

Ejer: Centrum Pæle A/S
Nr.: MD-22035-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

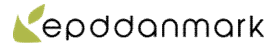


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Udgivet af

EPD Danmark
www.epddanmark.dk



- Branche EPD
 Produkt EPD

Deklareret produkt

1 stk konisk mastfundamentspæl i stålarmeret beton

Antal deklarerede datasæt/produktvariationer: 4

- MFP-C42, 3m
- MFP-C42, 4m
- MFP-C42, 5m
- MFP-C42, 6m

Produktionssted

Centrum Pæles produktionssted i Vejle, Danmark

Produktets anvendelse

Montering af master til f.eks. elektrificering af jernbane

Deklareret/funktionel enhed

Deklareret enhed er 1 stk konisk mastfundamentspæl

Årstal for data

2020

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, Niras A/S



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

Produktets hovedmaterialer er angivet i tabellen nedenfor. Disse udgør 100 vægt % af det deklarerede produkt.

Materiale	Produkt				Enhed
	MFP-C42, 3m	MFP-C42, 4m	MFP-C42, 5m	MFP-C42, 6m	
Cement	16%	16%	15%	16%	%
Granitskærver	37%	36%	36%	37%	%
Sand	29%	29%	29%	29%	%
Sten	6%	6%	5%	6%	%
Vand	5%	5%	5%	5%	%
Tilsætningsstoffer og formolie	0%	0%	0%	0%	%
Stål	7%	7%	8%	7%	%
Rustfrit stål	1%	1%	0%	0%	%
Beton afstandsstykker	0%	0%	0%	0%	%
O-ringe og labels	0%	0%	0%	0%	%
Sum	100%	100%	100%	100%	%

Sammensætning af emballage er opgjort i nedenstående tabel

Materiale	Produkt				Enhed
	MFP-C42, 3m	MFP-C42, 4m	MFP-C42, 5m	MFP-C42, 6m	
PVC rør	96%	96%	96%	96%	%
Fugebånd	1%	1%	1%	1%	%
Tape	3%	3%	3%	3%	%
Sum emballage	100%	100%	100%	100%	%

Repræsentativitet

Den deklarerede enhed er 1 stk konisk armeret mastfunderingspæl i beton.

Data til den bagvedliggende LCA er baseret på årgennemsnit 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. Undtagelsen er tilsætningsstoffer i beton, hvor den samlede mængde er under 0,2% (w/w).

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 skal efterleve følgende krav

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

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



LCA baggrund

Deklareret enhed

LCI og LCIA resultater i denne EPD relaterer til den deklarerede enhed 1 stk konisk mastfundamentspæl, angivet i tabellen nedenfor, med angivelse af vægt per stk og en omregningsfaktor til 1 kg.

Navn	Produkt				Enhed
	MFP-C42, 3m	MFP-C42, 4m	MFP-C42, 5m	MFP-C42, 6m	
Deklareret enhed	1				stk
Masse per stk	1,75E+03	2,14E+03	2,43E+03	2,62E+03	kg
Omregningsfaktor til 1 kg.	5,723E-04	4,671E-04	4,108E-04	3,810E-04	-

