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
HTP-nc1	[CTUh]	1,75E-06	4,46E-08	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
SQP1	-	1,76E+02	1,97E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
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)								
Disclaimers	¹ 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.								
	² 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.								

EP-B1, 0,5m

RESSOURCE CONSUMPTION PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
PERE	[MJ]	2,10E+02	3,29E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERM	[MJ]	8,13E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	2,11E+02	3,29E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRE	[MJ]	7,97E+02	5,74E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRM	[MJ]	1,46E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	8,12E+02	5,74E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
SM	[kg]	8,61E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	[m ³]	3,35E-01	3,77E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
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								

EP-B1, 0,5m

WASTE CATEGORIES AND OUTPUT FLOWS PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
HWD	[kg]	2,78E-05	3,03E-09	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NHWD	[kg]	3,07E+00	9,01E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RWD	[kg]	6,60E-02	1,04E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
CRU	[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
MFR	[kg]	1,16E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	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	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	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	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								

EP-B1, 0,5m

BIOGENIC CARBON CONTENT PER PER PRODUCT		
Parameter	Unit	At the factory gate
Biogenic carbon content in product	kg C	8,56E-03
Biogenic carbon content in accompanying packaging	kg C	0,00E+00

EP-B10

EP-B10

ENVIRONMENTAL EFFECTS PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
GWP-total	[kg CO ₂ eq.]	3,09E+02	2,41E+01	-4,40E+00	1,50E+00	4,64E+00	1,05E+00	0,00E+00	-2,14E+01
GWP-fossil	[kg CO ₂ eq.]	3,09E+02	2,39E+01	-4,40E+00	1,55E+00	4,61E+00	1,09E+00	0,00E+00	-2,15E+01
GWP-bio	[kg CO ₂ eq.]	4,62E-01	-2,85E-02	0,00E+00	-6,73E-02	-5,49E-03	-4,74E-02	0,00E+00	1,08E-01
GWP-luluc	[kg CO ₂ eq.]	3,55E-01	1,95E-01	0,00E+00	1,22E-02	3,77E-02	8,59E-03	0,00E+00	-5,80E-02
ODP	[kg CFC 11 eq.]	1,03E-08	4,72E-15	0,00E+00	2,95E-16	9,09E-16	2,07E-16	0,00E+00	-1,95E-14
AP	[mol H ⁺ eq.]	9,12E-01	2,54E-02	0,00E+00	7,48E-03	4,90E-03	5,27E-03	0,00E+00	-1,32E-01
EP-fw	[kg P eq.]	3,24E-04	7,10E-05	0,00E+00	4,43E-06	1,37E-05	3,12E-06	0,00E+00	-3,26E-05
EP-mar	[kg N eq.]	2,40E-01	8,11E-03	0,00E+00	3,51E-03	1,56E-03	2,47E-03	0,00E+00	-2,00E-02
EP-ter	[mol N eq.]	2,61E+00	9,64E-02	0,00E+00	3,88E-02	1,86E-02	2,73E-02	0,00E+00	-2,18E-01
POCP	[kg NMVOC eq.]	7,19E-01	2,21E-02	0,00E+00	9,83E-03	4,25E-03	6,92E-03	0,00E+00	-6,07E-02
ADP-mm ¹	[kg Sb eq.]	1,72E-03	2,12E-06	0,00E+00	1,32E-07	4,08E-07	9,31E-08	0,00E+00	-3,06E-05
ADP-fos ¹	[MJ]	2,92E+03	3,18E+02	0,00E+00	1,99E+01	6,14E+01	1,40E+01	0,00E+00	-2,63E+02
WDP ¹	[m ³]	3,25E+01	2,22E-01	0,00E+00	1,38E-02	4,27E-02	9,75E-03	0,00E+00	-8,51E+00
Caption	GWP-total = Globale Warming Potential - total; GWP-fossil = Global Warming Potential - fossil fuels; GWP-bio = 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 use								
Disclaimer	¹ 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.								

EP-B10

ADDITIONAL ENVIRONMENTAL EFFECTS PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
PM	[Disease incidence]	1,29E-05	1,74E-07	0,00E+00	8,50E-08	3,36E-08	5,99E-08	0,00E+00	-2,97E-06
IRP2	[kBq U235 eq.]	2,54E+01	8,47E-02	0,00E+00	5,29E-03	1,63E-02	3,73E-03	0,00E+00	-2,81E-01
ETP-fw1	[CTUe]	1,15E+03	2,36E+02	0,00E+00	1,48E+01	4,55E+01	1,04E+01	0,00E+00	-1,57E+02
HTP-c1	[CTUh]	2,30E-05	4,78E-09	0,00E+00	2,98E-10	9,21E-10	2,10E-10	0,00E+00	-3,10E-07
HTP-nc1	[CTUh]	5,34E-06	2,48E-07	0,00E+00	1,79E-08	4,78E-08	1,26E-08	0,00E+00	-1,98E-07
SQP1	-	4,98E+02	1,09E+02	0,00E+00	6,83E+00	2,11E+01	4,81E+00	0,00E+00	-3,74E+01
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)								
Disclaimers	¹ 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.								
	² 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.								

EP-B10

RESSOURCE CONSUMPTION PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
PERE	[MJ]	5,66E+02	1,83E+01	0,00E+00	1,14E+00	3,53E+00	8,05E-01	0,00E+00	-5,01E+01
PERM	[MJ]	1,35E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	5,80E+02	1,83E+01	0,00E+00	1,14E+00	3,53E+00	8,05E-01	0,00E+00	-5,01E+01
PENRE	[MJ]	2,75E+03	3,19E+02	0,00E+00	1,99E+01	6,16E+01	1,40E+01	0,00E+00	-2,63E+02
PENRM	[MJ]	1,76E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	2,92E+03	3,19E+02	0,00E+00	1,99E+01	6,16E+01	1,40E+01	0,00E+00	-2,63E+02
SM	[kg]	1,40E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	[m ³]	1,17E+00	2,10E-02	0,00E+00	1,31E-03	4,04E-03	9,23E-04	0,00E+00	-3,49E-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								

EP-B10

WASTE CATEGORIES AND OUTPUT FLOWS PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
HWD	[kg]	2,19E-04	1,68E-08	0,00E+00	1,05E-09	3,24E-09	7,40E-10	0,00E+00	-2,32E-03
NHWD	[kg]	2,52E+01	5,01E-02	0,00E+00	3,13E-03	9,66E-03	2,20E-03	0,00E+00	-1,27E+01
RWD	[kg]	1,59E-01	5,79E-04	0,00E+00	3,62E-05	1,12E-04	2,55E-05	0,00E+00	-2,29E-03
CRU	[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
MFR	[kg]	4,65E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,49E+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	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	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	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								

EP-B10

BIOGENIC CARBON CONTENT PER PER PRODUCT		
Parameter	Unit	At the factory gate
Biogenic carbon content in product	kg C	1,42E-01
Biogenic carbon content in accompanying packaging	kg C	0,00E+00

EP-B10, 0,5m

EP-B10, 0,5m

ENVIRONMENTAL EFFECTS PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
GWP-total	[kg CO ₂ eq.]	4,03E+01	4,08E+00	-5,60E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
GWP-fossil	[kg CO ₂ eq.]	4,02E+01	4,06E+00	-5,60E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
GWP-bio	[kg CO ₂ eq.]	5,63E-02	-4,83E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
GWP-luluc	[kg CO ₂ eq.]	4,27E-02	3,31E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
ODP	[kg CFC 11 eq.]	1,80E-09	8,00E-16	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
AP	[mol H ⁺ eq.]	9,37E-02	4,31E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EP-fw	[kg P eq.]	3,46E-05	1,20E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EP-mar	[kg N eq.]	3,34E-02	1,38E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EP-ter	[mol N eq.]	3,61E-01	1,63E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
POCP	[kg NMVOC eq.]	9,71E-02	3,74E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
ADP-mm ¹	[kg Sb eq.]	2,99E-06	3,59E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
ADP-fos ¹	[MJ]	3,11E+02	5,40E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
WDP ¹	[m ³]	2,87E+00	3,76E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Caption	GWP-total = Globale Warming Potential - total; GWP-fossil = Global Warming Potential - fossil fuels; GWP-bio = 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 use								
Disclaimer	¹ 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.								

