



# Environmental Product Declaration



In accordance with ISO 14025:2006 and EN 15804:2012+A2:2019/AC:2021 for:

## **Gmar sid super**

The declaration includes 2 package sizes: 16L, 18L

from

**Tambour**

Programme:	The International EPD® System, <a href="http://www.environdec.com">www.environdec.com</a>
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*An EPD should provide current information and may be updated if conditions change.*

*The stated validity is therefore subject to the continued registration and publication at [www.environdec.com](http://www.environdec.com)  
EPD of multiple products, based on the average results of the product group*

# About the Company

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For over 85 years, Tambour has taken part in shaping the Israeli landscape, from building structures, tunnels, and bridges, to painting roads, constructing national infrastructure, and improving Israeli residents' quality of life.

Today, we look to the future, understand the magnitude of our impact on future generations, and work towards building more innovative, healthy, and ecological living environments.

We have already begun this process, from developing greener products, building factories that meet international standards and use green energy to switching to the use of hybrid/electric vehicles and reusable utensils.

We have chosen our path - to do as much as we can, and more, to build a better future.



## General information

### Programme information

Programme:	The International EPD® System
Address:	EPD International AB Box 210 60 SE-100 31 Stockholm Sweden
Website:	<a href="http://www.environdec.com">www.environdec.com</a>
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<b>Accountabilities for PCR, LCA and independent, third-party verification</b>
<b>Product Category Rules (PCR)</b>
CEN standard EN 15804 serves as the Core Product Category Rules (PCR)
Product Category Rules (PCR): 2019:14, Construction products, version 1.3.4, UN CPC 3511
PCR review was conducted by: The Technical Committee of the International EPD® System. A full list of members available on <a href="http://www.environdec.com">www.environdec.com</a> The review panel may be contacted via <a href="mailto:info@environdec.com">info@environdec.com</a> Chair of the PCR review: Claudia A. Peña
<b>Life Cycle Assessment (LCA)</b>
LCA accountability: Shai Ben Aharon, KVS
<b>Third-party verification</b>
Independent third-party verification of the declaration and data, according to ISO 14025:2006, via: <input checked="" type="checkbox"/> EPD verification by individual verifier Third-party verifier: Rubén Carnerero <a href="mailto:r.carnerero@ik-ingenieria.com">r.carnerero@ik-ingenieria.com</a> Approved by: The International EPD® System
Procedure for follow-up of data during EPD validity involves third party verifier: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

The EPD owner has the sole ownership, liability, and responsibility for the EPD.

EPDs within the same product category but registered in different EPD programmes, or not compliant with EN 15804, 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 characterisation factors); have equivalent content declarations; and be valid at the time of comparison. For further information about comparability, see EN 15804 and ISO 14025.

EPD of multiple products, based on the average results of the product group with package sizes of 15L, 18L.

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## Company information

**Owner of the EPD:** Tambour

**Description of the organisation:** Tambour is an Israeli manufacturing company. It produces a variety of solutions for the construction industry including paints. Tambour considers sustainability to be a core value and is currently in the process of conducting several EPDs for varying products. Tambour offers the construction industry a wide and rich range of products, including products which are locally produced in Israel.

**Product-related or management system-related certifications:** Tambour is certified ISO 14001, ISO 9001 and ISO 45001.

**Name and location of production site(s):** Tambour manufacturing site is located in Acre, Israel.

## Product information

**Product name:** Gmar sid super.

**Product identification:** Water-based paint.

**Product description:** Water based paint, made with calcium carbonate, has a high coverage ability, with a matte finish. Intended for use on interior walls and ceiling both for whitewashed walls and for new construction.



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**Specifications:**

Name of Product	Gmar sid super
Calculated coverage [m2/L]	8-9
Color	White
Package size [L]	16, 18
Dillution (First coat)	15%-20%
Dillution (other coats)	10%-15%
Dilution- Usage in airspry	Up to 30%

**Product test standard:**

The product complies with the Israeli standards 1637, and green label No. 75154.

**UN CPC code:** 3511- Paints and varnishes and related products

**Geographical scope:** The study represents the manufacturing of paint in Tambour manufacturing facility in Acre, Israel. Moudules A4, A5 and the end-of-life scenario of the products is application, demolition and recycling in Israel, according to market research that was conducted.

