ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH ISO 14025:2006 and EN 15804:2012+A2:2019/AC:2021 for

Bet30 (C21/26) CONCRETE

by **Readymix Industries (Israel) Ltd.**

EPD of multiple products, based on worst-case results

Programme:
The International EPD® System
www.environdec.com

Programme Operator:
EPD International AB

EPD Registration Number:
EPD-IES-0005720
Publication Date:
2022-03-29
Revision Date:
2025-05-12
Validity Date:
2030-05-11

Geographical Scope:
Israel

EPD INTERNATIONAL EPD SYSTEM

ECO PLATFORM EPD VERIFIED

An EPD may be updated or depublished if conditions change. To find the latest version of the EPD and to confirm its validity, see www.environdec.com.

PROGRAMME INFORMATION

CEN standard EN 15804 serves as the core Product Category Rules (PCR)

Product Category Rules (PCR):

PCR 2019:14 Construction products, version 1.3.4, Construction EN 15804:2012+A2:2019/AC:2021 Sustainability of Construction Works and c-PCR-003 Concrete and concrete elements (EN 16757) (2023-01-02).

PCR review was conducted by: The Technical Committee of the International EPD® System.

Review Chair: Claudia A. Peña, University of Concepción, Chile. The review panel may be contacted via the Secretariat www.environdec.com/contact.

UN CPC Code:
Division 375 “Articles of concrete, cement and plaster"

EPDs within the same product category but registered in different EPD programs may not be comparable. For two EPDs to be comparable, they must be based on the same PCR (including the same version number) or be based on fully-aligned PCRs or versions of PCRs; cover products with identical functions, technical performances, and use (e.g., identical declared/functional units); have equivalent system boundaries and descriptions of data; apply equivalent data quality requirements, methods of data collection, and allocation methods; apply identical cut-off rules and impact assessment methods (including the same version of characterization factors); have equivalent content declarations; and be valid at the time of comparison. For further information about comparability, see EN 15804 and ISO 14025. The EPD owner has the sole ownership, liability, and responsibility for the EPD.

The International EPD® System

EPD International AB
Box 210 60 SE-100 31
Stockholm, Sweden

www.environdec.com
info@environdec.com

LCA Practitioner:

LCA accountability: Yıldıray Yılmaz, Işıl Atalay Sırt, Metsims Sustainability Consulting

Verification

External and independent (‘third-party’) verification of the declaration and data, according to ISO 14025:2006, via

EPD verification through an individual EPD verification

Third party individual verifier: Dr. Rajesh Kumar Singh

Approved by: The International EPD® System

Procedure for follow-up of data during EPD validity involves third party verifier:

Yes No ✓

Readymix Industries (Israel) Ltd. has the sole ownership, liability, and responsibility for the EPD.

HOW TO READ THIS EPD?

An Environmental Product Declaration (EPD) is an ISO Type III Environmental Declaration based on ISO 14025 standard. An EPD transparently reports the environmental performance of products or services from a lifecycle perspective. The preparation of an EPD includes different stages, from acquiring raw materials to the end of life of the final product/service. EPDs are based on international standards and consider the entire value chain. Additionally, EPD is a third-party verified document. This EPD includes several sections described below.

1. General and Program Information

The first part of an EPD has information about the name of the manufacturer and product/service and other general information such as the validity and expiration dates of the document, the name of the program operator, geographical scope, etc. The second page states the standards followed and gives information about the program operator, third-party verifier, etc. The followed Product Category Rule (PCR) is indicated on the second page.

2. Company and Product/Service Information

Information about the company and the investigated product is given in this section. It summarizes the characteristics of the product provided by the manufacturer. It also includes information about the product such as product composition and packaging.

3. LCA Information

LCA information is one of the most important parts of the EPD as it describes the functional/declared unit, time representativeness of the study, database(s) and LCA software, along with system boundaries. The table presented in this part has columns for each stage in the life cycle. The considered stages are marked 'X' whereas the ones that are not considered are labeled as 'ND' (Not Relevant). Not all EPDs consider the full life cycle assessment for a product's entire life stages. The 'System Boundary' page is also the place where one can find detailed information about the stages and the assumptions made.

4. LCA Results

The results of the Life Cycle Assessment analysis are presented in table format. The first column in each table indicates the name of the impact category and their measurement units are presented in the second column. These tables show an amount at each life cycle stage to see the impact of different indicators on different stages. Each impact can be understood as what is released through the production of the declared unit of the material—in this case, 1 m^3 of Bet30/C21-26 ready-mix concrete. The benefits of reuse/recycling of the declared product is reflected in this section.