Funktionel enhed

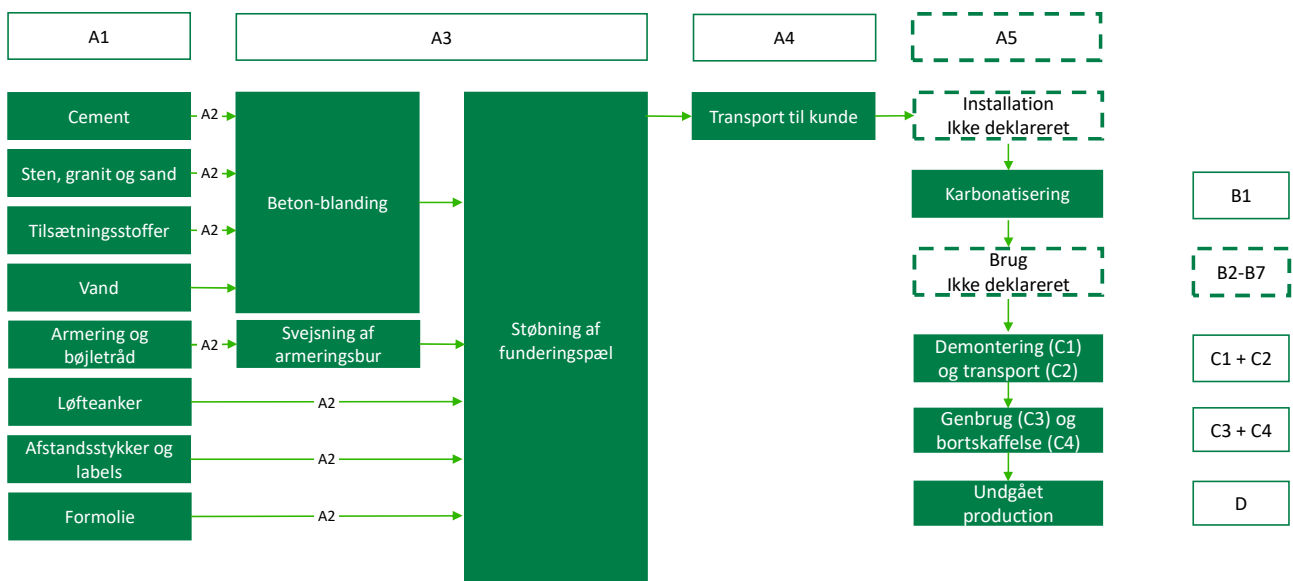
Ikke defineret.

PCR

Denne miljøvaredeklaration er baseret på kravene i EN 15804:2012+A2:2019 samt 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.

Fundamentspælene fremstilles ved, at beton blandes på et blandeanlæg 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

Byggeprocessfasen (A4-A5):

Byggeprocessfasen omfatter transport fra fabriksporten til byggepladsen (300 km 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):

De koniske mastfundamentspæle trækkes op af jorden. Pælen transporteres 100 km til behandlingssted, hvor den 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.

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.

MFP-C42, 3m MFP-C42, 3m

ENVIRONMENTAL EFFECTS PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
GWP-total	[kg CO ₂ eq.]	2,96E+02	2,40E+01	-3,85E+00	5,14E+00	1,60E+01	3,62E+00	0,00E+00	-1,81E+01
GWP-fossil	[kg CO ₂ eq.]	2,96E+02	2,38E+01	-3,85E+00	5,33E+00	1,58E+01	3,76E+00	0,00E+00	-1,81E+01
GWP-bio	[kg CO ₂ eq.]	4,49E-01	-2,83E-02	0,00E+00	-2,31E-01	-1,89E-02	-1,63E-01	0,00E+00	1,14E-01
GWP-luluc	[kg CO ₂ eq.]	3,36E-01	1,94E-01	0,00E+00	4,19E-02	1,29E-01	2,95E-02	0,00E+00	-5,16E-02
ODP	[kg CFC 11 eq.]	1,03E-08	4,69E-15	0,00E+00	1,01E-15	3,13E-15	7,13E-16	0,00E+00	-3,18E-14
AP	[mol H ⁺ eq.]	8,32E-01	2,53E-02	0,00E+00	2,57E-02	1,68E-02	1,81E-02	0,00E+00	-1,12E-01
EP-fw	[kg P eq.]	3,04E-04	7,06E-05	0,00E+00	1,52E-05	4,70E-05	1,07E-05	0,00E+00	-3,23E-05
EP-mar	[kg N eq.]	2,31E-01	8,07E-03	0,00E+00	1,21E-02	5,37E-03	8,49E-03	0,00E+00	-2,02E-02
EP-ter	[mol N eq.]	2,51E+00	9,59E-02	0,00E+00	1,33E-01	6,38E-02	9,39E-02	0,00E+00	-2,19E-01
POCP	[kg NMVOC eq.]	6,89E-01	2,19E-02	0,00E+00	3,38E-02	1,46E-02	2,38E-02	0,00E+00	-6,03E-02
ADP-mm ¹	[kg Sb eq.]	1,32E-03	2,11E-06	0,00E+00	4,55E-07	1,40E-06	3,20E-07	0,00E+00	-2,36E-05
ADP-fos ¹	[MJ]	2,75E+03	3,17E+02	0,00E+00	6,83E+01	2,11E+02	4,81E+01	0,00E+00	-2,27E+02
WDP ¹	[m ³]	2,94E+01	2,21E-01	0,00E+00	4,76E-02	1,47E-01	3,35E-02	0,00E+00	-6,65E+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.								

