

Environmental Product Declaration (EPD)  
According to ISO 14025 and EN 15804

# Concrete foundation for lightning poles and traffic signs

Registration number:	EPD-Kiwa-EE-158830-EN
Issue date:	15-04-2024
Valid until:	15-04-2029
Declaration owner:	Cetong AB
Publisher:	Kiwa-Ecobility Experts
Program operator:	Kiwa-Ecobility Experts
Status:	verified



# 1 General information

## 1.1 PRODUCT

Concrete foundation for lightning poles and traffic signs

## 1.2 REGISTRATION NUMBER

EPD-Kiwa-EE-158830-EN

## 1.3 VALIDITY

**Issue date:** 15-04-2024

**Valid until:** 15-04-2029

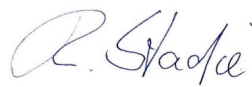
## 1.4 PROGRAM OPERATOR

Kiwa-Ecobility Experts  
Wattstraße 11-13  
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DE



Raoul Mancke

*(Head of programme operations, Kiwa-Ecobility Experts)*



Dr. Ronny Stadie

*(Verification body, Kiwa-Ecobility Experts)*

## 1.5 OWNER OF THE DECLARATION

**Manufacturer:** Cetong AB

**Address:** Malmövägen 1, 26538 Åstorp, SE

**E-mail:** cetong@info.se

**Website:** www.cetong.se

**Production location:** Cetong

**Address production location:** Malmövägen 1, 26538 Åstorp, SE

## 1.6 VERIFICATION OF THE DECLARATION

The independent verification is in accordance with the ISO 14025:2011. The LCA is in compliance with ISO 14040:2006 and ISO 14044:2006. The EN 15804:2012+A2:2019 serves as the core PCR.

Internal  External



Dr.-Ing. Morteza Nikravan, Kiwa GmbH

## 1.7 STATEMENTS

The owner of this EPD shall be liable for the underlying information and evidence. The programme operator Kiwa-Ecobility Experts shall not be liable with respect to manufacturer data, life cycle assessment data and evidence.

## 1.8 PRODUCT CATEGORY RULES

Kiwa-Ecobility Experts (Kiwa-EE) – General Product Category Rules (2022-02-14)

EN 15804+A2 EN 15804+A2: 2019: Sustainability of construction works — Environmental Product Declarations — Core rules for the product category of construction products

EN 16757:2022 Sustainability of construction works - Environmental product declarations - Product Category Rules for concrete and concrete elements

## 1.9 COMPARABILITY

In principle, a comparison or assessment of the environmental impacts of different products is only possible if they have been prepared in accordance with EN 15804. For the evaluation of the comparability, the following aspects have to be considered in particular: PCR used, functional or declared unit, geographical reference, the definition of the system

# 1 General information

boundary, declared modules, data selection (primary or secondary data, background database, data quality), scenarios used for use and disposal phases, and the life cycle inventory (data collection, calculation methods, allocations, validity period). PCRs and general program instructions of different EPDs programs may differ. Comparability needs to be evaluated. For further guidance, see EN 15804+A2 (5.3 Comparability of EPD for construction products) and ISO 14025 (6.7.2 Requirements for comparability).

## 1.10 CALCULATION BASIS

**LCA method R<THiNK:** Ecobility Experts | EN15804+A2

**LCA software\*:** Simapro 9.1

**Characterization method:** EN 15804 +A2 Method v1.0

**LCA database profiles:** EcolInvent version 3.6

**Version database:** v3.16 (2024-02-12)

*\* Used for calculating the characterized results of the Environmental profiles within R<THiNK.*

## 1.11 LCA BACKGROUND REPORT

This EPD is generated on the basis of the LCA background report 'Concrete foundation for lightning poles and traffic signs' with the calculation identifier ReTHiNK-58830.