The first impact in the table is global warming potential (GWP), which shows how much CO_2 is released at each stage. Other impacts include eutrophication potential, acidification potential, ozone layer depletion, land use related impacts, etc. The second table provides results for resource use and the third table is about the waste produced during the production. The fourth and final table shows the results for the GWP-GHG indicator, which is almost equivalent to the GWP-Total indicator mentioned previously. The only difference is that this indicator excludes the biogenic carbon content by following a certain methodology.

Reason for the update of the EPD

The reference data period for the study is updated. Thus, the entire LCA study has been updated.

ABOUT THE COMPANY

The Readymix Group is Israel's leading producer and supplier of raw materials for the Construction Industry. Over the decades, the Group has built its reputation on providing building solutions based on products and services representing consistent high quality, excellence, and reliability. Readymix Industries (Israel) is a story of development, success, and contribution to the country's industry. In the early '60s, the British company RMC began to expand worldwide and established Readymix Industries (Israel) Ltd. in 1962. The hands that had cast the first concrete cube in the company's plant in December 1962, are the same hands that have brought the company this far. In 2005, RMC was acquired by Cemex.

Cemex is a leading vertically integrated heavy building materials company focused on four core businesses— Cement, Ready-Mix Concrete, Aggregates, and Urbanization Solutions. The Group is active in several fields and specializes in ready-mixed concrete, aggregates, infrastructure products, landscape products, chemical admixtures for concrete and white cement.

The Readymix Group's Concrete Division is the leading producer of ready-mixed concrete and mortar in Israel. With a national network of plants from Kiryat Shmona in the north to Eilat in the south, the Group can ensure transfer and efficient supply to its customers. Readymix has supplied concrete for many of Israel's most prominent construction projects, including power stations, bridges, airports and many other important projects, such as Ben Gurion 2000 Airport, the Ayalon Highway, the Ashkelon and Herzliya marinas, the CrossIsrael Highway, the Haifa national soccer stadium and a desalination plant.

ABOUT THE PRODUCT

Concrete is a composite material consist of cement, coarse and fine aggregates, water, and minor additives. When water is mixed with cement and aggregates, the mixture forms a fluid slurry which can be poured easily. The reaction between cement and water occurres and within several hours it hardens and form a hard matrix binds. The final product is transported to the construction sites via concrete mixers. The average density of the product is 2082 kg per 1 m^3.

The declared product is ready-mix concrete which complies with the requirements. The cement used in the product is CEM II 52.5 A-M SLV. Product composition breakdown is given in the following table. The product does not require any packaging input. Thus, no material input is provided for packaging. The use and end-of-life performances of the related product are valid for Israel.

PRODUCT COMPOSITION

Product Composition	Weight (%)	Post-consumer material weight - %	Biogenic material kg C/declared unit
Cement	10- 15	0	0
Water	5- 10	0	0
Coarse Aggregates	20 - 25	0	0
Fine Aggregates	55- 60	0	0
SUM	100	0	0

Product composition is presented as percentages rather than specific weights to maintain confidentiality while transparently communicating the relative proportions of each component.

LCA INFORMATION

Declared Unit	1 m³ of Bet30 (C21-26) Ready-mix Concrete
Time Representativeness	2023
Database(s) and LCA Software Used	Ecoinvent 3.10 and SimaPro 10
System Boundaries	Cradle to gate with options, modules C1–C4, module D and with optional modules (A1–A3 + C + D and A4 & A5 & B1).

The inventory for the LCA study is based on the 2023 production figures for Readymix Industries (Israel) Ltd. that covers the production of Bet30 (C21-26) ready-mix concrete at their 54 plants located in Israel. This EPD's system boundary is cradle to gate with options, modules C1–C4, module D and with optional modules (A1–A3 + C + D and A4 & A5 & B1). Through modules A1-A5, supplier-specific data was used for the modelling.

For the B1 module, the calcination effect is included. Some portion of the CO_2 emitted during the cement production is taken back during the use phase (B1) of the concrete, known as the CO_2 uptake. The reason is the reaction of the calcium hydroxide in the cement paste with the CO_2 in the atmosphere. The amount of CO_2 uptake is determined using calculations based on Table BB.1 in EN 16757. Similarly, the effect of calcination during the waste processing stage is also considered. The concrete does not require any maintenance (B2), repair (B3), replacement (B4), refurbishment (B5), operational energy use (B6), or operational water use (B7) during its service Life. Additionally, the effect of calcination during the end-of-life phase of the concrete is also included considering the simplified method. Reference service life is considered as 50 years.

