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ECO PLATFORM EPD VERIFIED

Owner: RECYCON Element A/S
No.: MD-23145-EN
Issued: 29-02-2024
Valid to: 29-02-2029

3rd PARTY **VERIFIED**

EPD

VERIFIED ENVIRONMENTAL PRODUCT DECLARATION | **ISO 14025 & EN 15804**

Owner of declaration
RECYCON Element A/S
Sandvedvej 59B
DK-4250 Fuglebjerg
Denmark
VAT 37462713

Programme
EPD Danmark
www.epddanmark.dk

☐ Industry EPD
☒ Product EPD

Declared product(s)
RECYCON concrete elements or ready-mixed liquid concrete with 100% recycled aggregates.

Number of declared datasets/product variations: 4 datasets.

Product 1: Concrete elements with recycled building waste.
Product 2: Concrete elements with recycled concrete waste.
Product 3: Liquid concrete with recycled building waste.
Product 4: Liquid concrete with recycled concrete waste.

Production site
Sandvedvej 61
DK-4250 Fuglebjerg
Denmark

Product(s) use
Product 1 and product 2 are used for construction (use case 1) or for non-construction purposes such as temporary retaining walls at construction or road work sites (use case 2). Product 3 and product 4 are used for construction (use case 1).

Declared unit
1000 kg product at factory gate.

Year of production site data (A3)
October 1st, 2022 – September 30th, 2023.

EPD version
Revision 1 of 01-02-2024.

Issued: 29-02-2024
Valid to: 29-02-2029

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

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

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

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

EPD type
☐Cradle-to-gate with modules C1-C4 and D
☐Cradle-to-gate with options, modules C1-C4 and D
☐Cradle-to-grave and module D
☐Cradle-to-gate
☒Cradle-to-gate with options

CEN standard EN 15804 serves as the core PCR

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

☐ internal ☒ external

Third party verifier:

Mirko Miseljic

Martha Katrine Sørensen
EPD Danmark

Life cycle stages and modules (MND = module not declared)																
Product			Construction		Use							End of life				Beyond the system boundary
Raw material supply	Transport	Manufacturing	Transport	Installation process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction	Transport	Waste processing	Disposal	Re-use, recovery and recycling potential
Product 1 and Product 2																
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
X	X	X	MND	MND	X	MND	MND	MND	MND	MND	MND	X	X	X	X	X
Product 3 and Product 4																
X	X	X	X	MND	X	MND	MND	MND	MND	MND	MND	X	X	X	X	X

Product information

Product description

The main product components are shown in the table below. All RECYCON products are made with 100% recycled aggregates. RECYCON is DS/EN 206 and DS/EN 14001 certified. RECYCON Element A/S produces both standard elements and special design (bespoke) elements. Standard elements include so-called system blocks, L-shape elements, and so-called Hoffman blocks.

Material	Weight-% of declared products
Aggregate	80-85%
Cement	9-12%
Water	5-8%
Additives	<1%

Product 1 is any precast concrete element, standard or bespoke, made from RECYCON's proprietary formulation for concrete with 100% recycled building waste as aggregates.

Product 2 is any precast concrete element, standard or bespoke, made from RECYCON's proprietary formulation for concrete with 100% recycled concrete waste as aggregates.

Product 3 is ready mixed liquid concrete made from RECYCON's proprietary formulation for concrete with 100% recycled building waste as aggregates.

Product 4 is ready mixed liquid concrete made from RECYCON's proprietary formulation for concrete with 100% recycled concrete waste as aggregates.

Product packaging

There is no product packaging.

Representativity

This declaration, including data collection and the modeled foreground system including results, represents the production of precast concrete elements as well as liquid concrete at the production site in Fuglebjerg, Denmark. Product specific values are based on data collected in the period from October 1st, 2022 to September 30th, 2023. Background data are based on material supplier EPD's as well as the EcoInvent 3.9 databasa. Generally, the used background datasets are of high quality and have a high degree of representativeness. Allocation of electricity consumption in production to the four products is done by dividing total metered consumption with the total volume of mixed concrete.

Pictures of elements

Bespoke element

System blocks

L-shape

Hoffman blocks

Hazardous substances

Products do not contain substances listed on the "Candidate List of Substances of Very High Concern for Authorization".

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

Essential characteristics

Products fulfill strength class 25 MPa according to DS/EN 1920-5:2018.

Reference Service Life (RSL)

Use case 1 - The Reference Service Life is 100 years in accordance with scenarios 2 and 5 of DS/EN 16575:2022.

Use case 2 - The Reference Service Life is minimum 20 years according to the manufacturer estimates.

LCA background

Declared unit

The LCI and LCIA results in this EPD relates to impacts caused by production, carbonation during use, demolition, transport to site of waste processing, waste processing to produce material for use as road filling as well as benefits from replacement of such natural materials.

Name	Value	Unit
Declared unit	1000	Kg at gate
Density	2230-2265	kg/m3
Conversion factor to 1 kg.	0,001	kg/1000kg

Functional unit

Not defined.

PCR

This EPD is developed according to the core rules for the product category of construction products in EN 15804+A2 and the PCR for concrete and concrete elements EN 16757:2022.

System boundary

This EPD is based on a cradle-to-gate LCA with options covering modules A1-A3, B1, C1-C4, and D. Module A4 is declared for product 3 and product 4 but not for product 1 and product 2.

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

Product stage (A1-A3) includes:

A1 – Extraction and processing of raw materials

Construction waste or waste end-of-life construction products are used for aggregates. Aggregates for product 1 and product 3 are made from end-of-life bricks, tiles and like materials. Product 2 and product 4 are made from end-of-life concrete. Regardless, the waste is delivered directly to RECYCON's production site where it is processed to form two fractions of aggregate.

End-of-waste is reached after crushing and before final screening.

Cement and additives are produced by the respective suppliers.

A2 – Transport to the production site

Cement and additives are transported from their sites of production to the site of RECYCON's production.

A3 – Manufacturing processes

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

The raw materials are mixed in a concrete mixer and poured into a mold to form the element (Product 1 and product 2) or into a specialized transport truck (Product 3 and product 4).

Elements are removed the next day to repeat the procedure and are left to cure for 21 days.