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## LCA information

**Functional unit / declared unit:** 1 kg of paint

**Time representativeness:** The time coverage of the LCA's data is from January to December 2022.

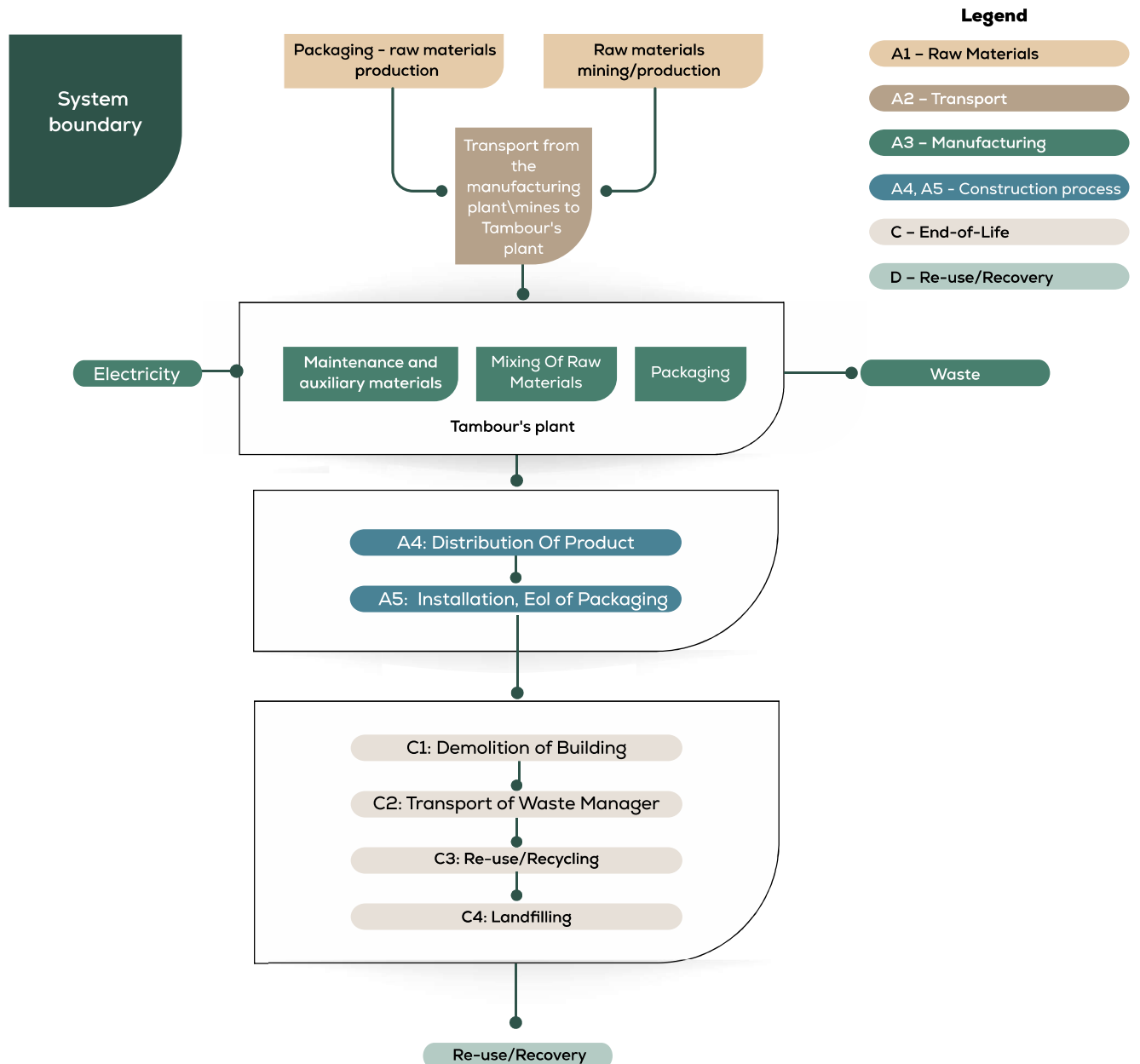
**Database(s) and LCA software used:** The software used is SimaPro, Analyst 9.4.0.3. The database used is the Ecoinvent database v3.8 (2021) using the cut-off by classification approach (SCLCI, 2017).

**Description of system boundaries:**

Cradle to gate with modules A4–A5, C1–C4 and module D (A1–A5 + C + D).