EP-B10, 0,5m

ADDITIONAL ENVIRONMENTAL EFFECTS PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
PM	[Disease incidence]	1,26E-06	2,96E-08	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
IRP2	[kBq U235 eq.]	2,92E+00	1,44E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
ETP-fw1	[CTUe]	1,28E+02	4,01E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
HTP-c1	[CTUh]	6,42E-09	8,10E-10	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
HTP-nc1	[CTUh]	6,82E-07	4,20E-08	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
SQP1	-	5,20E+01	1,86E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
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)								
Disclaimers	¹ 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.								
	² 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.								

**EP-B10,
0,5m**

RESSOURCE CONSUMPTION PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
PERE	[MJ]	5,79E+01	3,11E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERM	[MJ]	1,14E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	5,90E+01	3,11E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRE	[MJ]	2,91E+02	5,42E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRM	[MJ]	2,04E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	3,11E+02	5,42E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
SM	[kg]	1,52E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	[m ³]	9,83E-02	3,56E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
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								

**EP-B10,
0,5m**

WASTE CATEGORIES AND OUTPUT FLOWS PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
HWD	[kg]	3,87E-05	2,85E-09	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NHWD	[kg]	3,41E+00	8,50E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RWD	[kg]	1,82E-02	9,83E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
CRU	[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
MFR	[kg]	7,37E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	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	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	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	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								

**EP-B10,
0,5m**

BIOGENIC CARBON CONTENT PER PER PRODUCT		
Parameter	Unit	At the factory gate
Biogenic carbon content in product	kg C	1,20E-02
Biogenic carbon content in accompanying packaging	kg C	0,00E+00

EP-B11

EP-B11

ENVIRONMENTAL EFFECTS PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
GWP-total	[kg CO ₂ eq.]	3,36E+02	2,42E+01	-4,40E+00	1,53E+00	4,74E+00	1,08E+00	0,00E+00	-3,15E+01
GWP-fossil	[kg CO ₂ eq.]	3,35E+02	2,40E+01	-4,40E+00	1,58E+00	4,71E+00	1,12E+00	0,00E+00	-3,16E+01
GWP-bio	[kg CO ₂ eq.]	4,67E-01	-2,86E-02	0,00E+00	-6,87E-02	-5,60E-03	-4,84E-02	0,00E+00	1,55E-01
GWP-luluc	[kg CO ₂ eq.]	3,90E-01	1,96E-01	0,00E+00	1,25E-02	3,84E-02	8,77E-03	0,00E+00	-8,48E-02
ODP	[kg CFC 11 eq.]	1,03E-08	4,74E-15	0,00E+00	3,01E-16	9,28E-16	2,12E-16	0,00E+00	-2,58E-14
AP	[mol H ⁺ eq.]	1,07E+00	2,55E-02	0,00E+00	7,64E-03	5,00E-03	5,38E-03	0,00E+00	-1,93E-01
EP-fw	[kg P eq.]	3,57E-04	7,14E-05	0,00E+00	4,53E-06	1,40E-05	3,19E-06	0,00E+00	-4,71E-05
EP-mar	[kg N eq.]	2,58E-01	8,15E-03	0,00E+00	3,58E-03	1,60E-03	2,52E-03	0,00E+00	-2,89E-02
EP-ter	[mol N eq.]	2,80E+00	9,69E-02	0,00E+00	3,96E-02	1,90E-02	2,79E-02	0,00E+00	-3,13E-01
POCP	[kg NMVOC eq.]	7,74E-01	2,22E-02	0,00E+00	1,00E-02	4,34E-03	7,06E-03	0,00E+00	-8,77E-02
ADP-mm ¹	[kg Sb eq.]	2,54E-03	2,13E-06	0,00E+00	1,35E-07	4,17E-07	9,51E-08	0,00E+00	-4,54E-05
ADP-fos ¹	[MJ]	3,26E+03	3,20E+02	0,00E+00	2,03E+01	6,26E+01	1,43E+01	0,00E+00	-3,86E+02
WDP ¹	[m ³]	3,84E+01	2,23E-01	0,00E+00	1,41E-02	4,36E-02	9,96E-03	0,00E+00	-1,26E+01
Caption	GWP-total = Globale Warming Potential - total; GWP-fossil = Global Warming Potential - fossil fuels; GWP-bio = 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 use								
Disclaimer	¹ 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.								

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ADDITIONAL ENVIRONMENTAL EFFECTS PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
PM	[Disease incidence]	1,54E-05	1,75E-07	0,00E+00	8,68E-08	3,43E-08	6,11E-08	0,00E+00	-4,30E-06
IRP2	[kBq U235 eq.]	2,72E+01	8,52E-02	0,00E+00	5,40E-03	1,67E-02	3,80E-03	0,00E+00	-3,67E-01
ETP-fw1	[CTUe]	1,28E+03	2,37E+02	0,00E+00	1,51E+01	4,65E+01	1,06E+01	0,00E+00	-2,31E+02
HTP-c1	[CTUh]	3,42E-05	4,80E-09	0,00E+00	3,04E-10	9,40E-10	2,14E-10	0,00E+00	-4,60E-07
HTP-nc1	[CTUh]	5,69E-06	2,49E-07	0,00E+00	1,83E-08	4,88E-08	1,29E-08	0,00E+00	-2,75E-07
SQP1	-	5,52E+02	1,10E+02	0,00E+00	6,97E+00	2,15E+01	4,91E+00	0,00E+00	-5,42E+01
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)								
Disclaimers	¹ 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.								
	² 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.								

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RESSOURCE CONSUMPTION PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
PERE	[MJ]	6,32E+02	1,84E+01	0,00E+00	1,17E+00	3,60E+00	8,22E-01	0,00E+00	-7,31E+01
PERM	[MJ]	1,35E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	6,46E+02	1,84E+01	0,00E+00	1,17E+00	3,60E+00	8,22E-01	0,00E+00	-7,31E+01
PENRE	[MJ]	3,08E+03	3,21E+02	0,00E+00	2,04E+01	6,29E+01	1,43E+01	0,00E+00	-3,86E+02
PENRM	[MJ]	1,76E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	3,26E+03	3,21E+02	0,00E+00	2,04E+01	6,29E+01	1,43E+01	0,00E+00	-3,86E+02
SM	[kg]	1,45E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	[m ³]	1,39E+00	2,11E-02	0,00E+00	1,34E-03	4,13E-03	9,42E-04	0,00E+00	-5,17E-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								

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WASTE CATEGORIES AND OUTPUT FLOWS PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
HWD	[kg]	2,19E-04	1,69E-08	0,00E+00	1,07E-09	3,31E-09	7,56E-10	0,00E+00	-3,45E-03
NHWD	[kg]	2,79E+01	5,04E-02	0,00E+00	3,20E-03	9,86E-03	2,25E-03	0,00E+00	-1,26E+01
RWD	[kg]	1,71E-01	5,83E-04	0,00E+00	3,69E-05	1,14E-04	2,60E-05	0,00E+00	-3,10E-03
CRU	[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
MFR	[kg]	4,71E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,56E+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	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	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	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								

EP-B11

BIOGENIC CARBON CONTENT PER PER PRODUCT		
Parameter	Unit	At the factory gate
Biogenic carbon content in product	kg C	1,42E-01
Biogenic carbon content in accompanying packaging	kg C	0,00E+00

EP-B11, 0,5m

EP-B11, 0,5m

ENVIRONMENTAL EFFECTS PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
GWP-total	[kg CO ₂ eq.]	4,15E+01	4,12E+00	-5,60E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
GWP-fossil	[kg CO ₂ eq.]	4,14E+01	4,09E+00	-5,60E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
GWP-bio	[kg CO ₂ eq.]	6,15E-02	-4,87E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
GWP-luluc	[kg CO ₂ eq.]	4,55E-02	3,34E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
ODP	[kg CFC 11 eq.]	1,80E-09	8,08E-16	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
AP	[mol H ⁺ eq.]	9,64E-02	4,35E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EP-fw	[kg P eq.]	3,74E-05	1,22E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EP-mar	[kg N eq.]	3,40E-02	1,39E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EP-ter	[mol N eq.]	3,68E-01	1,65E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
POCP	[kg NMVOC eq.]	9,95E-02	3,78E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
ADP-mm ¹	[kg Sb eq.]	3,22E-06	3,63E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
ADP-fos ¹	[MJ]	3,29E+02	5,45E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
WDP ¹	[m ³]	3,08E+00	3,80E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Caption	GWP-total = Globale Warming Potential - total; GWP-fossil = Global Warming Potential - fossil fuels; GWP-bio = 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 use								
Disclaimer	¹ 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.								