Construction process stage (A4-A5) - includes:

A4 - Transport of the element to its site of use. No packaging is used. Module is not declared for product 1 and product 2. Module is declared for product 3 and product 4. The average distance of transportation is 20 km.

A5 – At the construction site

The element (product 1 and product 2) is lifted into place and built into the building (use case 1) or lifted into its temporary place (use case 2).

The liquid concrete (product 3 and product 4) is poured from the truck into whichever structure it is used for. Module not declared.

Use stage (B1-B7) includes:

B1 – Use

Product 1 and product 2 elements are used as construction materials (use case 1) for separation walls, ducts, and other non-load bearing building structures. Product 1 and product 2 are also used as separation walls, road blocks and like non-building uses (use case 2).

Product 3 and product 4 are liquid concretes used for a variety of purposes in buildings, including floors, decks, cast foundations and multiple other uses. The reference use case for product 3 and product 4 is the casting of a 10 cm thick floor or deck inside a building, where only the top surface is exposed.

Carbonation takes place during use and the degree of carbonation depends on the shape and size of the product as well as its use environment.

The degree of carbonation for precast elements (product 1 and product 2) falls into three categories depending on the surface-to-volume ratio (SVR) of the actual element. In the EPD tables for product 1 and product 2 we declare Category 2, whereas Categories 1 and 3 data are mentioned in the notes.

Category 1: SVR less than or equal to 3 m^2/m^3

Category 2: 3 m^2/m^3 < SVR < 8 m^2/m^3

Category 3: SVR larger than or equal to 8 m^2/m^3

Water used for mixing of the concrete is assumed to evaporate during the use stage.

B2-B7 - These modules are not relevant. Modules are not declared.

End of Life (C1-C4) includes:

C1 – Deconstruction using a mechanical demolition hammer as well as sorting and collection of demolished concrete (use case 1).

Deconstruction is assumed to 100% effective in capturing concrete for recovery.

There is no deconstruction when products are not used as construction materials (use case 2).

C2 – Transport of demolished concrete parts (use case 1) or end-of-life products (use case 2) to the site of waste processing.

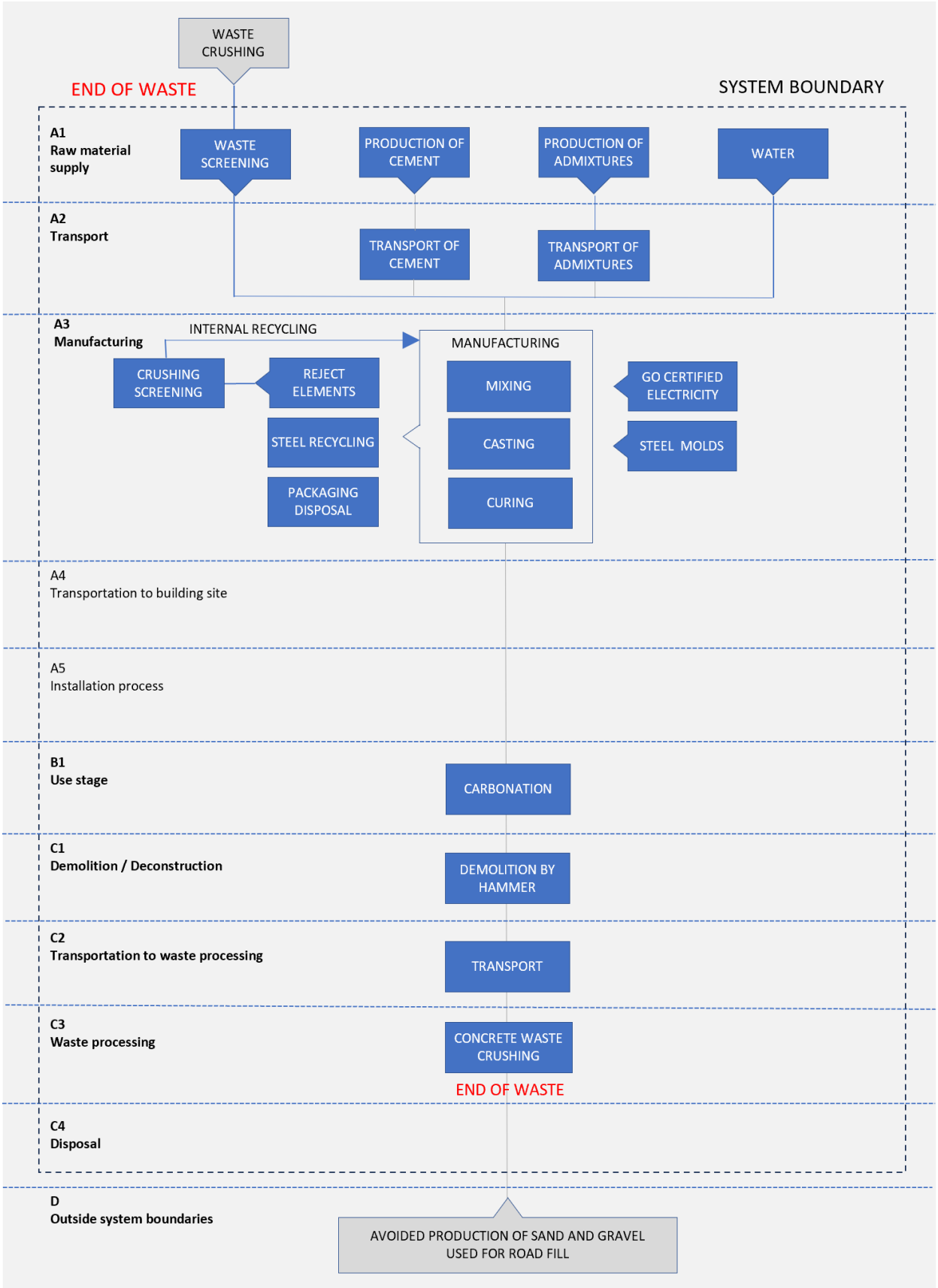
C3 – Waste is processes by 1. Cutting lumps into smaller pieces, when necessary, and 2. Crushing and screening to form a coarse fraction (60%) and a fine fraction (40%). Both fractions are assumed used as a filling material in e.g. road works.