MFP-C42, 3m

ADDITIONAL ENVIRONMENTAL EFFECTS PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
PM	[Disease incidence]	1,16E-05	1,73E-07	0,00E+00	2,92E-07	1,15E-07	2,06E-07	0,00E+00	-2,85E-06
IRP2	[kBq U235 eq.]	2,41E+01	8,43E-02	0,00E+00	1,82E-02	5,61E-02	1,28E-02	0,00E+00	-4,94E-01
ETP-fw1	[CTUe]	1,07E+03	2,35E+02	0,00E+00	5,07E+01	1,56E+02	3,57E+01	0,00E+00	-1,35E+02
HTP-c1	[CTUh]	1,76E-05	4,75E-09	0,00E+00	1,02E-09	3,16E-09	7,22E-10	0,00E+00	-2,37E-07
HTP-nc1	[CTUh]	5,12E-06	2,47E-07	0,00E+00	6,15E-08	1,64E-07	4,33E-08	0,00E+00	-2,62E-07
SQP1	-	4,67E+02	1,09E+02	0,00E+00	2,35E+01	7,25E+01	1,65E+01	0,00E+00	-3,56E+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.								

MFP-C42, 3m

RESSOURCE CONSUMPTION PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
PERE	[MJ]	5,31E+02	1,82E+01	0,00E+00	3,93E+00	1,21E+01	2,77E+00	0,00E+00	-4,50E+01
PERM	[MJ]	9,67E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	5,41E+02	1,82E+01	0,00E+00	3,93E+00	1,21E+01	2,77E+00	0,00E+00	-4,50E+01
PENRE	[MJ]	2,56E+03	3,18E+02	0,00E+00	6,86E+01	2,12E+02	4,83E+01	0,00E+00	-2,27E+02
PENRM	[MJ]	1,96E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	2,75E+03	3,18E+02	0,00E+00	6,86E+01	2,12E+02	4,83E+01	0,00E+00	-2,27E+02
SM	[kg]	1,35E+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]	1,05E+00	2,09E-02	0,00E+00	4,50E-03	1,39E-02	3,17E-03	0,00E+00	-2,74E-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								

MFP-C42, 3m

WASTE CATEGORIES AND OUTPUT FLOWS PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
HWD	[kg]	2,19E-04	1,67E-08	0,00E+00	3,61E-09	1,12E-08	2,54E-09	0,00E+00	-1,77E-03
NHWD	[kg]	2,39E+01	4,99E-02	0,00E+00	1,08E-02	3,32E-02	7,57E-03	0,00E+00	-4,43E+01
RWD	[kg]	1,51E-01	5,76E-04	0,00E+00	1,24E-04	3,84E-04	8,76E-05	0,00E+00	-3,48E-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]	4,59E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,20E+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								

MFP-C42, 3m

BIOGENIC CARBON CONTENT PER PER PRODUCT		
Parameter	Unit	At the factory gate
Biogenic carbon content in product	kg C	1,02E-01
Biogenic carbon content in accompanying packaging	kg C	0,00E+00