	Product Stage			Construction Process Stage		Use Stage							End of Life Stage				Benefits and Loads
	Raw Material Supply	Transport	Manufacturing	Transport	Construction Installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational Energy Use	Operational Water Use	Deconstruction / Demolition	Transport	Waste Processing	Disposal	Future reuse, recycling or energy recovery potentials
Module	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Modules Declared	X	X	X	X	X	X	ND	ND	ND	ND	ND	ND	X	X	X	X	X
Geography	IL	IL	IL	IL	IL	IL	-	-	-	-	-	-	IL	IL	IL	IL	IL
Specific Data Used	7%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation - Products	0%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation - Sites	6%			-	-	-	-	-	-	-	-	-	-	-	-	-	-

(X = Included, ND = Not declared, IL = Israel)

Allocations

Energy consumption and raw material transportation were weighted according to 2023 production figures. In addition, hazardous and non-hazardous waste amounts were also allocated from the total waste generation in 2023. No allocation has been applied, as there were no by-products or co-products from the manufacturing process.

Cut-Off Criteria

The criteria for exclusion were set so that individual input flows less than 1% of the total, with a cumulative limit of less than 5%, could be omitted. This was contingent upon confirming that these excluded flows did not significantly alter the reported data, with “significant” defined as affecting the total by less than 5%. The study includes all major raw material and energy consumption. All inputs and outputs of the unit processes which data are available for are included in the calculation.

REACH Regulation

No substances included in the Candidate List of Substances of Very High Concern for authorization under the REACH regulations are present in this product either above the threshold for registration with the European Chemicals Agency or above 0.1% (wt/wt).

Source of electricity

The modeled electricity data for the manufacturing of the investigated product is taken from ecoinvent 3.10 database based on the reference year 2021, which has GWP-GHG impact of 0.76 kg CO_2 eq. / kWh for medium voltage electricity production. The selected electricity data consists of around 69% electricity production from natural gas, 29% hard coal, 1% solar and less than 1< through various sources such as oil.

Plants included in the EPD

This EPD includes the production of the C40 ready-mix concrete at 54 plants of the Readymix Industries (Israel) Ltd. throughout Israel. The location of the plants are indicated on the right side. The results of this EPD is for 'Sapir' plant as worst-case since it has the highest cement content, thus the highest environmental impacts among the invesgitated plants.

Variation - Sites

The percentage of raw meterials used in the product and the energy requirements do not significantly change from one concrete plant to another. Thus, the variations are less than 10%.

Assumptions

Upstream and downstream road transportation are assumed to be carried out with Euro5 motor vehicles with a size class of > 32 metric tonnes where distances acquired through Google Maps.In addition, 40 km distance for the waste transport at C2 stage is assumed.

LOCATION OF THE PLANTS

- Ofakim
- Eyal
- Alon Tavor
- Ashdod
- Ashdod B
- Ashkelon
- Be'er- Sheba
- Beit - She'an
- Golani
- Gan Yavneh
- Dimona
- Hartuv
- Zichron Yaakov
- Hadera
- Holon
- Haifa
- Hatzor
- Tiberias
- Tirat HaCarmel
- Tlalim
- Yavneh
- Yehiam
- Kadmany- Yarka
- Carmiel
- Mevo Carmel
- Modiim
- Kadmany- Maghar
- Nachshonim
- Nazareth
- Netivot
- Netanya
- Premix-Readymix- Netanya
- Sapir
- Arad
- Petah- Tikva
- Tzemach
- Zefat
- Kadarim
- Clanswa
- Kiryat Bialik
- Kiryat- Gat
- Kiryat Shmona
- Rosh Ha'ayin
- Rishon LeZion
- Rehovot
- Kadmany- Reine
- Shcoret Eilat
- Kadmany- Shefar'am
- Teffen

Raw Material Supply (A1)