C4 – End-of-waste is reached in module C3 for all wastes, and there is not further disposal.

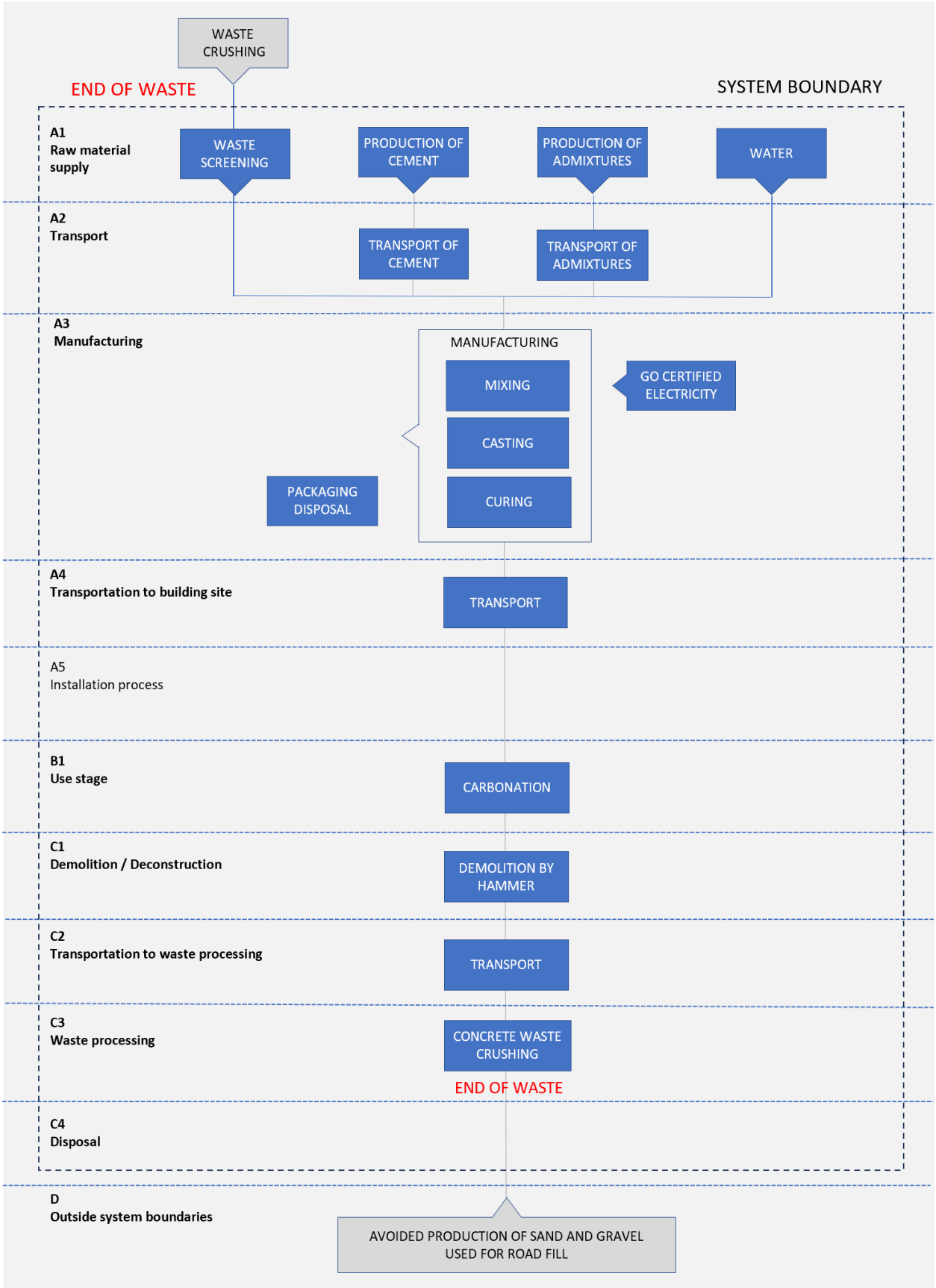
Re-use, recovery and recycling potential (D) includes:

The coarse and the fine fraction replace natural materials of gravel/stone and sand. This is included in module D. Also included in module D are credits associated with energy recovery from incineration of admixture packaging.

Flow diagram Product 1 and Product 2



Flow diagram Product 3 and Product 4



LCA results

Product 1

	ENVIRONMENTAL IMPACTS PER 1000 kg concrete element with recycled building waste							
Parameter	**Unit**	**A1-A3**	**B1***	**C1****	**C2**	**C3**	**C4**	**D**
GWP-total	[kg CO_2 eq.]	8,31E+01	-5,74E+00	4,64E+00	2,11E+00	3,33E+00	0,00E+00	-1,17E+01
GWP-fossil	[kg CO_2 eq.]	8,29E+01	-5,74E+00	4,63E+00	2,11E+00	3,32E+00	0,00E+00	-1,16E+01
GWP-biogenic	[kg CO_2 eq.]	2,40E-01	0,00E+00	1,06E-03	1,69E-03	1,37E-03	0,00E+00	-1,91E-02
GWP-luluc	[kg CO_2 eq.]	1,31E-02	0,00E+00	5,23E-04	1,03E-03	4,01E-04	0,00E+00	-1,80E-02
ODP	[kg CFC 11 eq.]	1,42E-06	0,00E+00	7,38E-08	4,79E-08	5,28E-08	0,00E+00	-1,66E-07
AP	[mol H^+ eq.]	2,35E-01	0,00E+00	4,30E-02	5,23E-03	3,08E-02	0,00E+00	-7,82E-02
EP-freshwater	[kg P eq.]	1,78E-03	0,00E+00	1,42E-04	1,56E-04	1,09E-04	0,00E+00	-1,84E-03
EP-marine	[kg N eq.]	4,27E-02	0,00E+00	1,99E-02	1,42E-03	1,42E-02	0,00E+00	-2,61E-02
EP-terrestrial	[mol N eq.]	4,20E-01	0,00E+00	2,16E-01	1,46E-02	1,55E-01	0,00E+00	-2,84E-01
POCP	[kg NMVOC eq.]	1,47E-01	0,00E+00	6,40E-02	8,55E-03	4,58E-02	0,00E+00	-8,98E-02
ADPm[1]	[kg Sb eq.]	2,14E-04	0,00E+00	1,62E-06	5,91E-06	1,21E-06	0,00E+00	-4,81E-05
ADPf[1]	[MJ]	4,53E+02	0,00E+00	6,07E+01	3,21E+01	4,36E+01	0,00E+00	-1,56E+02
WDP[1]	[m^3 world eq. deprived]	6,83E+00	0,00E+00	1,31E-01	1,53E-01	9,49E-02	0,00E+00	-5,03E+01
Caption		GWP-total = Globale Warming Potential - total; GWP-fossil = Global Warming Potential - fossil fuels; GWP-biogenic = Global Warming Potential - biogenic; GWP-luluc = Global Warming Potential - land use and land use change; ODP = Ozone Depletion; AP = Acidifcation; 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						
		The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: $1,95*10^2$ or 195, while 1,12E-11 is the same as $1,12*10^{-11}$ or 0,0000000000112.						
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.						