MFP-C42, 4m
MFP-C42, 4m

ENVIRONMENTAL EFFECTS PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
GWP-total	[kg CO ₂ eq.]	3,21E+02	2,47E+01	-4,66E+00	5,30E+00	1,65E+01	3,74E+00	0,00E+00	-1,81E+01
GWP-fossil	[kg CO ₂ eq.]	3,20E+02	2,45E+01	-4,66E+00	5,50E+00	1,63E+01	3,87E+00	0,00E+00	-1,81E+01
GWP-bio	[kg CO ₂ eq.]	5,46E-01	-2,92E-02	0,00E+00	-2,38E-01	-1,94E-02	-1,68E-01	0,00E+00	1,14E-01
GWP-luluc	[kg CO ₂ eq.]	3,85E-01	2,00E-01	0,00E+00	4,32E-02	1,33E-01	3,04E-02	0,00E+00	-5,16E-02
ODP	[kg CFC 11 eq.]	1,03E-08	4,84E-15	0,00E+00	1,04E-15	3,22E-15	7,35E-16	0,00E+00	-3,19E-14
AP	[mol H ⁺ eq.]	8,83E-01	2,61E-02	0,00E+00	2,65E-02	1,74E-02	1,87E-02	0,00E+00	-1,12E-01
EP-fw	[kg P eq.]	3,57E-04	7,28E-05	0,00E+00	1,57E-05	4,85E-05	1,11E-05	0,00E+00	-3,23E-05
EP-mar	[kg N eq.]	2,44E-01	8,32E-03	0,00E+00	1,24E-02	5,54E-03	8,75E-03	0,00E+00	-2,02E-02
EP-ter	[mol N eq.]	2,65E+00	9,88E-02	0,00E+00	1,38E-01	6,58E-02	9,68E-02	0,00E+00	-2,19E-01
POCP	[kg NMVOC eq.]	7,36E-01	2,26E-02	0,00E+00	3,48E-02	1,51E-02	2,45E-02	0,00E+00	-6,03E-02
ADP-mm ¹	[kg Sb eq.]	1,32E-03	2,17E-06	0,00E+00	4,69E-07	1,45E-06	3,30E-07	0,00E+00	-2,36E-05
ADP-fos ¹	[MJ]	3,13E+03	3,26E+02	0,00E+00	7,04E+01	2,17E+02	4,96E+01	0,00E+00	-2,27E+02
WDP ¹	[m ³]	3,33E+01	2,27E-01	0,00E+00	4,91E-02	1,51E-01	3,46E-02	0,00E+00	-6,65E+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.								

MFP-C42, 4m

ADDITIONAL ENVIRONMENTAL EFFECTS PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
PM	[Disease incidence]	1,23E-05	1,79E-07	0,00E+00	3,01E-07	1,19E-07	2,12E-07	0,00E+00	-2,85E-06
IRP2	[kBq U235 eq.]	2,87E+01	8,69E-02	0,00E+00	1,88E-02	5,79E-02	1,32E-02	0,00E+00	-4,94E-01
ETP-fw1	[CTUe]	1,20E+03	2,42E+02	0,00E+00	5,23E+01	1,61E+02	3,68E+01	0,00E+00	-1,35E+02
HTP-c1	[CTUh]	1,76E-05	4,90E-09	0,00E+00	1,06E-09	3,26E-09	7,44E-10	0,00E+00	-2,37E-07
HTP-nc1	[CTUh]	5,81E-06	2,54E-07	0,00E+00	6,34E-08	1,69E-07	4,47E-08	0,00E+00	-2,62E-07
SQP1	-	5,49E+02	1,12E+02	0,00E+00	2,42E+01	7,47E+01	1,70E+01	0,00E+00	-3,56E+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.								

MFP-C42, 4m

RESSOURCE CONSUMPTION PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
PERE	[MJ]	6,20E+02	1,88E+01	0,00E+00	4,05E+00	1,25E+01	2,85E+00	0,00E+00	-4,50E+01
PERM	[MJ]	1,18E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	6,31E+02	1,88E+01	0,00E+00	4,05E+00	1,25E+01	2,85E+00	0,00E+00	-4,50E+01
PENRE	[MJ]	2,90E+03	3,28E+02	0,00E+00	7,07E+01	2,18E+02	4,98E+01	0,00E+00	-2,27E+02
PENRM	[MJ]	2,34E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	3,13E+03	3,28E+02	0,00E+00	7,07E+01	2,18E+02	4,98E+01	0,00E+00	-2,27E+02
SM	[kg]	1,74E+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]	1,19E+00	2,15E-02	0,00E+00	4,64E-03	1,43E-02	3,27E-03	0,00E+00	-2,74E-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								

MFP-C42, 4m

WASTE CATEGORIES AND OUTPUT FLOWS PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
HWD	[kg]	2,19E-04	1,73E-08	0,00E+00	3,72E-09	1,15E-08	2,62E-09	0,00E+00	-1,77E-03
NHWD	[kg]	2,42E+01	5,14E-02	0,00E+00	1,11E-02	3,42E-02	7,81E-03	0,00E+00	-4,43E+01
RWD	[kg]	1,79E-01	5,94E-04	0,00E+00	1,28E-04	3,96E-04	9,03E-05	0,00E+00	-3,48E-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]	4,92E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,24E+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								

MFP-C42, 4m

BIOGENIC CARBON CONTENT PER PER PRODUCT		
Parameter	Unit	At the factory gate
Biogenic carbon content in product	kg C	1,24E-01
Biogenic carbon content in accompanying packaging	kg C	0,00E+00