EP-B11, 0,5m

ADDITIONAL ENVIRONMENTAL EFFECTS PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
PM	[Disease incidence]	1,29E-06	2,98E-08	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
IRP2	[kBq U235 eq.]	3,16E+00	1,45E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
ETP-fw1	[CTUe]	1,35E+02	4,04E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
HTP-c1	[CTUh]	6,77E-09	8,18E-10	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
HTP-nc1	[CTUh]	7,18E-07	4,24E-08	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
SQP1	-	5,64E+01	1,87E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
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)								
Disclaimers	¹ 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.								
	² 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.								

**EP-B11,
0,5m**

RESSOURCE CONSUMPTION PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
PERE	[MJ]	6,26E+01	3,13E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERM	[MJ]	1,14E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	6,37E+01	3,13E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRE	[MJ]	3,09E+02	5,47E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRM	[MJ]	2,04E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	3,29E+02	5,47E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
SM	[kg]	1,73E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	[m ³]	1,06E-01	3,59E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
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								

**EP-B11,
0,5m**

WASTE CATEGORIES AND OUTPUT FLOWS PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
HWD	[kg]	3,87E-05	2,88E-09	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NHWD	[kg]	3,43E+00	8,58E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RWD	[kg]	1,96E-02	9,92E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
CRU	[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
MFR	[kg]	7,55E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	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	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	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	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								

**EP-B11,
0,5m**

BIOGENIC CARBON CONTENT PER PER PRODUCT		
Parameter	Unit	At the factory gate
Biogenic carbon content in product	kg C	1,20E-02
Biogenic carbon content in accompanying packaging	kg C	0,00E+00

EP-B14

EP-B14

ENVIRONMENTAL EFFECTS PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
GWP-total	[kg CO ₂ eq.]	3,97E+02	2,56E+01	-5,08E+00	1,60E+00	4,95E+00	1,12E+00	0,00E+00	-3,94E+01
GWP-fossil	[kg CO ₂ eq.]	3,95E+02	2,54E+01	-5,08E+00	1,65E+00	4,91E+00	1,16E+00	0,00E+00	-3,95E+01
GWP-bio	[kg CO ₂ eq.]	6,39E-01	-3,02E-02	0,00E+00	-7,17E-02	-5,85E-03	-5,05E-02	0,00E+00	1,92E-01
GWP-luluc	[kg CO ₂ eq.]	4,96E-01	2,07E-01	0,00E+00	1,30E-02	4,01E-02	9,15E-03	0,00E+00	-1,06E-01
ODP	[kg CFC 11 eq.]	1,03E-08	5,01E-15	0,00E+00	3,14E-16	9,69E-16	2,21E-16	0,00E+00	-3,09E-14
AP	[mol H ⁺ eq.]	1,28E+00	2,70E-02	0,00E+00	7,98E-03	5,22E-03	5,62E-03	0,00E+00	-2,42E-01
EP-fw	[kg P eq.]	4,71E-04	7,54E-05	0,00E+00	4,72E-06	1,46E-05	3,33E-06	0,00E+00	-5,86E-05
EP-mar	[kg N eq.]	2,94E-01	8,61E-03	0,00E+00	3,74E-03	1,67E-03	2,63E-03	0,00E+00	-3,59E-02
EP-ter	[mol N eq.]	3,20E+00	1,02E-01	0,00E+00	4,14E-02	1,98E-02	2,91E-02	0,00E+00	-3,89E-01
POCP	[kg NMVOC eq.]	8,96E-01	2,34E-02	0,00E+00	1,05E-02	4,53E-03	7,37E-03	0,00E+00	-1,09E-01
ADP-mm ¹	[kg Sb eq.]	3,20E-03	2,25E-06	0,00E+00	1,41E-07	4,35E-07	9,93E-08	0,00E+00	-5,70E-05
ADP-fos ¹	[MJ]	4,14E+03	3,38E+02	0,00E+00	2,12E+01	6,54E+01	1,49E+01	0,00E+00	-4,83E+02
WDP ¹	[m ³]	4,98E+01	2,36E-01	0,00E+00	1,48E-02	4,56E-02	1,04E-02	0,00E+00	-1,58E+01
Caption	GWP-total = Globale Warming Potential - total; GWP-fossil = Global Warming Potential - fossil fuels; GWP-bio = 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 use								
Disclaimer	¹ 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.								

EP-B14

ADDITIONAL ENVIRONMENTAL EFFECTS PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
PM	[Disease incidence]	1,84E-05	1,85E-07	0,00E+00	9,06E-08	3,58E-08	6,38E-08	0,00E+00	-5,35E-06
IRP2	[kBq U235 eq.]	3,63E+01	9,00E-02	0,00E+00	5,64E-03	1,74E-02	3,97E-03	0,00E+00	-4,35E-01
ETP-fw1	[CTUe]	1,59E+03	2,51E+02	0,00E+00	1,57E+01	4,85E+01	1,11E+01	0,00E+00	-2,89E+02
HTP-c1	[CTUh]	4,30E-05	5,07E-09	0,00E+00	3,18E-10	9,81E-10	2,24E-10	0,00E+00	-5,79E-07
HTP-nc1	[CTUh]	7,12E-06	2,63E-07	0,00E+00	1,91E-08	5,09E-08	1,34E-08	0,00E+00	-3,35E-07
SQP1	-	7,33E+02	1,16E+02	0,00E+00	7,28E+00	2,25E+01	5,13E+00	0,00E+00	-6,75E+01
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)								
Disclaimers	¹ 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.								
	² 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.								

EP-B14

RESSOURCE CONSUMPTION PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
PERE	[MJ]	8,34E+02	1,95E+01	0,00E+00	1,22E+00	3,76E+00	8,58E-01	0,00E+00	-9,13E+01
PERM	[MJ]	1,73E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	8,52E+02	1,95E+01	0,00E+00	1,22E+00	3,76E+00	8,58E-01	0,00E+00	-9,13E+01
PENRE	[MJ]	3,92E+03	3,39E+02	0,00E+00	2,13E+01	6,56E+01	1,50E+01	0,00E+00	-4,83E+02
PENRM	[MJ]	2,20E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	4,14E+03	3,39E+02	0,00E+00	2,13E+01	6,56E+01	1,50E+01	0,00E+00	-4,83E+02
SM	[kg]	2,16E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	[m ³]	1,80E+00	2,23E-02	0,00E+00	1,40E-03	4,31E-03	9,83E-04	0,00E+00	-6,50E-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								

EP-B14

WASTE CATEGORIES AND OUTPUT FLOWS PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
HWD	[kg]	2,19E-04	1,79E-08	0,00E+00	1,12E-09	3,46E-09	7,89E-10	0,00E+00	-4,34E-03
NHWD	[kg]	3,07E+01	5,32E-02	0,00E+00	3,34E-03	1,03E-02	2,35E-03	0,00E+00	-1,25E+01
RWD	[kg]	2,28E-01	6,15E-04	0,00E+00	3,86E-05	1,19E-04	2,72E-05	0,00E+00	-3,73E-03
CRU	[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
MFR	[kg]	5,32E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,72E+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	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	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	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								

EP-B14

BIOGENIC CARBON CONTENT PER PER PRODUCT		
Parameter	Unit	At the factory gate
Biogenic carbon content in product	kg C	1,82E-01
Biogenic carbon content in accompanying packaging	kg C	0,00E+00

EP-B14, 0,5m

EP-B14, 0,5m

ENVIRONMENTAL EFFECTS PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
GWP-total	[kg CO ₂ eq.]	5,46E+01	5,29E+00	-6,40E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
GWP-fossil	[kg CO ₂ eq.]	5,44E+01	5,26E+00	-6,40E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
GWP-bio	[kg CO ₂ eq.]	8,81E-02	-6,26E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
GWP-luluc	[kg CO ₂ eq.]	6,11E-02	4,29E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
ODP	[kg CFC 11 eq.]	2,28E-09	1,04E-15	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
AP	[mol H ⁺ eq.]	1,27E-01	5,59E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EP-fw	[kg P eq.]	5,22E-05	1,56E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EP-mar	[kg N eq.]	4,42E-02	1,78E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EP-ter	[mol N eq.]	4,79E-01	2,12E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
POCP	[kg NMVOC eq.]	1,30E-01	4,85E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
ADP-mm ¹	[kg Sb eq.]	4,50E-06	4,66E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
ADP-fos ¹	[MJ]	4,48E+02	7,00E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
WDP ¹	[m ³]	4,30E+00	4,87E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Caption	GWP-total = Globale Warming Potential - total; GWP-fossil = Global Warming Potential - fossil fuels; GWP-bio = 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 use								
Disclaimer	¹ 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.								