* B1 GWP is for element surface to volume ratio between 3m2/m3 and 8 m2/m3. GWP is -2,87 kg CO2-e below 3 m2/m3 and -8,17 kg CO2-e above 8 m2/m3

** C1 not relevant for use case 2.

ADDITIONAL ENVIRONMENTAL IMPACTS PER 1000 kg concrete element with recycled building waste								
Parameter	**Unit**	**A1-A3**	**B1**	**C1**	**C2**	**C3**	**C4**	**D**
PM	[Disease incidence]	2,86E-06	0,00E+00	1,20E-06	2,09E-07	8,55E-07	0,00E+00	-1,30E-06
IRP[2]	[kBq U235 eq.]	6,82E-01	0,00E+00	2,88E-02	4,05E-02	2,39E-02	0,00E+00	-3,88E-01
ETP-fw[1]	[CTUe]	9,39E+02	0,00E+00	2,90E+01	1,54E+01	2,08E+01	0,00E+00	-8,32E+01
HTP-c[1]	[CTUh]	6,34E-08	0,00E+00	1,42E-09	9,41E-10	1,02E-09	0,00E+00	-8,77E-09
HTP-nc[1]	[CTUh]	3,45E-07	0,00E+00	9,85E-09	2,30E-08	7,17E-09	0,00E+00	-1,14E-07
SQP[1]	-	1,30E+02	0,00E+00	4,09E+00	3,25E+01	3,12E+00	0,00E+00	-3,82E+02
Caption	PM = Particulate Matter emissions; IRP = Ionizing radiation – human health; ETP-fw = Eco toxicity – freshwater; HTP-c = Human toxicity – cancer effects; HTP-nc = Human toxicity – non cancer effects; SQP = Soil Quality (dimensionless)							
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: $1,95*10^2$ or 195, while 1,12E-11 is the same as $1,12*10^{-11}$ or 0,0000000000112.							
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.							

RESOURCE USE PER 1000 kg concrete element with recycled building waste								
Parameter	**Unit**	**A1-A3**	**B1**	**C1**	**C2**	**C3**	**C4**	**D**
PERE	[MJ]	1,10E+02	0,00E+00	3,46E-01	4,79E-01	3,90E-01	0,00E+00	-5,88E+00
PERM	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	1,10E+02	0,00E+00	3,46E-01	4,79E-01	3,90E-01	0,00E+00	-5,88E+00
PENRE	[MJ]	4,43E+02	0,00E+00	6,07E+01	3,21E+01	4,36E+01	0,00E+00	-1,56E+02
PENRM	[MJ]	1,95E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	4,63E+02	0,00E+00	6,07E+01	3,21E+01	4,36E+01	0,00E+00	-1,56E+02
SM	[kg]	8,08E+02	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
NRSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	[m^3]	1,51E+00	0,00E+00	1,31E-01	1,53E-01	2,92E-01	0,00E+00	-5,03E+01
Caption	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non renewable primary energy excluding non renewable primary energy resources used as raw materials; PENRM = Use of non renewable primary energy resources used as raw materials; PENRT = Total use of non renewable primary energy resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non renewable secondary fuels; FW = Net use of fresh water							
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: $1,95*10^2$ or 195, while 1,12E-11 is the same as $1,12*10^{-11}$ or 0,0000000000112.							

WASTE CATEGORIES AND OUTPUT FLOWS PER 1000 kg concrete element with recycled building waste								
Parameter	**Unit**	**A1-A3**	**B1**	**C1**	**C2**	**C3**	**C4**	**D**
HWD	[kg]	2,20E+00	0,00E+00	4,09E-04	9,62E-06	2,92E-04	0,00E+00	-1,27E-03
NHWD	[kg]	4,77E+01	0,00E+00	8,69E-02	2,08E-03	6,29E-02	0,00E+00	-5,57E+00
RWD	[kg]	3,59E-03	0,00E+00	6,63E-06	6,12E-05	5,50E-06	0,00E+00	-3,26E-04
CRU	[kg]	2,30E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	[kg]	6,64E+00	0,00E+00	0,00E+00	0,00E+00	9,19E+02	0,00E+00	0,00E+00
MER	[kg]	2,48E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EE	[MJ]	2,10E+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; EE = Exported energy;							
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: $1,95*10^2$ or 195, while 1,12E-11 is the same as $1,12*10^{-11}$ or 0,0000000000112.							