MFP-C42, 5m
MFP-C42, 5m

ENVIRONMENTAL EFFECTS PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
GWP-total	[kg CO ₂ eq.]	3,42E+02	2,53E+01	-5,47E+00	5,44E+00	1,69E+01	3,83E+00	0,00E+00	-1,81E+01
GWP-fossil	[kg CO ₂ eq.]	3,41E+02	2,52E+01	-5,47E+00	5,64E+00	1,68E+01	3,97E+00	0,00E+00	-1,81E+01
GWP-bio	[kg CO ₂ eq.]	6,29E-01	-2,99E-02	0,00E+00	-2,44E-01	-1,99E-02	-1,72E-01	0,00E+00	1,14E-01
GWP-luluc	[kg CO ₂ eq.]	4,27E-01	2,05E-01	0,00E+00	4,43E-02	1,37E-01	3,12E-02	0,00E+00	-5,17E-02
ODP	[kg CFC 11 eq.]	1,03E-08	4,96E-15	0,00E+00	1,07E-15	3,30E-15	7,54E-16	0,00E+00	-3,19E-14
AP	[mol H ⁺ eq.]	9,27E-01	2,67E-02	0,00E+00	2,72E-02	1,78E-02	1,92E-02	0,00E+00	-1,12E-01
EP-fw	[kg P eq.]	4,02E-04	7,47E-05	0,00E+00	1,61E-05	4,97E-05	1,13E-05	0,00E+00	-3,23E-05
EP-mar	[kg N eq.]	2,55E-01	8,53E-03	0,00E+00	1,27E-02	5,68E-03	8,97E-03	0,00E+00	-2,02E-02
EP-ter	[mol N eq.]	2,77E+00	1,01E-01	0,00E+00	1,41E-01	6,75E-02	9,93E-02	0,00E+00	-2,19E-01
POCP	[kg NMVOC eq.]	7,76E-01	2,32E-02	0,00E+00	3,57E-02	1,55E-02	2,51E-02	0,00E+00	-6,03E-02
ADP-mm ¹	[kg Sb eq.]	1,32E-03	2,23E-06	0,00E+00	4,81E-07	1,48E-06	3,39E-07	0,00E+00	-2,36E-05
ADP-fos ¹	[MJ]	3,45E+03	3,35E+02	0,00E+00	7,22E+01	2,23E+02	5,09E+01	0,00E+00	-2,27E+02
WDP ¹	[m ³]	3,67E+01	2,33E-01	0,00E+00	5,03E-02	1,55E-01	3,54E-02	0,00E+00	-6,65E+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.								

MFP-C42, 5m

ADDITIONAL ENVIRONMENTAL EFFECTS PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
PM	[Disease incidence]	1,28E-05	1,83E-07	0,00E+00	3,09E-07	1,22E-07	2,18E-07	0,00E+00	-2,86E-06
IRP2	[kBq U235 eq.]	3,25E+01	8,91E-02	0,00E+00	1,92E-02	5,94E-02	1,35E-02	0,00E+00	-4,94E-01
ETP-fw1	[CTUe]	1,31E+03	2,48E+02	0,00E+00	5,36E+01	1,65E+02	3,78E+01	0,00E+00	-1,35E+02
HTP-c1	[CTUh]	1,76E-05	5,02E-09	0,00E+00	1,08E-09	3,35E-09	7,63E-10	0,00E+00	-2,37E-07
HTP-nc1	[CTUh]	6,39E-06	2,61E-07	0,00E+00	6,50E-08	1,74E-07	4,58E-08	0,00E+00	-2,62E-07
SQP1	-	6,20E+02	1,15E+02	0,00E+00	2,48E+01	7,66E+01	1,75E+01	0,00E+00	-3,56E+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.								