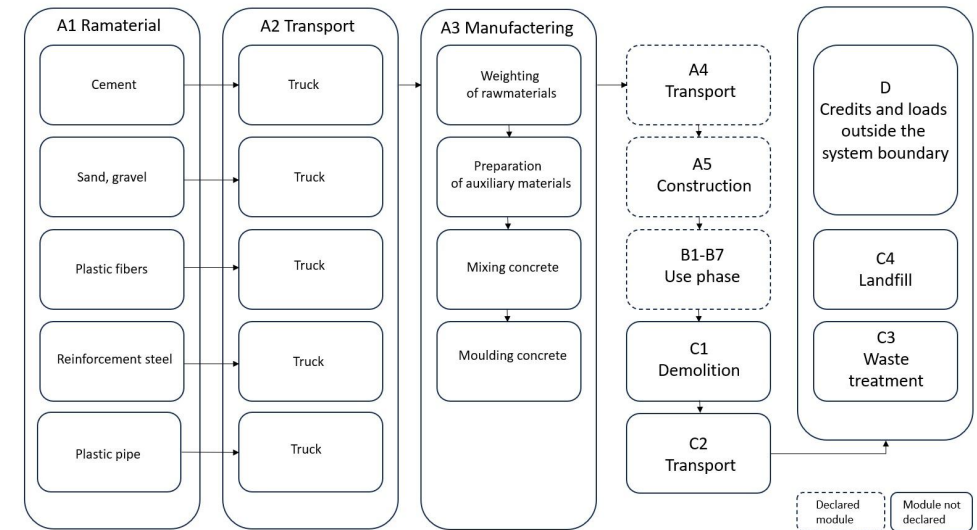
## 2 Product

### 2.1 PRODUCT DESCRIPTION

The foundations are made of reinforced concrete. They are equipped with plastic cable intakes for several power lines. The foundations are available in different heights, from 500 cm to 2000 cm. The width/diameter of the product ranges from 250 cm to 416 cm. There are recesses for pole and cable intake which come in different sizes. The footings weight between 30 and 740 kg. Because of the fact, that the foundations are available in different dimensions but are always made from the same materials, with just the mass of reinforced concrete significantly differing, kilogram was chosen as the declared unit.

E-number	Typ	Weight piece (kg)
7778600	Svart/500	30
7778611	Svart Special	30
7778640	Röd/700	78
7778650	Röd/900	136
7778660	Gul/700	74
7778670	Gul/900	126
7778680	Gul/1300	224
7778690	Grön/700	72
7778700	Grön/1000	196

7778710	Grön/1300	268
7778720	Grön/1500	316
7778730	Blå/750	94
7778740	Blå/1300	310
7778750	Blå/1500	390
7778760	Blå/1800	492
7771044	Brun/900	295
7778770	Brun/1500	500
7778790	Brun/2000	740



### 2.2 APPLICATION (INTENDED USE OF THE PRODUCT)

The prefabricated concrete foundations are intended to be used as footing for lightning poles and traffic signs.

Main customers for this product are other companies.

### 2.3 REFERENCE SERVICE LIFE

#### RSL PRODUCT

The concrete composition limits given in EN 206 are specified for an intended service life of at least 50 years under the respective exposure classes/ environmental conditions.

#### USED RSL (YR) IN THIS LCA CALCULATION:

50

### 2.4 TECHNICAL DATA

Strength class C54/65

Water/cement: 0,33

## 2 Product

Quality reinforcement steel: K500

### Base material concrete foundation

*Rawmaterial*

Cement 18 %

Sand 46,95 %

Gravel 30 %

Water 4.4 %

Plastic fibers 0.26 %

Reinforcement steel rings 0.21 %

Plastic pipe 0.18 %

No further additives included (according to producer)

*Ancillary material*

Diesel

Mould release agent

### 2.5 SUBSTANCES OF VERY HIGH CONCERN

The product contains no substances of high concern (SVHC).

### 2.6 DESCRIPTION PRODUCTION PROCESS

The manufacturing contains the following processes:

- Delivery of raw materials
- The raw materials are weighted.
- Preparation of the molds (plywood formwork, laying out of the reinforcement and cable intake)
- Concrete is mixed and filled into the molds, curing.
- Removal of the formwork, finishing, storage.