EP-B14, 0,5m

ADDITIONAL ENVIRONMENTAL EFFECTS PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
PM	[Disease incidence]	1,69E-06	3,83E-08	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
IRP2	[kBq U235 eq.]	4,45E+00	1,86E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
ETP-fw1	[CTUe]	1,82E+02	5,19E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
HTP-c1	[CTUh]	9,18E-09	1,05E-09	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
HTP-nc1	[CTUh]	9,75E-07	5,45E-08	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
SQP1	-	7,89E+01	2,40E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
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)								
Disclaimers	¹ 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.								
	² 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.								

**EP-B14,
0,5m**

RESSOURCE CONSUMPTION PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
PERE	[MJ]	8,81E+01	4,03E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERM	[MJ]	1,44E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	8,95E+01	4,03E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRE	[MJ]	4,22E+02	7,02E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRM	[MJ]	2,59E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	4,48E+02	7,02E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
SM	[kg]	2,58E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	[m ³]	1,48E-01	4,61E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
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								

**EP-B14,
0,5m**

WASTE CATEGORIES AND OUTPUT FLOWS PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
HWD	[kg]	4,90E-05	3,70E-09	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NHWD	[kg]	4,38E+00	1,10E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RWD	[kg]	2,76E-02	1,27E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
CRU	[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
MFR	[kg]	9,89E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	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	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	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	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								

**EP-B14,
0,5m**

BIOGENIC CARBON CONTENT PER PER PRODUCT		
Parameter	Unit	At the factory gate
Biogenic carbon content in product	kg C	1,52E-02
Biogenic carbon content in accompanying packaging	kg C	0,00E+00

EP-F1

EP-F1

ENVIRONMENTAL EFFECTS PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
GWP-total	[kg CO ₂ eq.]	2,44E+02	2,30E+01	-3,79E+00	1,45E+00	4,50E+00	1,02E+00	0,00E+00	-7,47E+00
GWP-fossil	[kg CO ₂ eq.]	2,43E+02	2,29E+01	-3,79E+00	1,51E+00	4,47E+00	1,06E+00	0,00E+00	-7,49E+00
GWP-bio	[kg CO ₂ eq.]	3,26E-01	-2,72E-02	0,00E+00	-6,52E-02	-5,32E-03	-4,59E-02	0,00E+00	4,35E-02
GWP-luluc	[kg CO ₂ eq.]	2,51E-01	1,87E-01	0,00E+00	1,18E-02	3,65E-02	8,33E-03	0,00E+00	-2,09E-02
ODP	[kg CFC 11 eq.]	1,01E-08	4,51E-15	0,00E+00	2,86E-16	8,82E-16	2,01E-16	0,00E+00	-1,06E-14
AP	[mol H ⁺ eq.]	6,33E-01	2,43E-02	0,00E+00	7,26E-03	4,75E-03	5,11E-03	0,00E+00	-4,63E-02
EP-fw	[kg P eq.]	2,14E-04	6,79E-05	0,00E+00	4,30E-06	1,33E-05	3,03E-06	0,00E+00	-1,26E-05
EP-mar	[kg N eq.]	1,99E-01	7,76E-03	0,00E+00	3,40E-03	1,52E-03	2,39E-03	0,00E+00	-7,80E-03
EP-ter	[mol N eq.]	2,16E+00	9,22E-02	0,00E+00	3,76E-02	1,80E-02	2,65E-02	0,00E+00	-8,49E-02
POCP	[kg NMVOC eq.]	5,83E-01	2,11E-02	0,00E+00	9,53E-03	4,12E-03	6,71E-03	0,00E+00	-2,34E-02
ADP-mm ¹	[kg Sb eq.]	5,74E-04	2,03E-06	0,00E+00	1,28E-07	3,96E-07	9,03E-08	0,00E+00	-1,01E-05
ADP-fos ¹	[MJ]	1,99E+03	3,05E+02	0,00E+00	1,93E+01	5,95E+01	1,36E+01	0,00E+00	-9,30E+01
WDP ¹	[m ³]	2,00E+01	2,12E-01	0,00E+00	1,34E-02	4,14E-02	9,46E-03	0,00E+00	-2,84E+00
Caption	GWP-total = Globale Warming Potential - total; GWP-fossil = Global Warming Potential - fossil fuels; GWP-bio = 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 use								
Disclaimer	¹ 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.								

EP-F1

ADDITIONAL ENVIRONMENTAL EFFECTS PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
PM	[Disease incidence]	8,72E-06	1,67E-07	0,00E+00	8,24E-08	3,26E-08	5,80E-08	0,00E+00	-1,12E-06
IRP2	[kBq U235 eq.]	1,76E+01	8,11E-02	0,00E+00	5,13E-03	1,58E-02	3,61E-03	0,00E+00	-1,62E-01
ETP-fw1	[CTUe]	8,04E+02	2,26E+02	0,00E+00	1,43E+01	4,41E+01	1,01E+01	0,00E+00	-5,54E+01
HTP-c1	[CTUh]	7,58E-06	4,57E-09	0,00E+00	2,89E-10	8,93E-10	2,04E-10	0,00E+00	-1,02E-07
HTP-nc1	[CTUh]	4,06E-06	2,37E-07	0,00E+00	1,74E-08	4,63E-08	1,22E-08	0,00E+00	-9,29E-08
SQP1	-	3,23E+02	1,05E+02	0,00E+00	6,62E+00	2,04E+01	4,67E+00	0,00E+00	-1,40E+01
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)								
Disclaimers	¹ 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.								
	² 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.								

EP-F1

RESSOURCE CONSUMPTION PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
PERE	[MJ]	3,64E+02	1,75E+01	0,00E+00	1,11E+00	3,42E+00	7,81E-01	0,00E+00	-1,81E+01
PERM	[MJ]	1,31E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	3,77E+02	1,75E+01	0,00E+00	1,11E+00	3,42E+00	7,81E-01	0,00E+00	-1,81E+01
PENRE	[MJ]	1,86E+03	3,06E+02	0,00E+00	1,93E+01	5,97E+01	1,36E+01	0,00E+00	-9,30E+01
PENRM	[MJ]	1,29E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	1,99E+03	3,06E+02	0,00E+00	1,93E+01	5,97E+01	1,36E+01	0,00E+00	-9,30E+01
SM	[kg]	8,86E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	[m ³]	7,00E-01	2,01E-02	0,00E+00	1,27E-03	3,92E-03	8,95E-04	0,00E+00	-1,17E-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								

EP-F1

WASTE CATEGORIES AND OUTPUT FLOWS PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
HWD	[kg]	2,18E-04	1,61E-08	0,00E+00	1,02E-09	3,15E-09	7,18E-10	0,00E+00	-7,63E-04
NHWD	[kg]	2,10E+01	4,80E-02	0,00E+00	3,03E-03	9,37E-03	2,14E-03	0,00E+00	-1,28E+01
RWD	[kg]	1,10E-01	5,54E-04	0,00E+00	3,51E-05	1,08E-04	2,47E-05	0,00E+00	-1,19E-03
CRU	[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
MFR	[kg]	4,18E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,38E+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	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	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	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								

EP-F1

BIOGENIC CARBON CONTENT PER PER PRODUCT		
Parameter	Unit	At the factory gate
Biogenic carbon content in product	kg C	1,38E-01
Biogenic carbon content in accompanying packaging	kg C	0,00E+00

EP-F1, 0,5m

EP-F1, 0,5m

ENVIRONMENTAL EFFECTS PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
GWP-total	[kg CO ₂ eq.]	3,79E+01	4,00E+00	-5,60E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
GWP-fossil	[kg CO ₂ eq.]	3,78E+01	3,98E+00	-5,60E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
GWP-bio	[kg CO ₂ eq.]	4,53E-02	-4,73E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
GWP-luluc	[kg CO ₂ eq.]	3,71E-02	3,25E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
ODP	[kg CFC 11 eq.]	1,80E-09	7,84E-16	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
AP	[mol H ⁺ eq.]	8,82E-02	4,22E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EP-fw	[kg P eq.]	2,88E-05	1,18E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EP-mar	[kg N eq.]	3,20E-02	1,35E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EP-ter	[mol N eq.]	3,46E-01	1,60E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
POCP	[kg NMVOC eq.]	9,22E-02	3,67E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
ADP-mm ¹	[kg Sb eq.]	2,50E-06	3,52E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
ADP-fos ¹	[MJ]	2,74E+02	5,29E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
WDP ¹	[m ³]	2,44E+00	3,69E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Caption	GWP-total = Globale Warming Potential - total; GWP-fossil = Global Warming Potential - fossil fuels; GWP-bio = 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 use								
Disclaimer	¹ 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.								

