Environmental Product Declaration

In accordance with ISO 14025:2010 and EN 15804:2012+A2:2019/AC:2021 for:

Insulated pipe support product – PVC cover

from

Isoflex Kft.

Programme:	The International EPD® System, www.environdec.com
Programme operator:	EPD International AB
Licensee:	N/A
Type of EPD:	EPD of single products from a manufacturer.
EPD registration number:	EPD-IES-0031764:001
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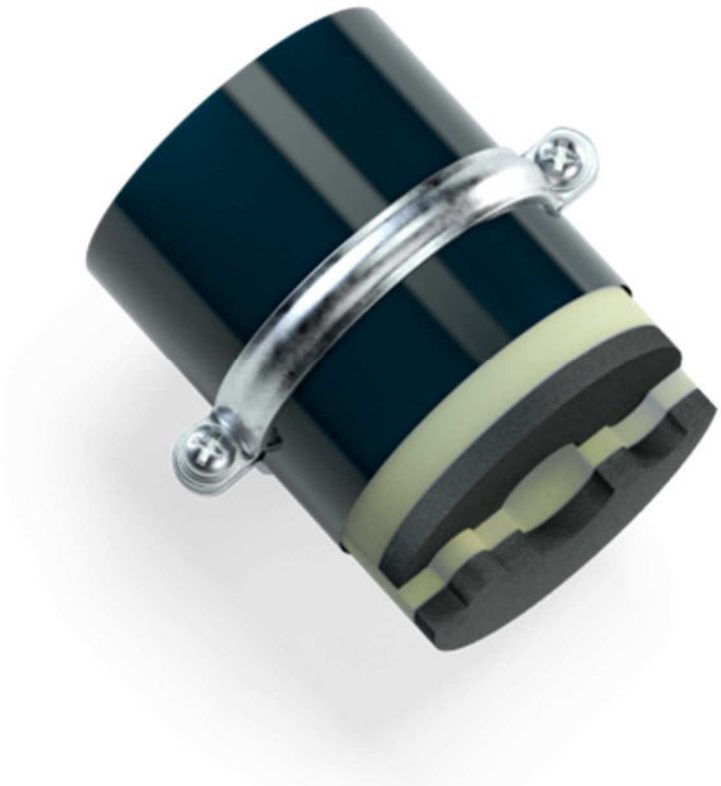
	An EPD should provide current information and may be updated if conditions change. The stated validity is therefore subject to the continued registration and publication at www.environdec.com



General information

Programme Information	
Programme:	The International EPD® System
Address:	EPD International AB Box 210 60 SE-100 31 Stockholm Sweden
Website:	www.environdec.com
E-mail:	support@environdec.com

Product Category Rules (PCR)
CEN standard EN 15804 serves as the Core Product Category Rules (PCR)
Product Category Rules (PCR): **PCR 2019:14 Construction products, version 2.0.1.**
PCR review was conducted by: **The Technical Committee of the International EPD System. A full list of members is available on www.environdec.com. The review panel may be contacted via support@environdec.com. Members of the Technical Committee were requested to state any potential conflict of interest with the PCR Committee, and if there were conflicts of interest, they were excused from the review. Rob Rouwette (chair), Noa Meron (co-chair)**

Third-party Verification
Independent third-party verification of the declaration and data, according to ISO 14025:2006, via: ☒ **Individual EPD verification without a pre-verified LCA/EPD tool** Third-party verifier: ***Dr. Freddy Navarro, LCACHECK S.A.S de C.V., fnavarro@lcacheck.org*** Approved by: International EPD System
Procedure for follow-up of data during EPD validity involves third party verifier: ☐ Yes ☒ 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 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 ISO 14025.

INFORMATION ABOUT EPD OWNER

Owner of the EPD: Isoflex Kft.

Address: Székesfehérvár, Babér str. 22, 8000, Hungary.

Contact: Tibor Molnár.

Address and contact information of the LCA practitioner commissioned by the EPD owner:
BM Certification Estonia OÜ; Väike-Paala 1, 11415, Tallinn, Estonia; info.ee@bmcertification.com.