### 3 Calculation rules

#### 3.1 DECLARED UNIT

kg

1 kg concrete foundation

reference\_unit: kilogram (kg)

#### 3.2 CONVERSION FACTORS

Description	Value	Unit
reference_unit	1	kg
Conversion factor to 1 kg	1.000000	kg

#### 3.3 SCOPE OF DECLARATION AND SYSTEM BOUNDARIES

This is a Cradle to gate with modules C1-C4 and module D LCA. The life cycle stages included are as shown below:

(X = module included, ND = module not declared)

A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
X	X	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	X	X	X	X	X

The modules of the EN15804 contain the following:

Module A1 = Raw material supply	Module B5 = Refurbishment
Module A2 = Transport	Module B6 = Operational energy use
Module A3 = Manufacturing	Module B7 = Operational water use
Module A4 = Transport	Module C1 = De-construction / Demolition
Module A5 = Construction - Installation process	Module C2 = Transport
Module B1 = Use	Module C3 = Waste Processing
Module B2 = Maintenance	Module C4 = Disposal
Module B3 = Repair	Module D = Benefits and loads beyond the product system boundaries
Module B4 = Replacement	

#### 3.4 REPRESENTATIVENESS

This EPD is representative for Concrete foundation for lightning poles and traffic signs, a product of Cetong AB . The results of this EPD are representative for European Union.

#### 3.5 CUT-OFF CRITERIA

##### Product Stage (A1-A3)

All input flows (e.g. raw materials, transportation, energy use, packaging, etc.) and output flows (e.g. production waste) are considered in this LCA. The total neglected input flows do therefore not exceed the limit of 5% of energy use and mass.

### 3 Calculation rules

#### End of life stage (C1-C4)

All input flows (e.g. energy use for demolition or disassembly, transport to waste processing, etc.) and output flows (e.g. end-of-life waste processing of the product, etc.) are considered in this LCA. The total neglected input flows do therefore not exceed the limit of 5% of energy use and mass.

#### Benefits and Loads beyond the system boundary (Module D)

All benefits and loads beyond the system boundary resulting from reusable products, recyclable materials and/or useful energy carriers leaving the product system are considered in this LCA.

#### 3.6 ALLOCATION

There are no co-products in the raw material supply phase, so no allocation methods were used at this stage. There are no allocations during the manufacturing phase at the plant.

#### 3.7 DATA COLLECTION & REFERENCE TIME PERIOD

All process-specific data was collected for the operating year 2022. The quantities of raw and auxiliary materials as well as energy consumption have been recorded and averaged over the entire operating year 2022.

#### 3.8 ESTIMATES AND ASSUMPTIONS

The raw material data, the energy consumption, ancillary materials and production waste is recorded according to the total annual production at the factory (incl. averaging the obtained data depending on the proportion of the total).

#### 3.9 DATA QUALITY

In the operating data survey all relevant process-specific data has been collected. The data relating to the manufacturing phase of the concrete foundations was determined by Cetong AB and refers to the production site in Åstorp, Malmövägen 1. Secondary data was taken from the Ecoinvent 3.6 (2019) database. The database is regularly checked and thus complies with the requirements of ISO 14040/44 (background data not older than 10 years). The background data meets the requirements of EN 15804. The general rule was followed that specific data from specific production processes or average data derived from specific processes must be given priority when calculating an EPD or Life Cycle Assessment. Data for processes that the manufacturer cannot influence or choose, were backed up with generic data.

#### 3.10 GUARANTEES OF ORIGIN

The electricity mix was modeled using the country mix approach, so no GOs were taken into account.

## 4 Scenarios and additional technical information

### 4.1 DE-CONSTRUCTION, DEMOLITION (C1)

The following information describes the scenario for demolition at end of life.

Description	Amount	Unit
Diesel, burned in machine (incl. emissions)	0.001	l

### 4.2 TRANSPORT END-OF-LIFE (C2)

The following distances and transport conveyance are assumed for transportation during end of life for the different types of waste processing.

Waste Scenario	Transport conveyance	Not removed (stays in work) [km]	Landfill [km]	Incineration [km]	Recycling [km]	Re-use [km]
concrete (i.a. elements, brickwork, reinforced concrete) (NMD ID 9)	Lorry (Truck), unspecified (default)   market group for (GLO)	0	100	150	50	0
waste not applicable or evaporated (empty scenario) (NMD ID 26)	Lorry (Truck), unspecified (default)   market group for (GLO)	0	0	0	0	0

The transport conveyance(s) used in the scenario(s) for transport during end of life has the following characteristics.