EP-F1, 0,5m

ADDITIONAL ENVIRONMENTAL EFFECTS PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
PM	[Disease incidence]	1,19E-06	2,90E-08	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
IRP2	[kBq U235 eq.]	2,42E+00	1,41E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
ETP-fw1	[CTUe]	1,14E+02	3,93E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
HTP-c1	[CTUh]	5,70E-09	7,94E-10	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
HTP-nc1	[CTUh]	6,06E-07	4,12E-08	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
SQP1	-	4,28E+01	1,82E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
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)								
Disclaimers	¹ 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.								
	² 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.								

EP-F1, 0,5m

RESSOURCE CONSUMPTION PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
PERE	[MJ]	4,80E+01	3,04E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERM	[MJ]	1,14E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	4,91E+01	3,04E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRE	[MJ]	2,54E+02	5,31E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRM	[MJ]	2,04E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	2,74E+02	5,31E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
SM	[kg]	1,09E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	[m ³]	8,28E-02	3,49E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
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								

EP-F1, 0,5m

WASTE CATEGORIES AND OUTPUT FLOWS PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
HWD	[kg]	3,87E-05	2,80E-09	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NHWD	[kg]	3,38E+00	8,33E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RWD	[kg]	1,51E-02	9,63E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
CRU	[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
MFR	[kg]	7,00E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	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	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	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	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								

EP-F1, 0,5m

BIOGENIC CARBON CONTENT PER PER PRODUCT		
Parameter	Unit	At the factory gate
Biogenic carbon content in product	kg C	1,20E-02
Biogenic carbon content in accompanying packaging	kg C	0,00E+00

EP-F3

EP-F3

ENVIRONMENTAL EFFECTS PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
GWP-total	[kg CO ₂ eq.]	2,85E+02	2,44E+01	-3,79E+00	1,54E+00	4,76E+00	1,08E+00	0,00E+00	-7,47E+00
GWP-fossil	[kg CO ₂ eq.]	2,84E+02	2,42E+01	-3,79E+00	1,59E+00	4,73E+00	1,12E+00	0,00E+00	-7,49E+00
GWP-bio	[kg CO ₂ eq.]	5,08E-01	-2,88E-02	0,00E+00	-6,90E-02	-5,63E-03	-4,86E-02	0,00E+00	4,35E-02
GWP-luluc	[kg CO ₂ eq.]	3,49E-01	1,98E-01	0,00E+00	1,25E-02	3,86E-02	8,81E-03	0,00E+00	-2,09E-02
ODP	[kg CFC 11 eq.]	1,01E-08	4,78E-15	0,00E+00	3,02E-16	9,33E-16	2,13E-16	0,00E+00	-1,06E-14
AP	[mol H ⁺ eq.]	7,24E-01	2,57E-02	0,00E+00	7,68E-03	5,03E-03	5,41E-03	0,00E+00	-4,63E-02
EP-fw	[kg P eq.]	3,13E-04	7,19E-05	0,00E+00	4,55E-06	1,40E-05	3,20E-06	0,00E+00	-1,26E-05
EP-mar	[kg N eq.]	2,22E-01	8,21E-03	0,00E+00	3,60E-03	1,60E-03	2,53E-03	0,00E+00	-7,80E-03
EP-ter	[mol N eq.]	2,41E+00	9,76E-02	0,00E+00	3,98E-02	1,91E-02	2,80E-02	0,00E+00	-8,49E-02
POCP	[kg NMVOC eq.]	6,65E-01	2,23E-02	0,00E+00	1,01E-02	4,36E-03	7,10E-03	0,00E+00	-2,34E-02
ADP-mm ¹	[kg Sb eq.]	5,82E-04	2,15E-06	0,00E+00	1,36E-07	4,19E-07	9,56E-08	0,00E+00	-1,01E-05
ADP-fos ¹	[MJ]	2,61E+03	3,22E+02	0,00E+00	2,04E+01	6,29E+01	1,44E+01	0,00E+00	-9,30E+01
WDP ¹	[m ³]	2,73E+01	2,25E-01	0,00E+00	1,42E-02	4,39E-02	1,00E-02	0,00E+00	-2,84E+00
Caption	GWP-total = Globale Warming Potential - total; GWP-fossil = Global Warming Potential - fossil fuels; GWP-bio = 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 use								
Disclaimer	¹ 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.								

EP-F3

ADDITIONAL ENVIRONMENTAL EFFECTS PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
PM	[Disease incidence]	9,84E-06	1,77E-07	0,00E+00	8,72E-08	3,45E-08	6,14E-08	0,00E+00	-1,12E-06
IRP2	[kBq U235 eq.]	2,59E+01	8,58E-02	0,00E+00	5,43E-03	1,68E-02	3,82E-03	0,00E+00	-1,62E-01
ETP-fw1	[CTUe]	1,05E+03	2,39E+02	0,00E+00	1,51E+01	4,67E+01	1,07E+01	0,00E+00	-5,54E+01
HTP-c1	[CTUh]	7,60E-06	4,84E-09	0,00E+00	3,06E-10	9,45E-10	2,15E-10	0,00E+00	-1,02E-07
HTP-nc1	[CTUh]	5,32E-06	2,51E-07	0,00E+00	1,84E-08	4,90E-08	1,29E-08	0,00E+00	-9,29E-08
SQP1	-	4,78E+02	1,11E+02	0,00E+00	7,01E+00	2,16E+01	4,94E+00	0,00E+00	-1,40E+01
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)								
Disclaimers	¹ 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.								
	² 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.								

EP-F3

RESSOURCE CONSUMPTION PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
PERE	[MJ]	5,28E+02	1,85E+01	0,00E+00	1,17E+00	3,62E+00	8,26E-01	0,00E+00	-1,81E+01
PERM	[MJ]	1,31E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	5,42E+02	1,85E+01	0,00E+00	1,17E+00	3,62E+00	8,26E-01	0,00E+00	-1,81E+01
PENRE	[MJ]	2,49E+03	3,24E+02	0,00E+00	2,05E+01	6,32E+01	1,44E+01	0,00E+00	-9,30E+01
PENRM	[MJ]	1,29E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	2,62E+03	3,24E+02	0,00E+00	2,05E+01	6,32E+01	1,44E+01	0,00E+00	-9,30E+01
SM	[kg]	1,60E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	[m ³]	9,57E-01	2,12E-02	0,00E+00	1,34E-03	4,15E-03	9,46E-04	0,00E+00	-1,17E-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								

EP-F3

WASTE CATEGORIES AND OUTPUT FLOWS PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
HWD	[kg]	2,18E-04	1,70E-08	0,00E+00	1,08E-09	3,33E-09	7,59E-10	0,00E+00	-7,63E-04
NHWD	[kg]	2,17E+01	5,08E-02	0,00E+00	3,21E-03	9,91E-03	2,26E-03	0,00E+00	-1,28E+01
RWD	[kg]	1,61E-01	5,87E-04	0,00E+00	3,71E-05	1,15E-04	2,61E-05	0,00E+00	-1,19E-03
CRU	[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
MFR	[kg]	4,79E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,58E+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	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	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	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								

EP-F3

BIOGENIC CARBON CONTENT PER PER PRODUCT		
Parameter	Unit	At the factory gate
Biogenic carbon content in product	kg C	1,38E-01
Biogenic carbon content in accompanying packaging	kg C	0,00E+00

EP-F3, 0,5m

EP-F3, 0,5m

ENVIRONMENTAL EFFECTS PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
GWP-total	[kg CO ₂ eq.]	4,45E+01	4,22E+00	-5,60E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
GWP-fossil	[kg CO ₂ eq.]	4,43E+01	4,19E+00	-5,60E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
GWP-bio	[kg CO ₂ eq.]	7,44E-02	-4,99E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
GWP-luluc	[kg CO ₂ eq.]	5,27E-02	3,42E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
ODP	[kg CFC 11 eq.]	1,80E-09	8,26E-16	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
AP	[mol H ⁺ eq.]	1,03E-01	4,45E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EP-fw	[kg P eq.]	4,46E-05	1,24E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EP-mar	[kg N eq.]	3,57E-02	1,42E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EP-ter	[mol N eq.]	3,86E-01	1,69E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
POCP	[kg NMVOC eq.]	1,05E-01	3,86E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
ADP-mm ¹	[kg Sb eq.]	3,80E-06	3,71E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
ADP-fos ¹	[MJ]	3,74E+02	5,58E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
WDP ¹	[m ³]	3,60E+00	3,88E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Caption	GWP-total = Globale Warming Potential - total; GWP-fossil = Global Warming Potential - fossil fuels; GWP-bio = 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 use								
Disclaimer	¹ 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.								