MFP-C42, 5m

RESSOURCE CONSUMPTION PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
PERE	[MJ]	6,95E+02	1,93E+01	0,00E+00	4,16E+00	1,28E+01	2,93E+00	0,00E+00	-4,50E+01
PERM	[MJ]	1,34E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	7,08E+02	1,93E+01	0,00E+00	4,16E+00	1,28E+01	2,93E+00	0,00E+00	-4,50E+01
PENRE	[MJ]	3,19E+03	3,36E+02	0,00E+00	7,25E+01	2,24E+02	5,11E+01	0,00E+00	-2,27E+02
PENRM	[MJ]	2,62E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	3,45E+03	3,36E+02	0,00E+00	7,25E+01	2,24E+02	5,11E+01	0,00E+00	-2,27E+02
SM	[kg]	2,08E+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]	1,31E+00	2,21E-02	0,00E+00	4,76E-03	1,47E-02	3,35E-03	0,00E+00	-2,74E-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								

MFP-C42, 5m

WASTE CATEGORIES AND OUTPUT FLOWS PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
HWD	[kg]	2,19E-04	1,77E-08	0,00E+00	3,82E-09	1,18E-08	2,69E-09	0,00E+00	-1,77E-03
NHWD	[kg]	2,45E+01	5,27E-02	0,00E+00	1,14E-02	3,51E-02	8,01E-03	0,00E+00	-4,44E+01
RWD	[kg]	2,03E-01	6,09E-04	0,00E+00	1,32E-04	4,06E-04	9,26E-05	0,00E+00	-3,48E-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]	5,21E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,27E+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								

MFP-C42, 5m

BIOGENIC CARBON CONTENT PER PER PRODUCT		
Parameter	Unit	At the factory gate
Biogenic carbon content in product	kg C	1,41E-01
Biogenic carbon content in accompanying packaging	kg C	0,00E+00

MFP-C42, 6m
MFP-C42, 6m

ENVIRONMENTAL EFFECTS PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
GWP-total	[kg CO ₂ eq.]	3,45E+02	2,53E+01	-6,28E+00	5,44E+00	1,69E+01	3,83E+00	0,00E+00	-1,81E+01
GWP-fossil	[kg CO ₂ eq.]	3,44E+02	2,52E+01	-6,28E+00	5,64E+00	1,68E+01	3,97E+00	0,00E+00	-1,81E+01
GWP-bio	[kg CO ₂ eq.]	6,25E-01	-2,99E-02	0,00E+00	-2,44E-01	-1,99E-02	-1,72E-01	0,00E+00	1,14E-01
GWP-luluc	[kg CO ₂ eq.]	4,42E-01	2,05E-01	0,00E+00	4,43E-02	1,37E-01	3,12E-02	0,00E+00	-5,17E-02
ODP	[kg CFC 11 eq.]	1,03E-08	4,96E-15	0,00E+00	1,07E-15	3,30E-15	7,54E-16	0,00E+00	-3,19E-14
AP	[mol H ⁺ eq.]	9,30E-01	2,67E-02	0,00E+00	2,72E-02	1,78E-02	1,92E-02	0,00E+00	-1,12E-01
EP-fw	[kg P eq.]	4,07E-04	7,47E-05	0,00E+00	1,61E-05	4,97E-05	1,13E-05	0,00E+00	-3,23E-05
EP-mar	[kg N eq.]	2,56E-01	8,53E-03	0,00E+00	1,27E-02	5,68E-03	8,97E-03	0,00E+00	-2,02E-02
EP-ter	[mol N eq.]	2,78E+00	1,01E-01	0,00E+00	1,41E-01	6,75E-02	9,93E-02	0,00E+00	-2,19E-01
POCP	[kg NMVOC eq.]	7,79E-01	2,32E-02	0,00E+00	3,57E-02	1,55E-02	2,51E-02	0,00E+00	-6,03E-02
ADP-mm ¹	[kg Sb eq.]	1,32E-03	2,23E-06	0,00E+00	4,81E-07	1,48E-06	3,39E-07	0,00E+00	-2,36E-05
ADP-fos ¹	[MJ]	3,50E+03	3,35E+02	0,00E+00	7,22E+01	2,23E+02	5,09E+01	0,00E+00	-2,27E+02
WDP ¹	[m ³]	3,67E+01	2,33E-01	0,00E+00	5,03E-02	1,55E-01	3,54E-02	0,00E+00	-6,65E+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.								