	Value and unit
Vehicle type used for transport	Lorry (Truck), unspecified (default)   market group for (GLO)
Fuel type and consumption of vehicle	not available
Capacity utilisation (including empty returns)	50 % (loaded up and return empty)
Bulk density of transported products	inapplicable
Volume capacity utilisation factor	1

### 4.3 END OF LIFE (C3, C4)

The scenario(s) assumed for end of life of the product are given in the following tables. First the assumed percentages per type of waste processing are displayed, followed by the assumed amounts.



## 4 Scenarios and additional technical information

Waste Scenario	Region	Not removed (stays in work) [%]	Landfill [%]	Incineration [%]	Recycling [%]	Re-use [%]
concrete (i.a. elements, brickwork, reinforced concrete) (NMD ID 9)	NL	0	1	0	99	0
waste not applicable or evaporated (empty scenario) (NMD ID 26)	NL	0	0	0	0	0

Waste Scenario	Not removed (stays in work) [kg]	Landfill [kg]	Incineration [kg]	Recycling [kg]	Re-use [kg]
concrete (i.a. elements, brickwork, reinforced concrete) (NMD ID 9)	0.000	0.010	0.000	0.946	0.000
<b>Total</b>	<b>0.000</b>	<b>0.010</b>	<b>0.000</b>	<b>0.946</b>	<b>0.000</b>

### 4.4 BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARY (D)

The presented Benefits and loads beyond the system boundary in this EPD are based on the following calculated Net output flows in kilograms and Energy recovery displayed in MJ Lower Heating Value.

Waste Scenario	Net output flow [kg]	Energy recovery [MJ]
concrete (i.a. elements, brickwork, reinforced concrete) (NMD ID 9)	0.946	0.000
waste not applicable or evaporated (empty scenario) (NMD ID 26)	0.000	0.000
<b>Total</b>	<b>0.946</b>	<b>0.000</b>

## 5 Results

For the impact assessment, the characterization factors of the LCIA method EN 15804 +A2 Method v1.0 are used. Long-term emissions (>100 years) are not considered in the impact assessment. The results of the impact assessment are only relative statements that do not make any statements about end-points of the impact categories, exceedance of threshold values, safety margins or risks. The following tables show the results of the indicators of the impact assessment, of the use of resources as well as of waste and other output flows.

### 5.1 ENVIRONMENTAL IMPACT INDICATORS PER KILOGRAM

#### CORE ENVIRONMENTAL IMPACT INDICATORS EN15804+A2

Abbreviation	Unit	A1	A2	A3	C1	C2	C3	C4	D
AP	mol H+ eqv.	2.61E-4	2.47E-5	3.00E-5	3.43E-5	3.78E-5	9.65E-6	4.78E-7	-2.87E-5
GWP-total	kg CO2 eqv.	1.47E-1	4.25E-3	8.13E-3	3.28E-3	6.52E-3	1.55E-3	5.04E-5	-3.98E-3
GWP-b	kg CO2 eqv.	9.51E-5	1.96E-6	5.08E-5	9.12E-7	3.01E-6	8.92E-6	9.94E-8	-1.84E-5
GWP-f	kg CO2 eqv.	1.47E-1	4.25E-3	8.00E-3	3.28E-3	6.52E-3	1.54E-3	5.03E-5	-3.96E-3
GWP-luluc	kg CO2 eqv.	3.29E-5	1.56E-6	7.95E-5	2.58E-7	2.39E-6	2.93E-7	1.41E-8	-4.27E-6
EP-m	kg N eqv.	1.55E-5	8.69E-6	8.38E-6	1.51E-5	1.33E-5	3.84E-6	1.64E-7	-8.20E-6
EP-fw	kg P eqv.	8.82E-6	4.29E-8	3.73E-7	1.19E-8	6.57E-8	4.80E-8	5.64E-10	-1.46E-7
EP-T	mol N eqv.	8.79E-4	9.58E-5	1.19E-4	1.66E-4	1.47E-4	4.27E-5	1.82E-6	-9.52E-5
ODP	kg CFC 11 eqv.	2.49E-9	9.38E-10	1.08E-9	7.08E-10	1.44E-9	2.00E-10	2.07E-11	-3.96E-10
POCP	kg NMVOC eqv.	2.55E-4	2.73E-5	3.43E-5	4.57E-5	4.19E-5	1.16E-5	5.27E-7	-2.63E-5
ADP-f	MJ	6.93E-1	6.41E-2	1.90E-1	4.51E-2	9.83E-2	2.07E-2	1.41E-3	-4.94E-2
ADP-mm	kg Sb-eqv.	2.99E-7	1.08E-7	4.19E-8	5.03E-9	1.65E-7	4.34E-9	4.61E-10	-1.98E-7
WDP	m3 world eqv.	1.54E-2	2.29E-4	3.41E-4	6.05E-5	3.52E-4	9.37E-5	6.31E-5	-5.69E-2