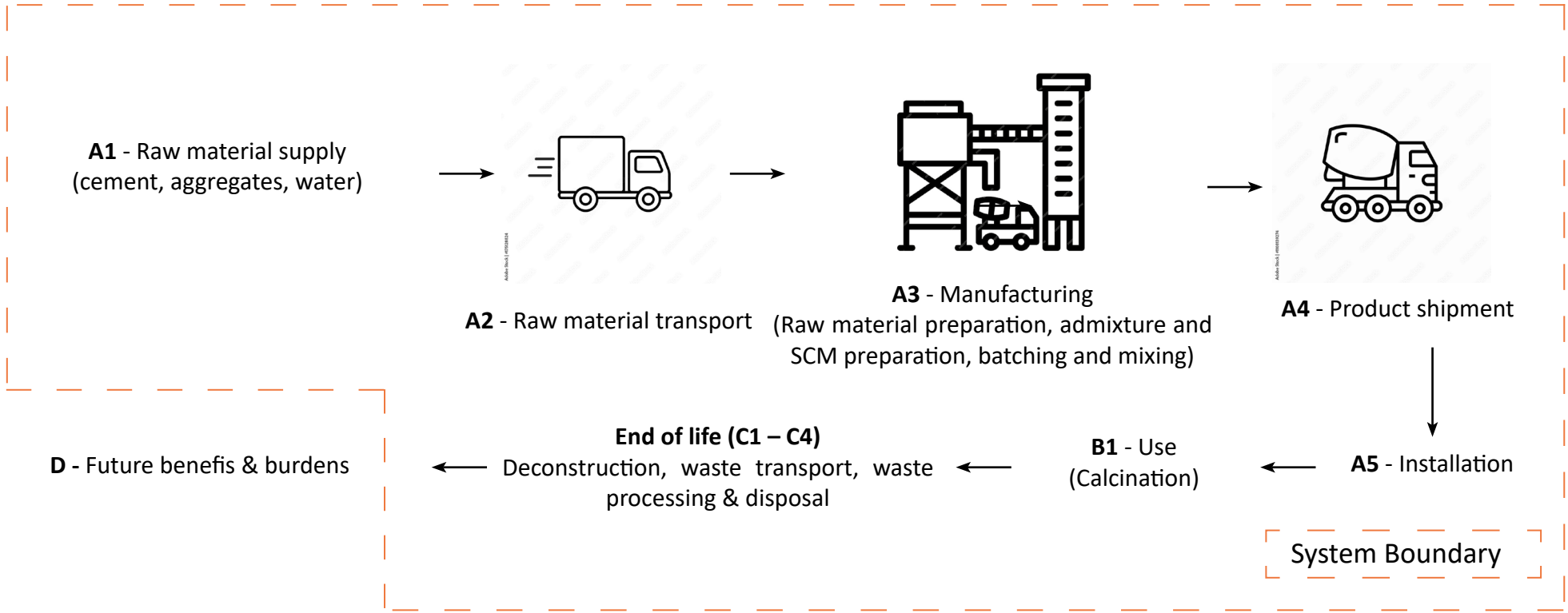
Production starts with acquiring the raw materials. Raw material stage includes raw material extraction and/or preparation and pre-treatment processes before production. The main materials used in the products are cement, gravel, sand, and water.

Transport of Raw Materials (A2)

Transport is relevant for delivery of raw materials and other materials to the plant, and the transport of materials within the plant. Transport distances of the raw materials to different plant provided by the company for each route.

Manufacturing (A3)

Concrete production at a batching plant follows a series of well-defined steps to ensure consistent quality and operational efficiency. The process begins with the precise weighing of raw materials—cement, aggregates (such as sand and gravel), water, and chemical admixtures—based on the specified mix design. These components are then conveyed to a central mixer, where they are thoroughly blended to produce a homogeneous concrete mix. Upon completion of mixing, the concrete is discharged into transport vehicles, such as transit mixers or containers, for delivery to the construction site. Throughout the production process, samples are routinely collected for quality control testing to verify that the concrete complies with relevant technical specifications and performance standards prior to dispatch.



Transport to Site (A4)

Transport routes for the final product to sites are provided by the company. Based on the given information, the product shipment distances of the routes are calculated.

Construction Installation (A5)

The diesel consumption (18 MJ/m^3) and the efficiency of the concrete mixer truck and the concrete pump at construction site is included. The water consumption is assumed to be 669 lt/m^3 concrete during this stage.