BIOGENIC CARBON CONTENT PER 1000 kg concrete element with recycled building waste		
Parameter	**Unit**	**At the factory gate**
Biogenic carbon content in product	[kg C]	0
Biogenic carbon content in accompanying packagaing	[kg C]	0
Note	1 kg biogenic carbon is equivalent to 44/12 kg of CO_2	

Product 2

	ENVIRONMENTAL IMPACTS PER 1000 kg concrete element with recycled concrete waste							
Parameter	**Unit**	**A1-A3**	**B1***	**C1****	**C2**	**C3**	**C4**	**D**
GWP-total	[kg CO_2 eq.]	7,50E+01	-5,74E+00	4,75E+00	2,16E+00	3,40E+00	0,00E+00	-1,20E+01
GWP-fossil	[kg CO_2 eq.]	7,47E+01	-5,74E+00	4,74E+00	2,16E+00	3,39E+00	0,00E+00	-1,19E+01
GWP-biogenic	[kg CO_2 eq.]	2,75E-01	0,00E+00	1,09E-03	1,73E-03	1,39E-03	0,00E+00	-1,97E-02
GWP-luluc	[kg CO_2 eq.]	1,49E-02	0,00E+00	5,35E-04	1,06E-03	4,10E-04	0,00E+00	-1,84E-02
ODP	[kg CFC 11 eq.]	1,16E-06	0,00E+00	7,55E-08	4,90E-08	5,39E-08	0,00E+00	-1,69E-07
AP	[mol H^+ eq.]	2,04E-01	0,00E+00	4,40E-02	5,36E-03	3,14E-02	0,00E+00	-8,00E-02
EP-freshwater	[kg P eq.]	1,53E-03	0,00E+00	1,46E-04	1,60E-04	1,11E-04	0,00E+00	-1,88E-03
EP-marine	[kg N eq.]	4,12E-02	0,00E+00	2,04E-02	1,46E-03	1,45E-02	0,00E+00	-2,67E-02
EP-terrestrial	[mol N eq.]	3,78E-01	0,00E+00	2,21E-01	1,50E-02	1,58E-01	0,00E+00	-2,91E-01
POCP	[kg NMVOC eq.]	1,32E-01	0,00E+00	6,55E-02	8,75E-03	4,67E-02	0,00E+00	-9,18E-02
ADPm[1]	[kg Sb eq.]	1,77E-04	0,00E+00	1,65E-06	6,05E-06	1,24E-06	0,00E+00	-4,91E-05
ADPf[1]	[MJ]	5,73E+02	0,00E+00	6,21E+01	3,28E+01	4,45E+01	0,00E+00	-1,61E+02
WDP[1]	[m^3 world eq. deprived]	6,66E+00	0,00E+00	1,34E-01	1,57E-01	9,69E-02	0,00E+00	-5,14E+01
Caption		GWP-total = Globale Warming Potential - total; GWP-fossil = Global Warming Potential - fossil fuels; GWP-biogenic = Global Warming Potential - biogenic; GWP-luluc = Global Warming Potential - land use and land use change; ODP = Ozone Depletion; AP = Acidifcation; 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						
		The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: $1,95*10^2$ or 195, while 1,12E-11 is the same as $1,12*10^{-11}$ or 0,0000000000112.						
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.						

* B1 GWP is for element surface to volume ratio between 3m2/m3 and 8 m2/m3. GWP is -2,92 kg CO2-e below 3 m2/m3 and -6,61 kg CO2-e above 8 m2/m3
** C1 not relevant for use case 2.

ADDITIONAL ENVIRONMENTAL IMPACTS PER 1000 kg concrete element with recycled concrete waste								
Parameter	**Unit**	**A1-A3**	**B1**	**C1**	**C2**	**C3**	**C4**	**D**
PM	[Disease incidence]	2,41E-06	0,00E+00	1,22E-06	2,14E-07	8,73E-07	0,00E+00	-1,32E-06
IRP[2]	[kBq U235 eq.]	1,31E+00	0,00E+00	2,95E-02	4,15E-02	2,44E-02	0,00E+00	-3,96E-01
ETP-fw[1]	[CTUe]	8,32E+02	0,00E+00	2,97E+01	1,58E+01	2,12E+01	0,00E+00	-8,49E+01
HTP-c[1]	[CTUh]	5,35E-08	0,00E+00	1,45E-09	9,63E-10	1,04E-09	0,00E+00	-8,96E-09
HTP-nc[1]	[CTUh]	3,50E-07	0,00E+00	1,01E-08	2,35E-08	7,32E-09	0,00E+00	-1,17E-07
SQP[1]	-	1,43E+02	0,00E+00	4,18E+00	3,33E+01	3,19E+00	0,00E+00	-3,90E+02
Caption	PM = Particulate Matter emissions; IRP = Ionizing radiation – human health; ETP-fw = Eco toxicity – freshwater; HTP-c = Human toxicity – cancer effects; HTP-nc = Human toxicity – non cancer effects; SQP = Soil Quality (dimensionless)							
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: $1,95*10^2$ or 195, while 1,12E-11 is the same as $1,12*10^{-11}$ or 0,0000000000112.							
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.							

RESOURCE USE PER 1000 kg concrete element with recycled concrete waste								
Parameter	**Unit**	**A1-A3**	**B1**	**C1**	**C2**	**C3**	**C4**	**D**
PERE	[MJ]	1,14E+02	0,00E+00	3,54E-01	4,90E-01	3,98E-01	0,00E+00	-6,24E+00
PERM	[MJ]	1,34E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	1,15E+02	0,00E+00	3,54E-01	4,90E-01	3,98E-01	0,00E+00	-6,24E+00
PENRE	[MJ]	5,54E+02	0,00E+00	6,21E+01	3,28E+01	4,45E+01	0,00E+00	-1,61E+02
PENRM	[MJ]	1,01E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	6,56E+02	0,00E+00	6,21E+01	3,28E+01	4,45E+01	0,00E+00	-1,61E+02
SM	[kg]	8,43E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	[MJ]	8,31E-01	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
FW	[m^3]	1,47E+00	0,00E+00	1,34E-01	1,57E-01	2,98E-01	0,00E+00	-5,14E+01
Caption	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non renewable primary energy excluding non renewable primary energy resources used as raw materials; PENRM = Use of non renewable primary energy resources used as raw materials; PENRT = Total use of non renewable primary energy resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non renewable secondary fuels; FW = Net use of fresh water							
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: $1,95*10^2$ or 195, while 1,12E-11 is the same as $1,12*10^{-11}$ or 0,0000000000112.							