Description of the organisation:
Main activity is production and sales of pipe supports for cooling and heating industrial usage. Most of the customer are located in Europe but Isoflex Kft. has customers in USA and North Africa as well. Company distributes rubber foam sheet and tubes in Hungary as well. Company sold in 2025 2,1 million pcs of supports had a turnover of 5 M Euro.

Product-related or management system-related certifications:
ISO 9001:2015, ISO 14001:2015 - https://isoflex-europe.eu/hu/letoltesek/

PRODUCT INFORMATION

Product name: Insulated pipe support product - PVC cover

TYP			grams / piece	kg-s / piece
19	x	10	9,2	0,0092
19	x	12	9,6	0,0096
19	x	15	10,6	0,0106
19	x	16	10,8	0,0108
19	x	50	22,0	0,0220
19	x	200	155,0	0,1550
25	x	12	14,0	0,0140
25	x	28	26,0	0,0260
25	x	42	36,6	0,0366
25	x	54	40,0	0,0400
25	x	108	64,8	0,0648
32	x	76	45,4	0,0454

UN CPC code: 54650 - Insulation services

Product description:
Made from rigid polyurethane foam of density with 80-120 kg/m3, covered with black PVC and 6mm rubber foam on both sides. Usage area: cooling systems for purpose of energy and cost saving. Product is always produced customized to relevant usage area and medium in the pipe.

Technology description including background system:
Customer (or constructor) has to give exact specification / or below parameters what he needs: wall thickness, diameter of pipe, required density of foam, length of supports… Based on above data Isoflex Kft produces required articles. Isoflex Kft. does not give any consulting service to the customers as far as construction / building process concerned.

Technical purpose of product or process:
By All kind / size of pipes / systems to reduce cooling and frost.
Physical properties of the product - see technical data sheet. Complies to standard - N/A

Name and location of production site: Székesfehérvár, Babér str. 22, 8000, Hungary

References to any relevant websites for more information: https://isoflex-europe.eu/

CONTENT DECLARATION

Information on the environmental and hazardous/toxic properties of a substances contained in the product:
Based on a review of safety data sheets provided by chemical suppliers and in accordance with Regulation (EC) No 1907/2006 (REACH), none of the chemicals used in the production process (including coatings, primers, adhesives, hardeners and water treatment chemicals) contain Substances of Very High Concern (SVHC) included in the ECHA Candidate List in concentrations above 0.1% (1000 ppm).

Therefore, no SVHC substances are required to be declared in this Environmental Product Declaration.

Other information on substances with hazardous and toxic properties: N/A

The table below shows the results of the study, containing a declaration of the composition of the representative product.

Product components	Weight, kg	Post-consumer material, weight-%	Biogenic material, mass-% of product	Biogenic material, kg C/product or declared unit
Polyurethane foam	0,8200	0	0	0
Black PVC	0,0538	0	0	0
Rubber foam	0,1262	0	0	0
TOTAL	1,0000	0	0	0

Packaging materials	Weight, kg	Weight-% (versus the product)	Weight biogenic carbon, kg C/kg
Cardboard	0,0305	3,05	0,01
Plastic wrap	0,0100	1,00	0,00
Timber	0,0200	2,00	0,01
TOTAL	0,0605	6,05	0,02

1 kg biogenic carbon in the product/packaging is equivalent to the uptake of 44/12 kg of CO_2.

LCA INFORMATION

Functional unit / declared unit: 1 kg of Insulated pipe support product - PVC cover.

Reference service life: 10 years.

Time representativeness: 2025.