**AP**=Acidification (AP) | **GWP-total**=Global warming potential (GWP-total) | **GWP-b**=Global warming potential - Biogenic (GWP-b) | **GWP-f**=Global warming potential - Fossil (GWP-f) | **GWP-luluc**=Global warming potential - Land use and land use change (GWP-luluc) | **EP-m**=Eutrophication marine (EP-m) | **EP-fw**=Eutrophication, freshwater (EP-fw) | **EP-T**=Eutrophication, terrestrial (EP-T) | **ODP**=Ozone depletion (ODP) | **POCP**=Photochemical ozone formation - human health (POCP) | **ADP-f**=Resource use, fossils (ADP-f) | **ADP-mm**=Resource use, minerals and metals (ADP-mm) | **WDP**=Water use (WDP)

## 5 Results

### ADDITIONAL ENVIRONMENTAL IMPACT INDICATORS EN15084+A2

Abbreviation	Unit	A1	A2	A3	C1	C2	C3	C4	D
ETP-fw	CTUe	2.41E-1	5.72E-2	7.34E-2	2.72E-2	8.76E-2	1.68E-2	9.13E-4	-7.95E-2
PM	disease incidence	3.83E-9	3.82E-10	5.59E-10	9.09E-10	5.86E-10	2.13E-10	9.29E-12	-4.93E-10
HTP-c	CTUh	2.25E-10	1.85E-12	8.61E-12	9.50E-13	2.84E-12	3.98E-13	2.11E-14	-2.95E-12
HTP-nc	CTUh	1.97E-9	6.25E-11	1.00E-10	2.34E-11	9.58E-11	1.13E-11	6.49E-13	-8.51E-11
IR	kBq U235 eqv.	7.92E+0	2.69E-4	2.81E-1	1.93E-4	4.12E-4	6.56E-5	5.77E-6	-2.00E-4
SQP	Pt	3.73E-1	5.56E-2	8.09E-2	5.76E-3	8.52E-2	3.45E-3	2.95E-3	-6.39E-2

**ETP-fw**=Ecotoxicity, freshwater (ETP-fw) | **PM**=Particulate Matter (PM) | **HTP-c**=Human toxicity, cancer (HTP-c) | **HTP-nc**=Human toxicity, non-cancer (HTP-nc) | **IR**=Ionising radiation, human health (IR) | **SQP**=Land use (SQP)

### CLASSIFICATION OF DISCLAIMERS TO THE DECLARATION OF CORE AND ADDITIONAL ENVIRONMENTAL IMPACT INDICATORS

ILCD classification	Indicator	Disclaimer
ILCD type / level 1	Global warming potential (GWP)	None
	Depletion potential of the stratospheric ozone layer (ODP)	None
	Potential incidence of disease due to PM emissions (PM)	None
	AAcidification potential, Accumulated Exceedance (AP)	None
	Eutrophication potential, Fraction of nutrients reaching freshwater end compartment (EP-freshwater)	None
ILCD type / level 2	Eutrophication potential, Fraction of nutrients reaching marine end compartment (EP-marine)	None
	Eutrophication potential, Accumulated Exceedance (EP-terrestrial)	None
	Formation potential of tropospheric ozone (POCP)	None
	Potential Human exposure efficiency relative to U235 (IRP)	1
ILCD type / level 3	Abiotic depletion potential for non-fossil resources (ADP-minerals&metals)	2
	Abiotic depletion potential for fossil resources (ADP-fossil)	2
	Water (user) deprivation potential, deprivation-weighted water consumption (WDP)	2
	Potential Comparative Toxic Unit for ecosystems (ETP-fw)	2
	Potential Comparative Toxic Unit for humans (HTP-c)	2