EP-F3, 0,5m

ADDITIONAL ENVIRONMENTAL EFFECTS PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
PM	[Disease incidence]	1,37E-06	3,05E-08	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
IRP2	[kBq U235 eq.]	3,75E+00	1,48E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
ETP-fw1	[CTUe]	1,53E+02	4,14E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
HTP-c1	[CTUh]	7,63E-09	8,37E-10	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
HTP-nc1	[CTUh]	8,08E-07	4,34E-08	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
SQP1	-	6,76E+01	1,92E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
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)								
Disclaimers	¹ 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.								
	² 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.								

EP-F3, 0,5m

RESSOURCE CONSUMPTION PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
PERE	[MJ]	7,44E+01	3,21E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERM	[MJ]	1,14E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	7,55E+01	3,21E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRE	[MJ]	3,54E+02	5,60E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRM	[MJ]	2,04E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	3,75E+02	5,60E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
SM	[kg]	2,24E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	[m ³]	1,24E-01	3,67E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
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								

EP-F3, 0,5m

WASTE CATEGORIES AND OUTPUT FLOWS PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
HWD	[kg]	3,87E-05	2,95E-09	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NHWD	[kg]	3,47E+00	8,78E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RWD	[kg]	2,32E-02	1,01E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
CRU	[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
MFR	[kg]	7,98E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	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	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	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	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								

EP-F3, 0,5m

BIOGENIC CARBON CONTENT PER PER PRODUCT		
Parameter	Unit	At the factory gate
Biogenic carbon content in product	kg C	1,20E-02
Biogenic carbon content in accompanying packaging	kg C	0,00E+00

Ballast 500

Ballast 500

ENVIRONMENTAL EFFECTS PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
GWP-total	[kg CO ₂ eq.]	9,64E+01	1,03E+01	-4,49E+00	2,22E+00	6,89E+00	1,57E+00	0,00E+00	-3,50E+00
GWP-fossil	[kg CO ₂ eq.]	9,63E+01	1,03E+01	-4,49E+00	2,31E+00	6,85E+00	1,62E+00	0,00E+00	-3,52E+00
GWP-bio	[kg CO ₂ eq.]	7,60E-02	-1,22E-02	0,00E+00	-9,99E-02	-8,15E-03	-7,03E-02	0,00E+00	3,07E-02
GWP-luluc	[kg CO ₂ eq.]	8,07E-02	8,39E-02	0,00E+00	1,81E-02	5,59E-02	1,28E-02	0,00E+00	-1,10E-02
ODP	[kg CFC 11 eq.]	4,77E-09	2,03E-15	0,00E+00	4,38E-16	1,35E-15	3,08E-16	0,00E+00	-1,19E-14
AP	[mol H ⁺ eq.]	2,49E-01	1,09E-02	0,00E+00	1,11E-02	7,27E-03	7,83E-03	0,00E+00	-2,23E-02
EP-fw	[kg P eq.]	5,89E-05	3,05E-05	0,00E+00	6,58E-06	2,03E-05	4,64E-06	0,00E+00	-8,03E-06
EP-mar	[kg N eq.]	8,35E-02	3,48E-03	0,00E+00	5,21E-03	2,32E-03	3,67E-03	0,00E+00	-5,10E-03
EP-ter	[mol N eq.]	9,04E-01	4,14E-02	0,00E+00	5,76E-02	2,76E-02	4,06E-02	0,00E+00	-5,58E-02
POCP	[kg NMVOC eq.]	2,38E-01	9,47E-03	0,00E+00	1,46E-02	6,31E-03	1,03E-02	0,00E+00	-1,50E-02
ADP-mm ¹	[kg Sb eq.]	2,04E-04	9,10E-07	0,00E+00	1,96E-07	6,06E-07	1,38E-07	0,00E+00	-3,76E-06
ADP-fos ¹	[MJ]	6,52E+02	1,37E+02	0,00E+00	2,95E+01	9,11E+01	2,08E+01	0,00E+00	-4,57E+01
WDP ¹	[m ³]	6,01E+00	9,52E-02	0,00E+00	2,06E-02	6,35E-02	1,45E-02	0,00E+00	-1,09E+00
Caption	GWP-total = Globale Warming Potential - total; GWP-fossil = Global Warming Potential - fossil fuels; GWP-bio = 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 use								
Disclaimer	¹ 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.								

Ballast 500

ADDITIONAL ENVIRONMENTAL EFFECTS PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
PM	[Disease incidence]	3,47E-06	7,49E-08	0,00E+00	1,26E-07	4,99E-08	8,89E-08	0,00E+00	-6,83E-07
IRP2	[kBq U235 eq.]	4,74E+00	3,64E-02	0,00E+00	7,86E-03	2,43E-02	5,53E-03	0,00E+00	-1,91E-01
ETP-fw1	[CTUe]	2,72E+02	1,01E+02	0,00E+00	2,19E+01	6,76E+01	1,54E+01	0,00E+00	-2,68E+01
HTP-c1	[CTUh]	2,71E-06	2,05E-09	0,00E+00	4,43E-10	1,37E-09	3,12E-10	0,00E+00	-3,70E-08
HTP-nc1	[CTUh]	1,37E-06	1,06E-07	0,00E+00	2,66E-08	7,10E-08	1,87E-08	0,00E+00	-8,58E-08
SQP1	-	8,66E+01	4,70E+01	0,00E+00	1,01E+01	3,13E+01	7,14E+00	0,00E+00	-8,38E+00
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)								
Disclaimers	¹ 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.								
	² 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.								

Ballast 500

RESSOURCE CONSUMPTION PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
PERE	[MJ]	9,93E+01	7,87E+00	0,00E+00	1,70E+00	5,24E+00	1,20E+00	0,00E+00	-9,71E+00
PERM	[MJ]	4,91E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	1,04E+02	7,87E+00	0,00E+00	1,70E+00	5,24E+00	1,20E+00	0,00E+00	-9,71E+00
PENRE	[MJ]	5,96E+02	1,37E+02	0,00E+00	2,96E+01	9,14E+01	2,09E+01	0,00E+00	-4,58E+01
PENRM	[MJ]	5,64E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	6,52E+02	1,37E+02	0,00E+00	2,96E+01	9,14E+01	2,09E+01	0,00E+00	-4,58E+01
SM	[kg]	1,15E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	[m ³]	2,06E-01	9,01E-03	0,00E+00	1,95E-03	6,00E-03	1,37E-03	0,00E+00	-4,51E-02
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								

Ballast 500

WASTE CATEGORIES AND OUTPUT FLOWS PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
HWD	[kg]	1,03E-04	7,23E-09	0,00E+00	1,56E-09	4,82E-09	1,10E-09	0,00E+00	-2,72E-04
NHWD	[kg]	9,51E+00	2,15E-02	0,00E+00	4,65E-03	1,43E-02	3,27E-03	0,00E+00	-2,11E+01
RWD	[kg]	3,00E-02	2,49E-04	0,00E+00	5,37E-05	1,66E-04	3,78E-05	0,00E+00	-1,25E-03
CRU	[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
MFR	[kg]	1,72E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,18E+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	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	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	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								

Ballast 500

BIOGENIC CARBON CONTENT PER PER PRODUCT		
Parameter	Unit	At the factory gate
Biogenic carbon content in product	kg C	5,17E-02
Biogenic carbon content in accompanying packaging	kg C	0,00E+00