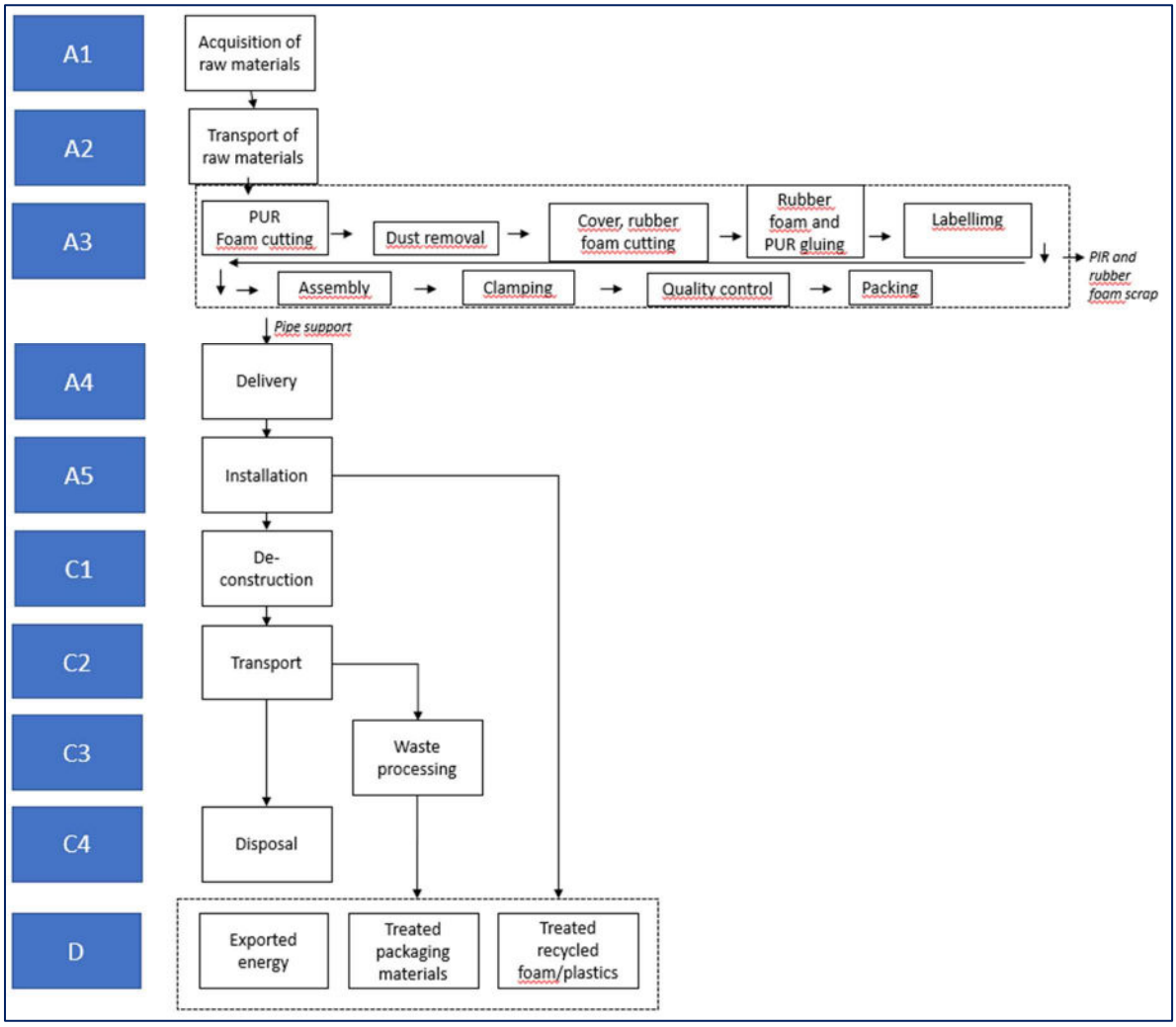
Geographical scope:
The manufacturing facility in Hungary and main suppliers are located in Europe.
The products are mainly exported to the European market.

Database(s) and LCA software used:
Calculation software - One Click LCA: EPD Generator - Ecoinvent 3.12 (IES PreVerified).

Environmental Impact Assessment Method: EN15804 reference package EF 3.1.

Description of system boundaries:
Cradle to gate with options, A4–A5, and modules C1–C4, D (A1–A3, A4–A5 + C1–C4 + D).

Process flow diagram:



More information:
The results have been calculated per 1 kg of product.
The study does not exclude any modules or processes which are mandatory and the applied PCR.
The study does not exclude any hazardous materials or substances.
All relevant inputs and outputs from each unit process that have available data are considered in the calculation. No single unit process is disregarded if it accounts for more than 1% of the total mass or energy flows. Additionally, the total neglected input and output flows for each module do not surpass 5% of the energy usage or mass.

Target group: The aim of the study is to provide information and data for an EPD for both business-to-consumer and business-to-business communication.