**Electricity grid CO2 coefficient:** the CO2 coefficient of the electricity provided to the factory by a private company in Israel is 0.356 kg CO2-eq/kWh (2022), based on a natural gas source.

## System diagram:



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**Manufacturer's contact information:**

**Address:** 6 Meir Ariel St., Netanya, Israel

**Phone Number:** \*6477

**Email:** tamSupport@tambour.co.il

**Website:** <https://tambour.co.il/>

**Name and contact information of the LCA practitioner:**

Shai Ben Aharon of KVS, shai@kvs.co.il.

**Assumptions:**

- Assumptions were made regarding the transportation for all materials required for manufacturing and packaging the product. The calculation was distance based.
- Generic data of larger areas have been used for some materials and processes inputs.
- In cases of multiple suppliers for one raw material a proportional share was taken into account.
- Approximated generic data has been used for additives which were not found in the Ecoinvent database, in addition to other databases and to research that was carried out.
- Assumptions regarding the model of each module are explained in pages 9-11 of the declaration
- The packaging relative amount per declared unit was calculated on a basis of the amount of product in each pallet



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**Allocations:** In this study, as per EN 15804, allocation is conducted in the following order:

1. Allocation should be avoided.
2. Allocation should be based on physical properties (e.g. mass, volume) when the difference in revenue is small.
3. Allocation should be based on economic values.

Overall and in general, allocations were avoided in the project as there are no by products in the manufacturing process. Nevertheless, allocations were made in the general energy usage.

Allocation used in Ecoinvent 3.8 environmental data sources follows the methodology 'allocation, cut-off by classification'. This methodology is in line with the requirements of the EN 15804 standard.

**Cut-off rules:** The study does not exclude any modules or processes which are stated mandatory in the EN 15804:2012+A2:2019 and the applied PCR of the EPD International Institution. The study does not exclude any hazardous materials or substances. During the life cycle of the product, no hazardous substance listed in the "Candidate List of Substances of Very High Concern (SVHC) for authorization" has been used in a percentage higher than 0.1% of the weight of the product. The study includes all major raw materials and energy consumption. All inputs and outputs of the unit processes with available data are included in the calculation. There is no neglected unit process of more than 1% of total mass or energy flows. The study excludes primary data on infrastructure/capital goods for upstream, core and downstream processes, this data is included as part of the ecoinvent database.

**Background Database:** The EPD is based on the primary production data of Tambour. The background database is Ecoinvent database v3.8 (2021). Since there are several missing datasets for Israel, background data for larger areas in which Israel is included in was used for a small part of the life cycle inventory. The electricity mix of the high voltage electricity grid according to 2022 data is given by a formal report from the Israel Electricity Authority and the water grid is modeled according to the water sources in Israel.

**Modules declared, geographical scope, share of specific data (in GWP-GHG results) and data variation (in GWP-GHG results):**

	Product stage			Construction process stage		Use stage							End of life stage				Resource recovery stage
	Raw material supply	Transport	Manufacturing	Transport	Construction installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling potential
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	ND	ND	ND	ND	ND	ND	ND	x	x	x	x	x
Geography	IL, EUR, Global	IL, EUR, Global	IL	IL	IL	ND	ND	ND	ND	ND	ND	ND	IL	IL	IL	IL	IL
Specific data used	39%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – products	<2%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – sites	0%			-	-	-	-	-	-	-	-	-	-	-	-	-	-

**Module A1 – Supply of raw materials:** The declared Tambour paints consist of acrylic emulsion, aggregates, water, pigment and additives. The raw materials supply includes raw material extraction/production that are taken into account in this study. The raw materials of packaging i.e., wooden pallets, bucket, lid and polyethylene are also included in this module.

**Module A2 – Transport of raw materials:** The acrylic emulsions and aggregates are produced locally or abroad in a nearby country. Accordingly, transport distances are short and done by ships and trucks. Further raw materials are supplied from manufacturers within Israel, Europe and east Asia.

**Module A3 – Manufacturing:** The manufacturing includes mixing of emulsions with aggregates, water and additives according to the relevant recipes of each product. The end products are packaged into buckets and compiled on wooden pallets. Electricity is consumed during the manufacturing process, in addition to maintenance procedures.

**Module A4 – Transport:** Transportation distance of distribution is estimated as 100 km by a 16-32 tonne lorry, which is the most common.