## 5 Results

ILCD classification	Indicator	Disclaimer
	Potential Comparative Toxic Unit for humans (HTP-nc)	2
	Potential Soil quality index (SQP)	2

**Disclaimer 1** – This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.

**Disclaimer 2** – The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.

### 5.2 INDICATORS DESCRIBING RESOURCE USE AND ENVIRONMENTAL INFORMATION BASED ON LIFE CYCLE INVENTORY (LCI)

#### PARAMETERS DESCRIBING RESOURCE USE

Abbreviation	Unit	A1	A2	A3	C1	C2	C3	C4	D
PERE	MJ	-1.68E-2	8.03E-4	6.72E-2	2.44E-4	1.23E-3	1.18E-3	1.14E-5	-3.43E-3
PERM	MJ	9.78E-2	0.00E+0	3.40E-3	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
PERT	MJ	8.11E-2	8.03E-4	7.06E-2	2.44E-4	1.23E-3	1.18E-3	1.14E-5	-3.43E-3
PENRE	MJ	6.56E-1	6.81E-2	1.88E-1	4.79E-2	1.04E-1	2.21E-2	1.49E-3	-5.25E-2
PENRM	MJ	5.90E-2	0.00E+0	5.52E-3	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
PENRT	MJ	7.15E-1	6.81E-2	1.93E-1	4.79E-2	1.04E-1	2.21E-2	1.49E-3	-5.25E-2
SM	Kg	2.06E-2	0.00E+0	6.95E-4	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
RSF	MJ	1.33E-1	0.00E+0	4.62E-3	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
NRSF	MJ	2.16E-1	0.00E+0	7.52E-3	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
FW	M3	1.40E-3	7.81E-6	1.58E-4	2.32E-6	1.20E-5	6.91E-6	1.50E-6	-1.33E-3

**PERE**=renewable primary energy ex. raw materials | **PERM**=renewable primary energy used as raw materials | **PERT**=renewable primary energy total | **PENRE**=non-renewable primary energy ex. raw materials | **PENRM**=non-renewable primary energy used as raw materials | **PENRT**=non-renewable primary energy total | **SM**=use of secondary material | **RSF**=use of renewable secondary fuels | **NRSF**=use of non-renewable secondary fuels | **FW**=use of net fresh water

## 5 Results

### OTHER ENVIRONMENTAL INFORMATION DESCRIBING WASTE CATEGORIES

Abbreviation	Unit	A1	A2	A3	C1	C2	C3	C4	D
HWD	Kg	2.67E-5	1.62E-7	1.01E-6	1.23E-7	2.49E-7	3.61E-8	2.10E-9	-9.90E-8
NHWD	Kg	8.82E-2	4.07E-3	4.28E-3	5.34E-5	6.23E-3	2.88E-3	9.56E-3	-5.36E-4
RWD	Kg	5.62E-7	4.21E-7	2.34E-6	3.13E-7	6.45E-7	9.28E-8	9.24E-9	-2.17E-7

HWD=hazardous waste disposed | NHWD=non hazardous waste disposed | RWD=radioactive waste disposed

### ENVIRONMENTAL INFORMATION DESCRIBING OUTPUT FLOWS

Abbreviation	Unit	A1	A2	A3	C1	C2	C3	C4	D
CRU	Kg	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
MFR	Kg	0.00E+0	0.00E+0	3.29E-2	0.00E+0	0.00E+0	9.46E-1	0.00E+0	0.00E+0
MER	Kg	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
EET	MJ	0.00E+0	0.00E+0	1.08E-3	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
EEE	MJ	0.00E+0	0.00E+0	6.25E-4	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0

CRU=Components for re-use | MFR=Materials for recycling | MER=Materials for energy recovery | EET=Exported Energy Thermic | EEE=Exported Energy Electric