B Modules (B1)

Due to the calcination of cement during its use phase, concrete absorbs some CO_2 emissions from the atmosphere over its lifespan. Following the relevant EN 16757 standard, the calcination-related recarbonation impact is calculated. Since the final application of the product is unkown, a simplified, yet realistic approach for assessing the CO_2 uptake of concrete and concrete elements is used. The rest of the B modules (B2-B7) is checked and found not applicable for the product. Below table lists some of the important parameters for uptake calculation.

U_{tcc} (maximum theoretical uptake) for CEM I	0.49 kg CO_2 uptake per kg cement
U_{tcc} (maximum theoretical uptake) for CEM II (considering 84% clinker ratio)	0.43 kg CO_2 uptake per kg cement
Total uptake of CO_2 per kg of cement	0.065 kg CO_2
CO_2 uptake for 1 m^3 of investigated concrete	16.25 kg CO_2 eq. /m^3

Demolition / Deconstruction (C1)

This stage includes the demolition / deconstruction of the discarded concrete. It is assumed that 129 kW construction excavator is used during the demolition of the concrete.

Transport (C2)

This stage is related with the transportation of concrete waste to a waste processing area. The transport distance of the waste material is taken 40 km.

Waste Processing (C3)

Waste processing refers to the processing steps for the discarded concrete for its final end-of-life phase. Possible carbonation during the product is stored and before it is been recycled is also included which corresponds to 5 kg CO_2 uptake per m^3 of concrete.

Disposal (C4)

This stage considers the impacts of the disposal of the related product. The recyling rate of construction waste is 55.4 % and this portion of waste concrete is assumed to substitute the use of aggregates in future concrete making processes. The rest is assumed landfilled.

Future reuse, recycling or energy recovery potential (D)

This module is known as benefits and loads beyond the product system boundary and serves as informational module. Benefits of recycled EoL product generated in C3 are considered in stage D. 55.4% of waste concrete is assumed recycled and substituted by natural gravel The substitution rate is taken as 1 % of the recycled concrete.

The LCA results provided below are for 1 m^3 of Bet30 (C21-26) concrete. The estimated impact results are only relative statements, which do not indicate the endpoints of the impact categories, exceeding threshold values, safety margins and/or risks. The results of this EPD should not be used without the consideration of Module C.