Cut-off criteria: The <1% due difficulties to attributing and minor environmental impacts.
Allocation: 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.
The allocations in the Ecoinvent 3.12 datasets used in this study follow the Ecoinvent system model 'Allocation, cut-off, EN15804'.

Electricity:
Energy sources of the electricity used in manufacturing processes of module A3 are modelled using the electricity:
"Electricity, Hungary, residual mix" - 0.42kg CO2 eq./kWh (74,1%) and
"Electricity production, photovoltaic, 3kWp slanted-roof installation, multi-Si, panel, mounted" – 0.078 kg CO2 eq./kWh (25,9 %).
The weighted average of the carbon intensity factor of the electricity - 0.3314 kg CO_2 eq./kWh

The GHG emission factor was estimated using the GWP-GHG indicator.

Explanation of assumptions regarding modules A4, A5, C and D:

A4: Transportation impacts occurred from final products delivery to construction site cover fuel direct exhaust emissions and environmental impacts of fuel production. The transportation distance is defined from the place of manufacture to main market. The distribution market is mainly Europe (Germany – 30%, France – 25%, other European countries 35%). Transport calculations were based on average scenario - the final product is transported 1250 km by lorry. Vehicle capacity utilization volume factor is assumed to be 1.
According to the manufacturer, transportation doesn't cause losses as products are packaged properly.

A5: Includes only packaging utilization.
It is assumed that 100% of packaging wrap and cardboard is sent to recycling and 100% of timber sent for incineration. It is assumed that incineration efficiency is low — energy recovery from materials is not assumed.

B: This EPD does not cover the use phase.
Air, soil, and water impacts during the use phase have not been studied.

The EOL scenario is representative of Europe.

C1: Demolition is not assumed to require any energy or resources.

C2: Transport to waste treatment site after dismantling using EURO 6 lorry average (100 km assumed).

C3: No product is assumed to be send for recycling.

C4: Assumed that 100% of the product to be send for disposal on a landfill.

D: Substitution of primary materials or energy. As it is assumed that materials contain no recycled content, double crediting is avoided.

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

	Product stage			Distribution/ installation stage		Use stage							End-of-life stage				Beyond product life cycle
	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	HUN, EU			EU		-	-	-	-	-	-	-	EU				EU
Share of primary data	11%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – products	< 10%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – sites	ND			-	-	-	-	-	-	-	-	-	-	-	-	-	-

Modules/processes/life-cycle stages declared noted with “X”. Modules/processes/life-cycle stages not declared marked as “ND”.

Process	Source type	Source	Reference year	Data category	Share of primary data, of GWP-GHG results for A1-A3	Share on GWP-GHG results for A1-A3
Raw materials	Collected data	Ecoinvent v3.12	2025	Primary data, Secondary data	0%	85%
Transport to manufacturing site	Database	Ecoinvent v3.12	2025	Primary data	2%	2%
Generation of electricity used in manufacturing of product	Database	One Click LCA Ecoinvent v3.12	2025	Primary data	8%	8%
Energy carriers used in the manufacturing of the product	Database	Ecoinvent v3.12	2025	Primary data	1%	1%
Production of packaging	Database	Ecoinvent v3.12	2025	Primary data	0%	1%
Waste from production	Database	Ecoinvent v3.12	2025	Primary data	0%	3%
Total share of primary data, of GWP-GHG results for A1-A3					11%*	100%

*The share of primary data is calculated based on GWP-GHG results. It is a simplified indicator for data quality that supports the use of more primary data, to increase the representativeness of and comparability between EPDs. Note that the indicator does not capture all relevant aspects of data quality and is not comparable across product categories.

Data quality assessment:

The EPD covers product manufactured in 2025. Primary data was collected directly from the manufacturer and suppliers, while background data was sourced from Ecoinvent v3.12.

The quality of the data has been assessed according to EN 15804:2012+A2:2019, Annex E, and EN 15941. Using the semi-quantitative evaluation criteria for data quality (DQR) proposed by the European Commission in its Environmental Footprint Guide, the following results were obtained:

- Temporal representativeness (TiR): Very good.
- Geographical representativeness (GeR): Fair.
- Technological representativeness (TeR): Good.