WASTE CATEGORIES AND OUTPUT FLOWS PER 1000 kg concrete element with recycled concrete waste								
Parameter	**Unit**	**A1-A3**	**B1**	**C1**	**C2**	**C3**	**C4**	**D**
HWD	[kg]	1,78E+00	0,00E+00	4,18E-04	9,85E-06	2,99E-04	0,00E+00	-1,30E-03
NHWD	[kg]	3,88E+01	0,00E+00	8,89E-02	2,13E-03	6,42E-02	0,00E+00	-5,69E+00
RWD	[kg]	9,83E-03	0,00E+00	6,79E-06	6,26E-05	5,62E-06	0,00E+00	-4,13E-04
CRU	[kg]	1,86E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	[kg]	1,39E+00	0,00E+00	0,00E+00	0,00E+00	9,40E+00	0,00E+00	0,00E+00
MER	[kg]	2,47E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EE	[MJ]	2,90E+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; EE = Exported energy;							
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: $1,95*10^2$ or 195, while 1,12E-11 is the same as $1,12*10^{-11}$ or 0,0000000000112.							

BIOGENIC CARBON CONTENT PER 1000 kg concrete element with recycled concrete waste		
Parameter	**Unit**	**At the factory gate**
Biogenic carbon content in product	[kg C]	0
Biogenic carbon centent in accompanying packagaing	[kg C]	0
Note	1 kg biogenic carbon is equivalent to 44/12 kg of CO_2	

Product 3

	ENVIRONMENTAL IMPACTS PER 1000 kg liquid concrete with recycled building waste								
Parameter	**Unit**	**A1-A3**	**A4**	**B1***	**C1**	**C2**	**C3**	**C4**	**D**
GWP-total	[kg CO_2 eq.]	8,30E+01	3,28E+00	-7,15E+00	4,64E+00	2,11E+00	3,33E+00	0,00E+00	-1,17E+01
GWP-fossil	[kg CO_2 eq.]	8,27E+01	3,28E+00	-7,15E+00	4,63E+00	2,11E+00	3,32E+00	0,00E+00	-1,16E+01
GWP-biogenic	[kg CO_2 eq.]	2,54E-01	2,62E-03	0,00E+00	1,06E-03	1,69E-03	1,37E-03	0,00E+00	-1,91E-02
GWP-luluc	[kg CO_2 eq.]	1,30E-02	1,60E-03	0,00E+00	5,23E-04	1,03E-03	4,01E-04	0,00E+00	-1,80E-02
ODP	[kg CFC 11 eq.]	1,41E-06	7,45E-08	0,00E+00	7,38E-08	4,79E-08	5,28E-08	0,00E+00	-1,66E-07
AP	[mol H^+ eq.]	2,34E-01	8,13E-03	0,00E+00	4,30E-02	5,23E-03	3,08E-02	0,00E+00	-7,82E-02
EP-freshwater	[kg P eq.]	1,65E-03	2,42E-04	0,00E+00	1,42E-04	1,56E-04	1,09E-04	0,00E+00	-1,84E-03
EP-marine	[kg N eq.]	4,25E-02	2,21E-03	0,00E+00	1,99E-02	1,42E-03	1,42E-02	0,00E+00	-2,61E-02
EP-terrestrial	[mol N eq.]	4,18E-01	2,27E-02	0,00E+00	2,16E-01	1,46E-02	1,55E-01	0,00E+00	-2,84E-01
POCP	[kg NMVOC eq.]	1,45E-01	1,33E-02	0,00E+00	6,40E-02	8,55E-03	4,58E-02	0,00E+00	-8,98E-02
ADPm[1]	[kg Sb eq.]	2,11E-04	9,18E-06	0,00E+00	1,62E-06	5,91E-06	1,21E-06	0,00E+00	-4,81E-05
ADPf[1]	[MJ]	4,61E+02	4,99E+01	0,00E+00	6,07E+01	3,21E+01	4,36E+01	0,00E+00	-1,56E+02
WDP[1]	[m^3 world eq. deprived]	6,85E+00	2,38E-01	0,00E+00	1,31E-01	1,53E-01	9,49E-02	0,00E+00	-5,03E+01
Caption		GWP-total = Globale Warming Potential - total; GWP-fossil = Global Warming Potential - fossil fuels; GWP-biogenic = Global Warming Potential - biogenic; GWP-luluc = Global Warming Potential - land use and land use change; ODP = Ozone Depletion; AP = Acidifcation; 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							
		The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: $1,95*10^2$ or 195, while 1,12E-11 is the same as $1,12*10^{-11}$ or 0,0000000000112.							
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.							

*B1 GWP is calculated for the use of concrete for a 10 cm thick floor inside a building.

ADDITIONAL ENVIRONMENTAL IMPACTS PER 1000 kg liquid concrete with recycled building waste									
Parameter	**Unit**	**A1-A3**	**A4**	**B1**	**C1**	**C2**	**C3**	**C4**	**D**
PM	[Disease incidence]	2,82E-06	3,25E-07	0,00E+00	1,20E-06	2,09E-07	8,55E-07	0,00E+00	-1,30E-06
IRP[2]	[kBq U235 eq.]	6,68E-01	6,30E-02	0,00E+00	2,88E-02	4,05E-02	2,39E-02	0,00E+00	-3,88E-01
ETP-fw[1]	[CTUe]	9,31E+02	2,40E+01	0,00E+00	2,90E+01	1,54E+01	2,08E+01	0,00E+00	-8,32E+01
HTP-c[1]	[CTUh]	6,10E-08	1,46E-09	0,00E+00	1,42E-09	9,41E-10	1,02E-09	0,00E+00	-8,77E-09
HTP-nc[1]	[CTUh]	3,38E-07	3,58E-08	0,00E+00	9,85E-09	2,30E-08	7,17E-09	0,00E+00	-1,14E-07
SQP[1]	-	1,28E+02	5,05E+01	0,00E+00	4,09E+00	3,25E+01	3,12E+00	0,00E+00	-3,82E+02
Caption		PM = Particulate Matter emissions; IRP = Ionizing radiation – human health; ETP-fw = Eco toxicity – freshwater; HTP-c = Human toxicity – cancer effects; HTP-nc = Human toxicity – non cancer effects; SQP = Soil Quality (dimensionless)							
		The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: $1,95*10^2$ or 195, while 1,12E-11 is the same as $1,12*10^{-11}$ or 0,0000000000112.							
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.							