Core environmental impact indicators (Mandatory)	Unit	A1-A3	A4	A5	B1	C1	C2	C3	C4	D
GWP- Total	kg CO_2 eq.	2.28E+02	1.12E+01	2.68E+00	-1.63E+01	6.98E+00	1.47E+01	5.15E-01	5.81E+00	-1.09E-01
GWP- Fossil	kg CO_2 eq.	2.28E+02	1.12E+01	2.67E+00	-1.63E+01	6.98E+00	1.47E+01	5.15E-01	5.81E+00	-1.09E-01
GWP- Biogenic	kg CO_2 eq.	2.08E-01	1.91E-03	9.35E-04	0.00E+00	6.21E-04	2.55E-03	5.43E-04	8.01E-04	-1.14E-04
GWP- Luluc	kg CO_2 eq.	6.65E-02	4.45E-03	8.60E-04	0.00E+00	6.06E-04	5.95E-03	3.02E-04	2.99E-03	-1.00E-04
ODP	kg CFC-11 eq.	7.61E-06	1.57E-07	1.82E-07	0.00E+00	1.07E-07	2.17E-07	8.11E-08	1.68E-07	-8.79E-10
AP	mol H+ eq.	6.91E-01	3.74E-02	2.09E-02	0.00E+00	6.30E-02	3.36E-02	2.84E-02	4.12E-02	-6.61E-04
EP- Freshwater	kg P eq.	2.45E-02	8.80E-04	3.41E-04	0.00E+00	2.04E-04	1.16E-03	1.08E-03	4.82E-04	-3.46E-05
EP- Marine	kg N eq.	1.92E-01	1.21E-02	8.52E-03	0.00E+00	2.92E-02	7.79E-03	4.32E-03	1.57E-02	-1.56E-04
EP- Terrestrial	mol N eq.	2.17E+00	1.32E-01	9.27E-02	0.00E+00	3.20E-01	8.42E-02	4.54E-02	1.71E-01	-1.88E-03
POCP	kg NMVOC	5.73E-01	5.20E-02	2.77E-02	0.00E+00	9.54E-02	4.70E-02	1.75E-02	6.13E-02	-5.21E-04
*ADPE	kg Sb eq.	7.75E-04	3.59E-05	4.45E-06	0.00E+00	2.49E-06	4.78E-05	4.78E-06	9.08E-06	-5.66E-07
*ADPF	MJ	1.02E+03	1.53E+01	7.39E+00	0.00E+00	3.70E+00	2.02E+01	2.21E+01	8.81E+00	-7.27E-01
*WDP	m^3 depriv.	1.10E+02	7.11E-01	2.86E+01	0.00E+00	1.98E-01	9.38E-01	3.25E-01	6.23E+00	-1.57E-01
Additional environmental impact indicators (Mandatory)										
**GWP-GHG	kg CO_2 eq.	2.28E+02	1.12E+01	2.68E+00	-1.63E+01	6.99E+00	1.47E+01	5.25E-01	5.83E+00	-1.09E-01
Additional environmental impact indicators (Optional)										
PM	disease inc.	6.77E-06	8.89E-07	5.24E-07	0.00E+00	1.79E-06	1.09E-06	4.34E-08	9.36E-07	-9.90E-09
***IR	kBq U-235 eq.	4.15E+00	1.29E-01	8.26E-02	0.00E+00	4.09E-02	1.71E-01	9.70E-03	9.08E-02	-1.06E-02
*ETP-FW	CTUe	4.55E+02	4.19E+01	1.02E+01	0.00E+00	1.29E+01	5.53E+01	9.31E+00	1.95E+01	-5.92E-01
*HTP- C	CTUh	1.79E-07	5.81E-08	2.06E-08	0.00E+00	2.73E-08	7.70E-08	5.81E-09	2.62E-08	-9.80E-10
*HTP- NC	CTUh	1.47E-06	9.78E-08	2.75E-08	0.00E+00	1.13E-08	1.29E-07	1.81E-08	2.43E-08	-8.53E-10
*SQP	Pt	7.65E+02	9.38E+01	3.79E+00	0.00E+00	6.42E+00	1.25E+02	5.18E+00	2.80E+02	-1.20E+00
Acronyms	GWP-total: Climate change, GWP-fossil: Climate change- fossil, GWP-biogenic: Climate change- biogenic, GWP-luluc: Climate change- land use and transformation, ODP: Ozone layer depletion, AP: Acidification terrestrial and freshwater, EP-freshwater: Eutrophication freshwater, EP-marine: Eutrophication marine, EP-terrestrial: Eutrophication terrestrial, POCP: Photochemical oxidation, ADPE: Abiotic depletion- elements, ADPF: Abiotic depletion- fossil resources, WDP: Water scarcity, PM: Respiratory inorganics- particulate matter, IR: Ionising radiation, ETP-FW: Ecotoxicity freshwater, HTP-c: Cancer human health effects, HTP-nc: Non-cancer human health effects, SQP: Land use related impacts, soil quality.									
Legend	A1: Raw Material Supply, A2: Transport, A3: Manufacturing, A4: Transportion, A5: Installation, B1: Use, C1: Demolition, C2: Waste Transport, C3: Waste Processing, C4: Disposal, D: Future reuse, recycling or energy recovery potentials,									