Ballast 675

Ballast 675

ENVIRONMENTAL EFFECTS PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
GWP-total	[kg CO ₂ eq.]	1,28E+02	1,39E+01	-5,83E+00	3,00E+00	9,29E+00	2,11E+00	0,00E+00	-3,88E+00
GWP-fossil	[kg CO ₂ eq.]	1,27E+02	1,38E+01	-5,83E+00	3,11E+00	9,22E+00	2,19E+00	0,00E+00	-3,90E+00
GWP-bio	[kg CO ₂ eq.]	9,98E-02	-1,65E-02	0,00E+00	-1,35E-01	-1,10E-02	-9,47E-02	0,00E+00	3,75E-02
GWP-luluc	[kg CO ₂ eq.]	1,05E-01	1,13E-01	0,00E+00	2,44E-02	7,53E-02	1,72E-02	0,00E+00	-1,26E-02
ODP	[kg CFC 11 eq.]	6,45E-09	2,73E-15	0,00E+00	5,89E-16	1,82E-15	4,15E-16	0,00E+00	-1,55E-14
AP	[mol H ⁺ eq.]	3,22E-01	1,47E-02	0,00E+00	1,50E-02	9,80E-03	1,05E-02	0,00E+00	-2,49E-02
EP-fw	[kg P eq.]	7,57E-05	4,11E-05	0,00E+00	8,87E-06	2,74E-05	6,25E-06	0,00E+00	-9,61E-06
EP-mar	[kg N eq.]	1,11E-01	4,69E-03	0,00E+00	7,02E-03	3,13E-03	4,94E-03	0,00E+00	-6,14E-03
EP-ter	[mol N eq.]	1,20E+00	5,58E-02	0,00E+00	7,76E-02	3,72E-02	5,47E-02	0,00E+00	-6,72E-02
POCP	[kg NMVOC eq.]	3,15E-01	1,28E-02	0,00E+00	1,97E-02	8,51E-03	1,38E-02	0,00E+00	-1,80E-02
ADP-mm ¹	[kg Sb eq.]	2,05E-04	1,23E-06	0,00E+00	2,65E-07	8,17E-07	1,86E-07	0,00E+00	-3,83E-06
ADP-fos ¹	[MJ]	8,44E+02	1,84E+02	0,00E+00	3,98E+01	1,23E+02	2,80E+01	0,00E+00	-5,14E+01
WDP ¹	[m ³]	7,54E+00	1,28E-01	0,00E+00	2,77E-02	8,55E-02	1,95E-02	0,00E+00	-1,12E+00
Caption	GWP-total = Globale Warming Potential - total; GWP-fossil = Global Warming Potential - fossil fuels; GWP-bio = 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 use								
Disclaimer	¹ 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.								

Ballast 675

ADDITIONAL ENVIRONMENTAL EFFECTS PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
PM	[Disease incidence]	4,46E-06	1,01E-07	0,00E+00	1,70E-07	6,72E-08	1,20E-07	0,00E+00	-8,09E-07
IRP2	[kBq U235 eq.]	6,15E+00	4,90E-02	0,00E+00	1,06E-02	3,27E-02	7,46E-03	0,00E+00	-2,50E-01
ETP-fw1	[CTUe]	3,54E+02	1,37E+02	0,00E+00	2,95E+01	9,11E+01	2,08E+01	0,00E+00	-2,99E+01
HTP-c1	[CTUh]	2,71E-06	2,76E-09	0,00E+00	5,97E-10	1,84E-09	4,20E-10	0,00E+00	-3,72E-08
HTP-nc1	[CTUh]	1,81E-06	1,43E-07	0,00E+00	3,58E-08	9,56E-08	2,52E-08	0,00E+00	-1,09E-07
SQP1	-	1,11E+02	6,33E+01	0,00E+00	1,37E+01	4,22E+01	9,63E+00	0,00E+00	-9,89E+00
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)								
Disclaimers	¹ 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.								
	² 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.								

Ballast 675

RESSOURCE CONSUMPTION PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
PERE	[MJ]	1,27E+02	1,06E+01	0,00E+00	2,29E+00	7,06E+00	1,61E+00	0,00E+00	-1,12E+01
PERM	[MJ]	6,68E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	1,33E+02	1,06E+01	0,00E+00	2,29E+00	7,06E+00	1,61E+00	0,00E+00	-1,12E+01
PENRE	[MJ]	7,70E+02	1,85E+02	0,00E+00	3,99E+01	1,23E+02	2,81E+01	0,00E+00	-5,14E+01
PENRM	[MJ]	7,54E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	8,45E+02	1,85E+02	0,00E+00	3,99E+01	1,23E+02	2,81E+01	0,00E+00	-5,14E+01
SM	[kg]	1,43E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	[m ³]	2,57E-01	1,21E-02	0,00E+00	2,62E-03	8,09E-03	1,85E-03	0,00E+00	-4,67E-02
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								

Ballast 675

WASTE CATEGORIES AND OUTPUT FLOWS PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
HWD	[kg]	1,39E-04	9,74E-09	0,00E+00	2,10E-09	6,49E-09	1,48E-09	0,00E+00	-2,72E-04
NHWD	[kg]	1,26E+01	2,90E-02	0,00E+00	6,26E-03	1,93E-02	4,41E-03	0,00E+00	-2,84E+01
RWD	[kg]	3,89E-02	3,35E-04	0,00E+00	7,24E-05	2,23E-04	5,10E-05	0,00E+00	-1,61E-03
CRU	[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
MFR	[kg]	2,31E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,98E+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	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	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	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								

Ballast 675

BIOGENIC CARBON CONTENT PER PER PRODUCT		
Parameter	Unit	At the factory gate
Biogenic carbon content in product	kg C	7,03E-02
Biogenic carbon content in accompanying packaging	kg C	0,00E+00

Ballast 1000

Ballast 1000

ENVIRONMENTAL EFFECTS PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
GWP-total	[kg CO ₂ eq.]	1,94E+02	2,17E+01	-8,36E+00	4,67E+00	1,45E+01	3,29E+00	0,00E+00	-4,69E+00
GWP-fossil	[kg CO ₂ eq.]	1,94E+02	2,16E+01	-8,36E+00	4,84E+00	1,44E+01	3,41E+00	0,00E+00	-4,73E+00
GWP-bio	[kg CO ₂ eq.]	1,50E-01	-2,57E-02	0,00E+00	-2,10E-01	-1,71E-02	-1,48E-01	0,00E+00	5,23E-02
GWP-luluc	[kg CO ₂ eq.]	1,58E-01	1,76E-01	0,00E+00	3,81E-02	1,17E-01	2,68E-02	0,00E+00	-1,60E-02
ODP	[kg CFC 11 eq.]	1,01E-08	4,26E-15	0,00E+00	9,19E-16	2,84E-15	6,47E-16	0,00E+00	-2,34E-14
AP	[mol H ⁺ eq.]	4,79E-01	2,29E-02	0,00E+00	2,34E-02	1,53E-02	1,64E-02	0,00E+00	-3,05E-02
EP-fw	[kg P eq.]	1,11E-04	6,41E-05	0,00E+00	1,38E-05	4,27E-05	9,74E-06	0,00E+00	-1,30E-05
EP-mar	[kg N eq.]	1,70E-01	7,32E-03	0,00E+00	1,09E-02	4,88E-03	7,70E-03	0,00E+00	-8,39E-03
EP-ter	[mol N eq.]	1,84E+00	8,70E-02	0,00E+00	1,21E-01	5,80E-02	8,53E-02	0,00E+00	-9,20E-02
POCP	[kg NMVOC eq.]	4,83E-01	1,99E-02	0,00E+00	3,07E-02	1,33E-02	2,16E-02	0,00E+00	-2,45E-02
ADP-mm ¹	[kg Sb eq.]	2,08E-04	1,91E-06	0,00E+00	4,13E-07	1,27E-06	2,91E-07	0,00E+00	-3,97E-06
ADP-fos ¹	[MJ]	1,25E+03	2,87E+02	0,00E+00	6,20E+01	1,91E+02	4,37E+01	0,00E+00	-6,36E+01
WDP ¹	[m ³]	1,08E+01	2,00E-01	0,00E+00	4,32E-02	1,33E-01	3,04E-02	0,00E+00	-1,20E+00
Caption	GWP-total = Globale Warming Potential - total; GWP-fossil = Global Warming Potential - fossil fuels; GWP-bio = 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 use								
Disclaimer	¹ 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.								