Scenario information	Unit per functional unit
Vehicle type	Lorry, 16-32 metric tons, euro 6 fuel type
Capacity utilization	50% (empty returns)
Distance	100 km

**Module A5 – Construction installation:** This module consists of the installation which is manually and the additional materials and resources can be neglected. The end of life of the packaging was taken into account as 10% of the packaging will be recycled as a conservative estimate, 7.5% will be incinerated and the rest of the packaging goes to landfill. The wooden pallets are assumed to be incinerated.

Scenario information	kg per functional unit (kg/kg product)
Ancillary materials for installation	Neglected
Waste treatment of packaging – municipal incineration	Wooden pallet – biogenic packaging – 0.0071 PE – Non biogenic packaging – 0.002428
Waste treatment of packaging – recycling	PE – Non biogenic packaging – 0.00324
Waste treatment of packaging – landfill	PE – Non biogenic packaging – 0.02671

#### End-of-Life stage (C1-C4):

Processes	Type	Amount per kg declared unit
Collection process	Kg collected separately	0
	Kg collected with mixed construction waste	1
Recovery specified by type	Kg for re use	0
	Kg for recycling	0
	Kg for energy recovery	0
Disposal	Landfilled	1
Assumption doe transport scenario	Transport to disposal waste treatment plant with Euro 6, 16-32 tonne lorry for 50 km	0.05 tkm

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**Module C1 – De-construction:** Demolition of Paint takes place with the whole demolition of the building/construction. Thus it is assumed that energy used for the demolition of the paints has minor significance and the environmental impact of this module is set to be zero. After the application of the paint it loses its water content to vapor, therefore the end of life of the paint is modeled without the water weight.

At the end-of-life, in the demolition phase 100% of the waste is assumed to be collected as mixed construction waste.

**Module C2 – Transportation:** Transportation distance to the closest disposal area is estimated as 50 km by a 16-32 tonne lorry, which is the most common.

**Module C3 – Waste processing:** According to interviews with industry executives that manage the construction waste in Israel (GREENMIX, Negevecology), and research on the waste sector in Israel, there is no any significant processing of the construction waste and especially not for the paint, therefore the environmental impact of this module is set to be zero.

**Module C4 – Disposal:** it is assumed and modeled that 100% of the Paint will be landfilled in the Israeli landfills of construction materials.

**Resource Recovery stage (D):**

**Module D – Reuse-Recovery-Recycling potential:** The paint is disposed to a landfill, therefore there is no reuse or recycling potential. There is also no energy recovery from the paints.

## Content information

Product components	Weight - %	Post-consumer material, weight %	Biogenic material, weight % and kg C/kg
Emulsions	1-10	0	0
Fillers and pigments	30-55	0	0
Water	20-40	0	0
Additives	0-10	0	0
TOTAL	100	0	0
Packaging materials	Weight - %	Post-consumer material, weight-%	Weight biogenic carbon, kg C/kg
Wooden pallet	<1	0	0.00166
Stainless steel	<0.5	0	0
Shrink	<0.5	0	0
Plastic bucket	<4	0	0
TOTAL	<6	0	0.00166

## Environmental Information

The EPD is for a specific product – Environmental impacts of 1 Kg of Gmar sid super

The results presented are the average of all 2 package sizes: 16L, 18L.