Indicators describing resource use (Mandatory)	Unit	A1-A3	A4	A5	B1	C1	C2	C3	C4	D
PERE	MJ	5.69E+01	2.07E+00	1.11E+00	0.00E+00	5.61E-01	2.75E+00	3.62E-01	1.33E+00	-1.29E-01
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	0.00E+00
PERT	MJ	5.69E+01	2.07E+00	1.11E+00	0.00E+00	5.61E-01	2.75E+00	3.62E-01	1.33E+00	-1.29E-01
PENRE	MJ	1.02E+03	1.53E+01	7.39E+00	0.00E+00	3.70E+00	2.02E+01	2.21E+01	8.81E+00	-7.27E-01
PENRM	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	0.00E+00
PENRT	MJ	1.02E+03	1.53E+01	7.39E+00	0.00E+00	3.70E+00	2.02E+01	2.21E+01	8.81E+00	-7.27E-01
SM	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	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	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	0.00E+00
FW	m^3	3.91E+00	2.46E-02	1.48E+00	0.00E+00	6.23E-03	3.25E-02	1.88E-02	1.48E-01	-1.25E-02
Acronyms	PERE: Use of renewable primary energy excluding resources used as raw materials, PERM: Use of renewable primary energy resources used as raw materials, PERT: Total use of renewable primary energy, PENRE: Use of non-renewable primary energy excluding 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, SM: Secondary material, RSF: Renewable secondary fuels, NRSF: Non-renewable secondary fuels, FW: Net use of fresh water.									
Environmental information describing waste categories (Mandatory)	Unit									
HWD	kg	6.67E-01	3.95E-03	7.83E-04	0.00E+00	8.33E-04	5.23E-03	1.13E-03	2.00E-03	-2.73E-04
NHWD	kg	1.69E+01	7.40E+00	7.66E-02	0.00E+00	5.58E-02	9.86E+00	7.75E-02	9.29E+02	-1.73E-02
RWD	kg	3.49E-03	3.17E-05	2.00E-05	0.00E+00	1.00E-05	4.19E-05	2.10E-06	2.21E-05	-2.58E-06
Environmental information describing output flow (Mandatory)	Unit									
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	0.00E+00
MFR	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	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	0.00E+00
EE (Electric)	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	0.00E+00
EE (Thermal)	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	0.00E+00
Acronmys	HWD: Hazardous waste disposed, NHWD: Non-hazardous waste disposed, RWD: Radioactive waste disposed, CRU: Components for reuse, MFR: Material for recycling, MER: Materials for energy recovery, EE (Electrical): Exported energy electrical, EE (Thermal): Exported energy thermal.									
***Disclamer 1**	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.									
****Disclamer 2**	GWP-GHG = Global Warming Potential total excl. biogenic carbon following IPCC AR5 methodology. The indicator includes all greenhouse gases included in GWP-total but excludes biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. The GWP-GHG indicator is identical to GWP-total except that the characterisation factor (CF) for biogenic CO_2 is set to zero.									
*****Disclamer 3**	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.									

REFERENCES

GPI/ General Programme Instructions of the International EPD® System. Version 4.0.

GPI/ General Programme Instructions of the International EPD® System. Version 5.0.

Ecoinvent / Ecoinvent Centre, www.ecoinvent.org

EN 15804:2012+A2:2019/AC:2021 Sustainability of construction works- Environmental Product Declarations — Core rules for the product category of construction products

ISO 9001:2015/ Quality Management Systems

ISO 50001:2018/ Energy Management Systems

ISO 14020:2000/ Environmental Labels and Declarations — General principles

ISO 14025/ DIN EN ISO 14025:2009-11: Environmental labels and declarations - Type III environmental declarations — Principles and procedures

ISO 14040/44/ DIN EN ISO 14040:2006-10, Environmental management- Life cycle assessment- Principles and framework (ISO14040:2006) and Requirements and guidelines (ISO 14044:2006)

PCR for Construction Products and Construction Services/ Prepared by IVL Swedish Environmental Research Institute, Swedish environmental Protection Agency, SP Trä, Swedish Wood Preservation Institute, Swedisol, SCDA, Svenskt Limträ AB, SSAB, The International EPD System, 2019:14 Version 1.3.4.

International EPD® System. Complementary Product Category Rules for Construction Products under EN 15804:2012+A2:2019 (c-PCR-003) Concrete and concrete elements (EN 16757) (2023-01-02).
EPD International AB.

SimaPro/ SimaPro LCA Software, Pré Consultants, the Netherlands, www.pre-sustainability.com

The International EPD® System/ The International EPD® System is a programme for type III environmental declarations, maintaining a system to verify and register EPD®s as well as keeping a library of EPD®s and PCRs in accordance with ISO 14025. www.environdec.com

European Committee for Standardization (CEN). (2017). EN 16757:2017 – Sustainability of construction works – Environmental product declarations – Product Category Rules for concrete and concrete elements. Brussels, Belgium: CEN.

www.readymix.co.il/en/

www.metsims.com

Contact Information

Programme and Programme operator	The International EPD® System www.environdec.com EPD INTERNATIONAL EPD SYSTEM	EPD International AB Box 210 60 SE-100 31 Stockholm, Sweden www.environdec.com info@environdec.com
Owner of the declaration	155, Bialik Street, Ramat-Gan 5252346, Israel רדימיקס Readymix Industries (Israel) Ltd.	Phone: (+972) 37519464 Fax: (+972) 37510201 www.readymix.co.il infocenter_israel@cemex.com
LCA practitioner & EPD designer	metsims Sustainability Consulting The United Kingdom: 4 Clear Water Place Oxford OX2 7NL, UK 0 800 722 0185 www.metsims.com info@metsims.com	alony.co Creative Environment Alony Consultants 12 Hakalaniot St. Yokneam Illit, Israel www.alony.co sagi@alony.co

רדימיקס