RESOURCE USE PER 1000 kg liquid concrete with recycled building waste									
Parameter	**Unit**	**A1-A3**	**A4**	**B1**	**C1**	**C2**	**C3**	**C4**	**D**
PERE	[MJ]	1,10E+02	7,45E-01	0,00E+00	3,46E-01	4,79E-01	3,90E-01	0,00E+00	-5,88E+00
PERM	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	1,10E+02	7,45E-01	0,00E+00	3,46E-01	4,79E-01	3,90E-01	0,00E+00	-5,88E+00
PENRE	[MJ]	4,48E+02	4,99E+01	0,00E+00	6,07E+01	3,21E+01	4,36E+01	0,00E+00	-1,56E+02
PENRM	[MJ]	2,29E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	4,71E+02	4,99E+01	0,00E+00	6,07E+01	3,21E+01	4,36E+01	0,00E+00	-1,56E+02
SM	[kg]	8,04E+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]	1,48E+00	2,38E-01	0,00E+00	1,31E-01	1,53E-01	2,92E-01	0,00E+00	-5,03E+01
Caption		PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non renewable primary energy excluding non renewable primary energy resources used as raw materials; PENRM = Use of non renewable primary energy resources used as raw materials; PENRT = Total use of non renewable primary energy resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non renewable secondary fuels; FW = Net use of fresh water							
		The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: $1,95*10^2$ or 195, while 1,12E-11 is the same as $1,12*10^{-11}$ or 0,0000000000112.							

WASTE CATEGORIES AND OUTPUT FLOWS PER 1000 kg liquid concrete with recycled building waste									
Parameter	**Unit**	**A1-A3**	**A4**	**B1**	**C1**	**C2**	**C3**	**C4**	**D**
HWD	[kg]	2,19E+00	1,50E-05	0,00E+00	4,09E-04	9,62E-06	2,92E-04	0,00E+00	-1,27E-03
NHWD	[kg]	4,72E+01	3,24E-03	0,00E+00	8,69E-02	2,08E-03	6,29E-02	0,00E+00	-5,57E+00
RWD	[kg]	3,75E-03	9,51E-05	0,00E+00	6,63E-06	6,12E-05	5,50E-06	0,00E+00	-3,25E-04
CRU	[kg]	2,29E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	[kg]	4,81E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,19E+02	0,00E+00	0,00E+00
MER	[kg]	2,46E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EE	[MJ]	2,17E+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; EE = Exported energy;							
		The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: $1,95*10^2$ or 195, while 1,12E-11 is the same as $1,12*10^{-11}$ or 0,0000000000112.							

BIOGENIC CARBON CONTENT PER 1000 kg liquid concrete with recycled building waste		
Parameter	**Unit**	**At the factory gate**
Biogenic carbon content in product	[kg C]	0
Biogenic carbon content in accompanying packagaing	[kg C]	0
Note	1 kg biogenic carbon is equivalent to 44/12 kg of CO_2	

Product 4

	ENVIRONMENTAL IMPACTS PER 1000 kg liquid concrete with recycled concrete waste								
Parameter	**Unit**	**A1-A3**	**A4**	**B1***	**C1**	**C2**	**C3**	**C4**	**D**
GWP-total	[kg CO_2 eq.]	7,77E+01	3,28E+00	-5,78E+00	4,75E+00	2,16E+00	3,40E+00	0,00E+00	-1,20E+01
GWP-fossil	[kg CO_2 eq.]	7,74E+01	3,28E+00	-5,78E+00	4,74E+00	2,16E+00	3,39E+00	0,00E+00	-1,20E+01
GWP-biogenic	[kg CO_2 eq.]	3,83E-01	2,62E-03	0,00E+00	1,09E-03	1,73E-03	1,39E-03	0,00E+00	4,72E-02
GWP-luluc	[kg CO_2 eq.]	1,57E-02	1,60E-03	0,00E+00	5,35E-04	1,06E-03	4,10E-04	0,00E+00	-1,84E-02
ODP	[kg CFC 11 eq.]	1,15E-06	7,45E-08	0,00E+00	7,55E-08	4,90E-08	5,39E-08	0,00E+00	-1,72E-07
AP	[mol H^+ eq.]	2,07E-01	8,13E-03	0,00E+00	4,40E-02	5,36E-03	3,14E-02	0,00E+00	-8,03E-02
EP-freshwater	[kg P eq.]	1,49E-03	2,42E-04	0,00E+00	1,46E-04	1,60E-04	1,11E-04	0,00E+00	-1,88E-03
EP-marine	[kg N eq.]	4,45E-02	2,21E-03	0,00E+00	2,04E-02	1,46E-03	1,45E-02	0,00E+00	-2,68E-02
EP-terrestrial	[mol N eq.]	3,87E-01	2,27E-02	0,00E+00	2,21E-01	1,50E-02	1,58E-01	0,00E+00	-2,91E-01
POCP	[kg NMVOC eq.]	1,34E-01	1,33E-02	0,00E+00	6,55E-02	8,75E-03	4,67E-02	0,00E+00	-9,20E-02
ADPm[1]	[kg Sb eq.]	1,83E-04	9,18E-06	0,00E+00	1,65E-06	6,05E-06	1,24E-06	0,00E+00	-4,91E-05
ADPf[1]	[MJ]	6,28E+02	4,99E+01	0,00E+00	6,21E+01	3,28E+01	4,45E+01	0,00E+00	-1,63E+02
WDP[1]	[m^3 world eq. deprived]	7,06E+00	2,38E-01	0,00E+00	1,34E-01	1,57E-01	9,69E-02	0,00E+00	-5,14E+01
Caption		GWP-total = Globale Warming Potential - total; GWP-fossil = Global Warming Potential - fossil fuels; GWP-biogenic = Global Warming Potential - biogenic; GWP-luluc = Global Warming Potential - land use and land use change; ODP = Ozone Depletion; AP = Acidifcation; 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							
		The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: $1,95*10^2$ or 195, while 1,12E-11 is the same as $1,12*10^{-11}$ or 0,0000000000112.							
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.							

*B1 GWP is calculated for the use of concrete for a 10 cm thick floor inside a building.