For the conversion of the results to liter multiply by 1.54

Potential environmental impact – mandatory indicators according to EN 15804

Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
GWP-fossil	kg CO <sub>2</sub> eq.	6.28E-01	3.26E-02	2.24E-03	0.00E+00	8.14E-03	0.00E+00	3.15E-03	0.00E+00
GWP-biogenic	kg CO <sub>2</sub> eq.	-1.16E-02	2.81E-05	1.16E-02	0.00E+00	7.03E-06	0.00E+00	3.12E-06	0.00E+00
GWP-luluc	kg CO <sub>2</sub> eq.	5.72E-04	1.30E-05	4.59E-07	0.00E+00	3.26E-06	0.00E+00	2.98E-06	0.00E+00
GWP-total	kg CO <sub>2</sub> eq.	6.17E-01	3.26E-02	1.39E-02	0.00E+00	8.15E-03	0.00E+00	3.16E-03	0.00E+00
ODP	kg CFC 11 eq.	7.97E-08	7.55E-09	2.31E-10	0.00E+00	1.89E-09	0.00E+00	1.27E-09	0.00E+00
AP	mol H <sup>+</sup> eq.	3.31E-03	9.25E-05	5.12E-06	0.00E+00	2.31E-05	0.00E+00	2.96E-05	0.00E+00
EP-freshwater	kg P eq.	1.66E-05	2.32E-07	8.74E-09	0.00E+00	5.81E-08	0.00E+00	3.30E-08	0.00E+00
EP-marine	kg N eq.	6.04E-04	1.84E-05	1.71E-06	0.00E+00	4.59E-06	0.00E+00	1.02E-05	0.00E+00
EP-terrestrial	mol N eq.	6.54E-03	2.05E-04	1.85E-05	0.00E+00	5.12E-05	0.00E+00	1.13E-04	0.00E+00
POCP	kg NMVOC eq.	2.16E-03	7.87E-05	5.35E-06	0.00E+00	1.97E-05	0.00E+00	3.28E-05	0.00E+00
ADP-minerals&metals*	kg Sb eq.	1.17E+01	4.94E-01	1.58E-02	0.00E+00	1.23E-01	0.00E+00	8.80E-02	0.00E+00
ADP-fossil*	MJ	2.29E-06	1.15E-07	3.17E-09	0.00E+00	2.89E-08	0.00E+00	7.19E-09	0.00E+00
WDP*	m <sup>3</sup>	3.80E-01	1.50E-03	1.61E-04	0.00E+00	3.76E-04	0.00E+00	3.96E-03	0.00E+00
Acronyms	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 = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption								

*\* Disclaimer:*

*I: 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.*

*II: The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator.*

## Potential environmental impact – additional mandatory and voluntary indicators

Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
GWP-GHG <sup>1</sup>	kg CO <sub>2</sub> eq.	6.30E-01	3.26E-02	2.25E-03	0.00E+00	8.15E-03	0.00E+00	3.16E-03	0.00E+00

### Use of resources<sup>2</sup>

Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
PERE	MJ	5.69E-01	7.06E-03	2.33E-04	0.00E+00	1.76E-03	0.00E+00	7.51E-04	0.00E+00
PERM	MJ	1.02E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	6.71E-01	7.06E-03	2.33E-04	0.00E+00	1.76E-03	0.00E+00	7.51E-04	0.00E+00
PENRE	MJ	1.03E+01	4.94E-01	1.58E-02	0.00E+00	1.23E-01	0.00E+00	8.80E-02	0.00E+00
PENRM	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
PENRT	MJ	1.17E+01	4.94E-01	1.58E-02	0.00E+00	1.23E-01	0.00E+00	8.80E-02	0.00E+00
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
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	m3	9.07E-03	5.59E-05	7.25E-06	0.00E+00	1.40E-05	0.00E+00	9.43E-05	0.00E+00
Acronyms	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 re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water								

## Waste production and output flows

### Waste production

Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Hazardous waste disposed	kg	8.24E-05	1.29E-06	3.71E-08	0.00E+00	3.22E-07	0.00E+00	1.33E-07	0.00E+00
Non-hazardous waste disposed	kg	5.88E-01	2.59E-02	2.98E-02	0.00E+00	6.47E-03	0.00E+00	5.98E-01	0.00E+00
Radioactive waste disposed	kg	3.33E-05	3.34E-06	9.97E-08	0.00E+00	8.34E-07	0.00E+00	5.77E-07	0.00E+00

### Output flows

Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Components for re-use	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
Material for recycling	kg	3.33E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for energy recovery	kg	0.00E+00	0.00E+00	9.21E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy, electricity	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
Exported energy, 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

<sup>1</sup> This indicator accounts for all greenhouse gases except biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. As such, the indicator is identical to GWP-total except that the CF for biogenic CO<sub>2</sub> is set to zero.

<sup>2</sup> The primary energy use indicators were calculated according to the PCR 2019:14 v1.3.4 Annex C option B.

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## References

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

PCR 2019:14, Construction products, version 1.3.4

EN 15804:2012+A2 - Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products

ISO 14025:2010 Environmental labels and declarations – Type III environmental declarations principles and procedures.

ISO 14040:2006 Environmental management. Life cycle assessment principles and frameworks.

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3rd Party Verifier	 IK / INGENIERIA IK Ingenieria <a href="https://www.ik-ingenieria.com/">https://www.ik-ingenieria.com/</a> <a href="mailto:f.campo@ik-ingenieria.co">f.campo@ik-ingenieria.co</a> <a href="mailto:g.benito@ik-ingenieria.com">g.benito@ik-ingenieria.com</a>