Overall, the data quality is rated between “good” and “very good.” No datasets assessed were rated “very poor.” The assessed datasets together represent more than 80% of the results of each declared environmental impact indicator, ensuring that the EPD is based on sufficiently robust and reliable data.

ENVIRONMENTAL PERFORMANCE

LCA results of the product(s) - main environmental performance results

The effect of the infrastructure involved in the production of raw material, transport means, and energy was included as it was not possible to exclude them. Characterization factors of EN15804 are based on EF 3.1.

Mandatory impact category indicators according to EN 15804

Results per functional or declared unit									
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-total	kg CO_2 eq.	7,02E+00	2,01E-01	5,17E-02	0,00E+00	1,11E-02	0,00E+00	6,27E-03	-5,63E-02
GWP-fossil	kg CO_2 eq.	6,89E+00	2,01E-01	2,56E-03	0,00E+00	1,11E-02	0,00E+00	6,26E-03	-6,54E-03
GWP-biogenic	kg CO_2 eq.	-4,79E-02	4,23E-05	4,91E-02	0,00E+00	2,55E-06	0,00E+00	2,81E-06	-4,97E-02
GWP-luluc	kg CO_2 eq.	1,77E-01	7,54E-05	1,94E-06	0,00E+00	4,95E-06	0,00E+00	3,58E-06	-3,68E-05
ODP	kg CFC 11 eq.	5,55E-07	4,09E-09	3,02E-11	0,00E+00	1,61E-10	0,00E+00	1,74E-10	-1,62E-10
AP	mol H^+ eq.	3,19E-02	4,39E-04	1,08E-05	0,00E+00	3,86E-05	0,00E+00	4,38E-05	-2,21E-05
EP-freshwater	kg P eq.	1,84E-03	1,40E-05	6,82E-07	0,00E+00	1,20E-06	0,00E+00	5,48E-07	-2,40E-06
EP-marine	kg N eq.	1,80E-02	1,09E-04	4,75E-06	0,00E+00	1,28E-05	0,00E+00	1,68E-05	-1,36E-05
EP-terrestrial	mol N eq.	8,37E-02	1,17E-03	3,80E-05	0,00E+00	1,38E-04	0,00E+00	1,84E-04	-1,47E-04
POCP	kg NMVOC eq.	3,07E-02	7,42E-04	1,27E-05	0,00E+00	5,66E-05	0,00E+00	6,63E-05	-2,93E-05
ADP-minerals&metals*	kg Sb eq.	2,21E-04	6,57E-07	1,70E-08	0,00E+00	3,18E-08	0,00E+00	9,32E-09	-5,16E-08
ADP-fossil*	MJ	1,41E+02	2,91E+00	2,60E-02	0,00E+00	1,58E-01	0,00E+00	1,53E-01	-5,51E-01
WDP*	m^3	1,04E+01	1,48E-02	1,07E-03	0,00E+00	9,25E-04	0,00E+00	6,73E-03	-2,67E-03
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: 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.*

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 the end-of-life stage (modules C1-C4) should be considered when using the results of the product stage (modules A1-A3).

Additional mandatory impact category indicators

Results per functional or declared unit									
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-GHG[1]	kg CO_2 eq.	7,06E+00	2,01E-01	2,56E-03	0,00E+00	1,11E-02	0,00E+00	6,26E-03	-5,63E-02

[1] 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_2 is set to zero.

Resource use indicators

Results per functional or declared unit									
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
PERE	MJ	1,37E+01	5,21E-02	7,64E-01	0,00E+00	2,20E-03	0,00E+00	1,43E-03	-6,34E-01
PERM	MJ	6,94E-01	0,00E+00	-6,94E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	1,44E+01	5,21E-02	7,00E-02	0,00E+00	2,20E-03	0,00E+00	1,43E-03	-6,34E-01
PENRE	MJ	9,36E+01	2,91E+00	2,04E-01	0,00E+00	1,58E-01	0,00E+00	1,53E-01	-1,18E-01
PENRM	MJ	4,78E+01	0,00E+00	-1,10E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	MJ	1,41E+02	2,91E+00	-1,08E+01	0,00E+00	1,58E-01	0,00E+00	1,53E-01	-1,18E-01
SM	kg	8,82E-02	1,33E-03	6,19E-05	0,00E+00	6,63E-05	0,00E+00	3,81E-05	-4,41E-05
RSF	MJ	1,45E-02	1,62E-05	4,27E-07	0,00E+00	8,65E-07	0,00E+00	7,96E-07	-5,08E-06
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	8,48E-02	4,18E-04	1,15E-05	0,00E+00	2,27E-05	0,00E+00	1,58E-04	-6,76E-05
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 resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water								

The approach B was used to compute the primary energy indicators.