ADDITIONAL ENVIRONMENTAL IMPACTS PER 1000 kg liquid concrete with recycled concrete waste									
Parameter	**Unit**	**A1-A3**	**A4**	**B1**	**C1**	**C2**	**C3**	**C4**	**D**
PM	[Disease incidence]	2,40E-06	3,25E-07	0,00E+00	1,22E-06	2,14E-07	8,73E-07	0,00E+00	-1,33E-06
IRP[2]	[kBq U235 eq.]	1,31E+00	6,30E-02	0,00E+00	2,95E-02	4,15E-02	2,44E-02	0,00E+00	-3,97E-01
ETP-fw[1]	[CTUe]	8,28E+02	2,40E+01	0,00E+00	2,97E+01	1,58E+01	2,12E+01	0,00E+00	-8,50E+01
HTP-c[1]	[CTUh]	5,21E-08	1,46E-09	0,00E+00	1,45E-09	9,63E-10	1,04E-09	0,00E+00	-8,96E-09
HTP-nc[1]	[CTUh]	3,53E-07	3,58E-08	0,00E+00	1,01E-08	2,35E-08	7,32E-09	0,00E+00	-1,17E-07
SQP[1]	-	1,42E+02	5,05E+01	0,00E+00	4,18E+00	3,33E+01	3,19E+00	0,00E+00	-3,90E+02
Caption		PM = Particulate Matter emissions; IRP = Ionizing radiation – human health; ETP-fw = Eco toxicity – freshwater; HTP-c = Human toxicity – cancer effects; HTP-nc = Human toxicity – non cancer effects; SQP = Soil Quality (dimensionless)							
		The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: $1,95*10^2$ or 195, while 1,12E-11 is the same as $1,12*10^{-11}$ or 0,0000000000112.							
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.							

RESOURCE USE PER 1000 kg liquid concrete with recycled concrete waste									
Parameter	**Unit**	**A1-A3**	**A4**	**B1**	**C1**	**C2**	**C3**	**C4**	**D**
PERE	[MJ]	1,70E+02	7,45E-01	0,00E+00	3,54E-01	4,90E-01	3,98E-01	0,00E+00	-6,56E+00
PERM	[MJ]	1,34E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	1,71E+02	7,45E-01	0,00E+00	3,54E-01	4,90E-01	3,98E-01	0,00E+00	-6,56E+00
PENRE	[MJ]	5,98E+02	4,99E+01	0,00E+00	6,21E+01	3,28E+01	4,45E+01	0,00E+00	-1,63E+02
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]	7,10E+02	4,99E+01	0,00E+00	6,21E+01	3,28E+01	4,45E+01	0,00E+00	-1,63E+02
SM	[kg]	8,43E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	[MJ]	8,26E-01	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]	2,32E+00	2,38E-01	0,00E+00	1,34E-01	1,57E-01	2,98E-01	0,00E+00	-5,14E+01
Caption		PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non renewable primary energy excluding non renewable primary energy resources used as raw materials; PENRM = Use of non renewable primary energy resources used as raw materials; PENRT = Total use of non renewable primary energy resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non renewable secondary fuels; FW = Net use of fresh water							
		The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: $1,95*10^2$ or 195, while 1,12E-11 is the same as $1,12*10^{-11}$ or 0,0000000000112.							

WASTE CATEGORIES AND OUTPUT FLOWS PER 1000 kg liquid concrete with recycled concrete waste									
Parameter	**Unit**	**A1-A3**	**A4**	**B1**	**C1**	**C2**	**C3**	**C4**	**D**
HWD	[kg]	1,77E+00	1,50E-05	0,00E+00	4,18E-04	9,85E-06	2,99E-04	0,00E+00	-1,30E-03
NHWD	[kg]	3,85E+01	3,24E-03	0,00E+00	8,89E-02	2,13E-03	6,42E-02	0,00E+00	-5,74E+00
RWD	[kg]	1,11E-02	9,51E-05	0,00E+00	6,79E-06	6,26E-05	5,62E-06	0,00E+00	-5,46E-04
CRU	[kg]	1,85E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	[kg]	3,90E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,40E+02	0,00E+00	0,00E+00
MER	[kg]	2,46E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EE	[MJ]	3,83E+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; EE = Exported energy;							
		The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: $1,95*10^2$ or 195, while 1,12E-11 is the same as $1,12*10^{-11}$ or 0,0000000000112.							

BIOGENIC CARBON CONTENT PER 1000 kg liquid concrete with recycled concrete waste		
Parameter	**Unit**	**At the factory gate**
Biogenic carbon content in product	[kg C]	0
Biogenic carbon content in accompanying packagaing	[kg C]	0
Note	1 kg biogenic carbon is equivalent to 44/12 kg of CO_2	

Additional information

Technical information on scenarios

Transport to the building site (A4) for product 3 and product 4.

Scenario information	Value	Unit
Type of vehicle	Truck EURO6 >32 t	
Transport distance	20	km
Transported weight	1000	kg
Capacity utilization (including empty runs)	61	%
Gross density of products transported	2250	Kg/m3

Reference service life

RSL information	Use case 1	Use case 2	Unit
Reference service Life	100	20	Years
Declared product properties	Elements and liquid concrete 25 MPa		

End of life (C1-C4)

Scenario information	P1 and P3	P2 and P4	Unit
Collected separately	919	940	kg
Collected with mixed waste	0	0	kg
For reuse	0	0	kg
For recycling	919	940	kg
For energy recovery	0	0	kg
For final disposal	0	0	kg
Assumptions for scenario development	Waste 100% recovered for recycling		

Re-use, recovery and recycling potential (D)

Scenario information	P1 and P3	P2 and P4	Unit
Crushed concrete replaces sand from natural sources	368	376	kg
Crushed concrete replaces gravel from natural sources	551	564	kg

References

Publisher	www.epddanmark.dk Template version 2022.2
Programme operator	Danish Technological Institute Buildings & Environment Gregersensvej DK-2630 Taastrup www.teknologisk.dk
LCA-practitioner	Jens Legarth Sustaineering ApS Agern Alle 24 DK-2970 Hørsholm, Denmark
LCA software /background data	The EPD is based on supplier EPDs as well as generic datasets from EcoInvent 3.9.
3rd party verifier	Mirko Miseljic FORCE Technology Park Alle 345 DK-2605 Brøndby, Denmark

General programme instructions
General Programme Instructions, version 2.0, spring 2020, www.epddanmark.dk

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