## 5 Results

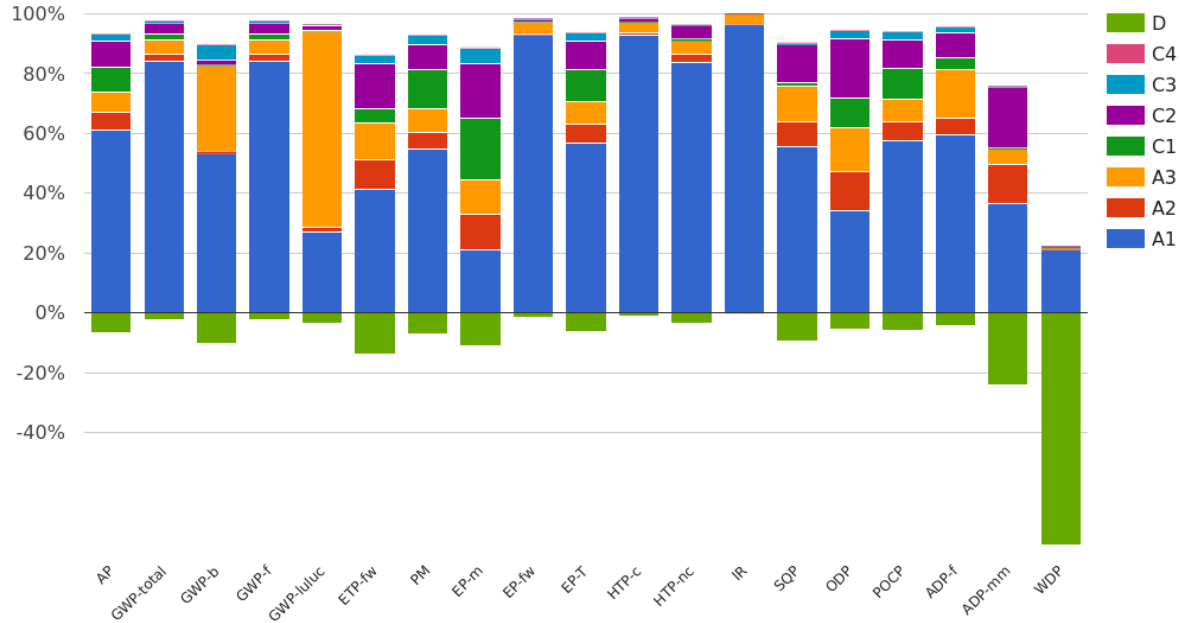
### 5.3 INFORMATION ON BIOGENIC CARBON CONTENT PER KILOGRAM

#### BIOGENIC CARBON CONTENT

The following Information describes the biogenic carbon content in (the main parts of) the product at the factory gate per kilogram:

Biogenic carbon content	Amount	Unit
Biogenic carbon content in the product	0	kg C
Biogenic carbon content in accompanying packaging	0	kg C

## 6 Interpretation of results



The following figure shows the influence of the different life stages on the environmental core indicators for the concrete bases. As shown in Figure 1 the majority of the environmental impact is attributed to raw material processing phase (A1), followed by the transports of raw materials (A2) and production (A3). These life stages have also the biggest impact on the GWP-total. Cement is the most prominent raw material in respect to the environmental impact categories.

## 7 References

### **ISO 14040**

ISO 14040:2006-10, Environmental management - Life cycle assessment - Principles and framework; EN ISO 14040:2006

### **ISO 14044**

ISO 14044:2006-10, Environmental management - Life cycle assessment - Requirements and guidelines; EN ISO 14040:2006

### **ISO 14025**

ISO 14025:2011-10: Environmental labels and declarations — Type III environmental declarations — Principles and procedures

### **EN 15804+A2**

EN 15804+A2: 2019: Sustainability of construction works — Environmental Product Declarations — Core rules for the product category of construction products

### **EN 16757:2022**

Sustainability of construction works - Environmental product declarations - Product Category Rules for concrete and concrete elements

### **General PCR Ecobility Experts**

Kiwa-Ecobility Experts (Kiwa-EE) – General Product Category Rules (2022-02-14)



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