Ballast 1000

ADDITIONAL ENVIRONMENTAL EFFECTS PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
PM	[Disease incidence]	6,60E-06	1,57E-07	0,00E+00	2,65E-07	1,05E-07	1,87E-07	0,00E+00	-1,08E-06
IRP2	[kBq U235 eq.]	9,15E+00	7,65E-02	0,00E+00	1,65E-02	5,10E-02	1,16E-02	0,00E+00	-3,79E-01
ETP-fw1	[CTUe]	5,29E+02	2,13E+02	0,00E+00	4,60E+01	1,42E+02	3,24E+01	0,00E+00	-3,67E+01
HTP-c1	[CTUh]	2,72E-06	4,31E-09	0,00E+00	9,30E-10	2,87E-09	6,55E-10	0,00E+00	-3,77E-08
HTP-nc1	[CTUh]	2,75E-06	2,24E-07	0,00E+00	5,58E-08	1,49E-07	3,93E-08	0,00E+00	-1,61E-07
SQP1	-	1,62E+02	9,87E+01	0,00E+00	2,13E+01	6,58E+01	1,50E+01	0,00E+00	-1,32E+01
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)								
Disclaimers	¹ 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.								
	² 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.								

Ballast 1000

RESSOURCE CONSUMPTION PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
PERE	[MJ]	1,85E+02	1,65E+01	0,00E+00	3,57E+00	1,10E+01	2,51E+00	0,00E+00	-1,43E+01
PERM	[MJ]	9,82E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	1,95E+02	1,65E+01	0,00E+00	3,57E+00	1,10E+01	2,51E+00	0,00E+00	-1,43E+01
PENRE	[MJ]	1,14E+03	2,88E+02	0,00E+00	6,22E+01	1,92E+02	4,38E+01	0,00E+00	-6,36E+01
PENRM	[MJ]	1,11E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	1,25E+03	2,88E+02	0,00E+00	6,22E+01	1,92E+02	4,38E+01	0,00E+00	-6,36E+01
SM	[kg]	1,98E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	[m ³]	3,66E-01	1,89E-02	0,00E+00	4,09E-03	1,26E-02	2,88E-03	0,00E+00	-5,01E-02
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								

Ballast 1000

WASTE CATEGORIES AND OUTPUT FLOWS PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
HWD	[kg]	2,17E-04	1,52E-08	0,00E+00	3,28E-09	1,01E-08	2,31E-09	0,00E+00	-2,72E-04
NHWD	[kg]	1,93E+01	4,52E-02	0,00E+00	9,76E-03	3,01E-02	6,88E-03	0,00E+00	-4,45E+01
RWD	[kg]	5,78E-02	5,23E-04	0,00E+00	1,13E-04	3,48E-04	7,95E-05	0,00E+00	-2,41E-03
CRU	[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
MFR	[kg]	3,59E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,09E+03	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	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	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	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								

Ballast 1000

BIOGENIC CARBON CONTENT PER PER PRODUCT		
Parameter	Unit	At the factory gate
Biogenic carbon content in product	kg C	1,03E-01
Biogenic carbon content in accompanying packaging	kg C	0,00E+00

Supplerende information

LCA fortolkning

Den største påvirkning fra produkterne stammer fra produktionen af cement og i mindre grad fra produktion af stål og rustfrit stål.

Teknisk information om underliggende scenarier

Transport til byggepladsen (A4)

Navn	Værdi	Enhed
Brændstofmængde og -type (alternativt: transporttype)	Diesel	-
Transport typer	Truck-trailer, Euro 6, 28 - 34t gross weight / 22t payload capacity	
Transportafstand	300	km
Kapacitetsudnyttelse (inkl. tom returkørsel)	61	%
Brutto massefylde af transporteret produkt	2,4E02	kg/m ³
Kapacitetsudnyttelse, volumenfaktor	1	-

Reference service life

Navn		Enhed
Reference Service Life - RSL (Levetid)	100	År
Deklarerede produkttegenskaber (ved port) etc.	https://www.centrumpaele.dk/paele.aspx	-
Instruktioner om anvendelse (hvis givet af producenten)	https://www.centrumpaele.dk/statiske-beregninger.aspx	-
Formodet kvalitet af installationsarbejdet, iht. producentanvisninger	https://www.centrumpaele.dk/statiske-beregninger.aspx	-
Udemiljø (udendørs anvendelse) – fx vejrbestandighed, vind, forurening, UV mv.	https://www.centrumpaele.dk/paele.aspx	-
Indemiljø (indendørs anvendelse), fx temperatur, luftfugtighed mv.	Ikke relevant	-
Brugsforhold – fx mekaniske påvirkninger, anvendelsesfrekvens mv.	https://www.centrumpaele.dk/statiske-beregninger.aspx	-
Vedligehold (frekvens, type, kvalitet, udskiftning af dele)	Ikke relevant	-

½m forlængelser af mastfundamentspæle efterlades i jorden og er ikke tillagt bortskaffelse (C1-C4) og genanvendelse (D).

End of life/Bortskaffelse (C1-C4)

Materiale	Produkt									Enhed
	B1, 3m	B10, 3m	B11, 3m	B14, 3m	EP-F1, 3m	EP-F3, 3m	Vægt 500	Vægt 675	Vægt 1000	
Typeadskilt byggeaffald	342	454	462	597	360	380	518	697	1.031	kg
Blandet byggeaffald	0	0	0	0	0	0	0	0	0	kg
Til genbrug	0	0	0	0	0	0	0	0	0	kg
Til genanvendelse	342	454	462	597	360	380	518	697	1.031	kg
Til energigenvinding	0	0	0	0	0	0	0	0	0	kg
Til deponering	0	0	0	0	0	0	0	0	0	kg
Forudsætninger for udvikling af scenarier	Regulære mastfundamentspæle opgraves til ½m under terræn. ½m forlængelser forbliver nedgravede og er ikke medregnede. Ballastklodser bortskaffes.									-

Genanvendelse, genvinding og/eller genbrugspotentiale (D)

Materiale	Produkt									Enhed
	B1, 3m	B10, 3m	B11, 3m	B14, 3m	EP-F1, 3m	EP-F3, 3m	Vægt 500	Vægt 675	Vægt 1000	
Undgået produktion af grus	310	416	416	535	331	331	506	684	1.012	kg
Undgået produktion af stål	0	0	0	0	0	0	0	0	0	kg
Undgået produktion af rustfrit stål	2,0	3,6	5,4	6,8	1,2	1,2	0,4	0,4	0,4	kg

Bemærk i ovenstående tabel at der kun regnes undgået produktion fra virgine materialer som input til produktionen. Genbrugsmaterialer regnes ikke som at fortrænge primære materialer.

Indeluft

Ikke relevant

Jord og vand

EPD'en angiver ikke noget omkring afgivelse af farlige stoffer til jord og vand, da de horisontale standarder for måling af afgivelse af regulerede farlige stoffer fra byggevarer ved brug af harmoniserede test metoder i henhold til bestemmelserne fra de respektive tekniske komitéer for Europæiske produktstandarder ikke er tilgængelige.

Referencer

Udgiver	 epddanmark www.epddanmark.dk
Programoperatør	Teknologisk Institut Gregersensvej DK-2630 Taastrup www.teknologisk.dk
LCA udvikler	Teknologisk Institut Center for Bygninger og Miljø Gregersensvej DK-2630 Taastrup www.teknologisk.dk
LCA software / baggrundsdata	Thinkstep GaBi 10.6 Databaser version 2021.2 www.gabi-software.com
3. parts verifikator	Ninkie Bendtsen NIRAS A/S Sortemosevej 19 DK-3450 Allerød www.niras.dk

Generelle programinstruktioner

Version 2.0

www.epddanmark.dk

EN 15804

DS/EN 15804 + A2:2019 - "Bæredygtighed inden for byggeri og anlæg - Miljøvaredeklarationer - Grundlæggende regler for produktkategorien byggevarer"

EN 16757

DS/EN 16757:2017 - "Bæredygtighed inden for byggeri og anlæg - miljøvaredeklarationer - Produktkategoriregler for beton og betonelementer"

EN 15942

DS/EN 15942:2011 - "Bæredygtighed inden for byggeri og anlæg - Miljøvaredeklarationer (EPD) - Kommunikationsformat: business-to-business (B2B)"

ISO 14025

DS/EN ISO 14025:2010 - "Miljømærker og -deklarationer - Type III-miljøvaredeklarationer - Principper og procedurer"

ISO 14040

DS/EN ISO 14040:2008 – "Miljøledelse – Livscyklusvurdering – Principper og struktur"

ISO 14044

DS/EN ISO 14044:2008 – "Miljøledelse – Livscyklusvurdering – Krav og vejledning"