Waste indicators

Results per functional or declared unit									
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
Hazardous waste disposed	kg	1,89E+00	4,21E-03	8,52E-04	0,00E+00	1,01E-03	0,00E+00	1,74E-04	-1,60E-03
Non-hazardous waste disposed	kg	1,68E+01	8,93E-02	2,57E-02	0,00E+00	2,00E-02	0,00E+00	4,03E-03	-1,89E-02
Radioactive waste disposed	kg	2,61E-04	9,68E-07	2,61E-08	0,00E+00	3,18E-08	0,00E+00	2,24E-08	-2,71E-07

Output flow indicators

Results per functional or declared unit									
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	0,00E+00	0,00E+00	4,05E-02	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	0,00E+00	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

Additional voluntary impact category indicators

Results per functional or declared unit									
Indicator	**Unit**	**A1-A3**	**A4**	**A5**	**C1**	**C2**	**C3**	**C4**	**D**
PM	Disease incidence	3,84E-07	1,61E-08	4,42E-10	0,00E+00	1,09E-09	0,00E+00	1,01E-09	-4,94E-10
IRP	kBq U235 eq.	1,43E+00	3,89E-03	1,04E-04	0,00E+00	1,33E-04	0,00E+00	9,17E-05	-8,84E-04
ETP-fw	CTUe	3,34E+02	3,85E-01	2,44E-02	0,00E+00	3,29E-02	0,00E+00	1,02E-01	-6,68E-02
HTP-c	CTUh	1,05E-08	3,37E-11	3,81E-12	0,00E+00	1,74E-12	0,00E+00	1,13E-12	-4,59E-12
HTP-nc	CTUh	8,60E-08	1,83E-09	8,57E-11	0,00E+00	9,85E-11	0,00E+00	2,55E-11	-4,45E-11
SQP	Dimensionless	5,64E+01	2,18E+00	2,39E-02	0,00E+00	1,58E-01	0,00E+00	3,01E-01	-6,13E+00

The estimated impact results are only relative statements, which do not indicate the endpoint of the impact categories, exceeding threshold values, safety margins and/or risks.

Disclaimer: it is not encouraged to use the results of modules A1-A3 without taking into account the results of module C.

The results of the impact categories abiotic depletion of minerals and metals, land use, human toxicity (cancer), human toxicity, non cancer and ecotoxicity (freshwater) may be highly uncertain in LCAs that include capital goods/infrastructure in generic datasets, in case infrastructure/capital goods contribute greatly to the total results. This is because the LCI data of infrastructure/capital goods used to quantify these indicators in currently available generic datasets sometimes lack temporal, technological and geographical representativeness. Caution should be exercised when using the results of these indicators for decision-making purposes.

ABBREVIATIONS

Abbreviation	Definition
General Abbreviations	
EN	European Norm (Standard)
EF	Environmental Footprint
GPI	General Programme Instructions
ISO	International Organization for Standardization
eq	equivalent
CPC	Central product classification
SVHC	Substances of Very High Concern
ND	Not Declared

REFERENCES

Life-Cycle Assessment Background Report in accordance with EN 15804+A2 & ISO 14025 / ISO 21930.

General Programme Instructions of the international EPD® system. Version 5.0. ww.environdec.com.

ISO 14020:2023 Environmental statements and programmes for products. Principles and general requirements.

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.

ISO 14044:2006 Environmental management. Life cycle assessment. Requirements and guidelines.

EN 15804+A2 Sustainability in construction works – Environmental product declarations – Core rules for the product category of construction products.

PCR 2019:14 Construction products, version 2.0.1.

54650 - Insulation services.

LCA background report 30.06.2026.

Data references:
One Click LCA
Ecoinvent 3.12 database

VERSION HISTORY

Original Version of the EPD, 2026-06-30

EPD®

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