MFP-C42, 6m

ADDITIONAL ENVIRONMENTAL EFFECTS PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
PM	[Disease incidence]	1,28E-05	1,83E-07	0,00E+00	3,09E-07	1,22E-07	2,18E-07	0,00E+00	-2,86E-06
IRP2	[kBq U235 eq.]	3,25E+01	8,91E-02	0,00E+00	1,92E-02	5,94E-02	1,35E-02	0,00E+00	-4,94E-01
ETP-fw1	[CTUe]	1,33E+03	2,48E+02	0,00E+00	5,36E+01	1,65E+02	3,78E+01	0,00E+00	-1,35E+02
HTP-c1	[CTUh]	1,76E-05	5,02E-09	0,00E+00	1,08E-09	3,35E-09	7,63E-10	0,00E+00	-2,37E-07
HTP-nc1	[CTUh]	6,41E-06	2,61E-07	0,00E+00	6,50E-08	1,74E-07	4,58E-08	0,00E+00	-2,62E-07
SQP1	-	6,28E+02	1,15E+02	0,00E+00	2,48E+01	7,66E+01	1,75E+01	0,00E+00	-3,56E+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.								

MFP-C42, 6m

RESSOURCE CONSUMPTION PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
PERE	[MJ]	6,95E+02	1,93E+01	0,00E+00	4,16E+00	1,28E+01	2,93E+00	0,00E+00	-4,50E+01
PERM	[MJ]	1,45E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	7,10E+02	1,93E+01	0,00E+00	4,16E+00	1,28E+01	2,93E+00	0,00E+00	-4,50E+01
PENRE	[MJ]	3,22E+03	3,36E+02	0,00E+00	7,25E+01	2,24E+02	5,11E+01	0,00E+00	-2,27E+02
PENRM	[MJ]	2,83E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	3,50E+03	3,36E+02	0,00E+00	7,25E+01	2,24E+02	5,11E+01	0,00E+00	-2,27E+02
SM	[kg]	2,08E+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]	1,31E+00	2,21E-02	0,00E+00	4,76E-03	1,47E-02	3,35E-03	0,00E+00	-2,74E-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								

MFP-C42, 6m

WASTE CATEGORIES AND OUTPUT FLOWS PER PRODUCT									
Parameter	Enhed	A1-A3	A4	B1	C1	C2	C3	C4	D
HWD	[kg]	2,19E-04	1,77E-08	0,00E+00	3,82E-09	1,18E-08	2,69E-09	0,00E+00	-1,77E-03
NHWD	[kg]	2,45E+01	5,27E-02	0,00E+00	1,14E-02	3,51E-02	8,01E-03	0,00E+00	-4,44E+01
RWD	[kg]	2,03E-01	6,09E-04	0,00E+00	1,32E-04	4,06E-04	9,26E-05	0,00E+00	-3,48E-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]	5,21E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,27E+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								

MFP-C42, 6m

BIOGENIC CARBON CONTENT PER PER PRODUCT		
Parameter	Unit	At the factory gate
Biogenic carbon content in product	kg C	1,53E-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 retur kørsel)	61	%
Brutto massefylde af transporteret produkt	Ca. 2400	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 Error! Hyperlink reference not valid.	-
Indemiljø (indendørs anvendelse), fx temperatur, luftfugtighed mv.	<i>Ikke relevant</i>	-
Brugsforhold – fx mekaniske påvirkninger, anvendelsesfrekvens mv.	https://www.centrumpaele.dk/statiske-beregninger.aspx	-
Vedligehold (frekvens, type, kvalitet, udskiftning af dele)	<i>Ikke relevant</i>	-

End of life/Bortskaffelse (C1-C4)

Materiale	Produkt				Enhed
	MFP-C42, 3m	MFP-C42, 4m	MFP-C42, 5m	MFP-C42, 6m	
Typeadskilt byggeaffald	1.747	2.141	2.434	2.426	kg
Blandet byggeaffald	0	0	0	0	kg
Til genbrug	0	0	0	0	kg
Til genanvendelse	1.747	2.141	2.434	2.426	kg
Til energigenvinding	0	0	0	0	kg
Til deponering	0	0	0	0	kg
Forudsætninger for udvikling af scenarier	Koniske fundamentspæle kan trækkes op af jorden				kg

Genanvendelse, genvinding og/eller genbrugspotentiale (D)

Materiale	Produkt				Enhed
	MFP-C42, 3m	MFP-C42, 4m	MFP-C42, 5m	MFP-C42, 6m	
Undgået produktion af grus	1.618	1.974	2.236	2.426	kg
Undgået produktion af stål	0	0	0	0	kg
Undgået produktion af rustfrit stål	2,8	2,8	2,8	2,8	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 10.0 Databaser version 2020.2 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"