



Environmental Product Declaration

*in accordance with ISO 14025 and
EN15804:2012+A2:2019/AC:2021*

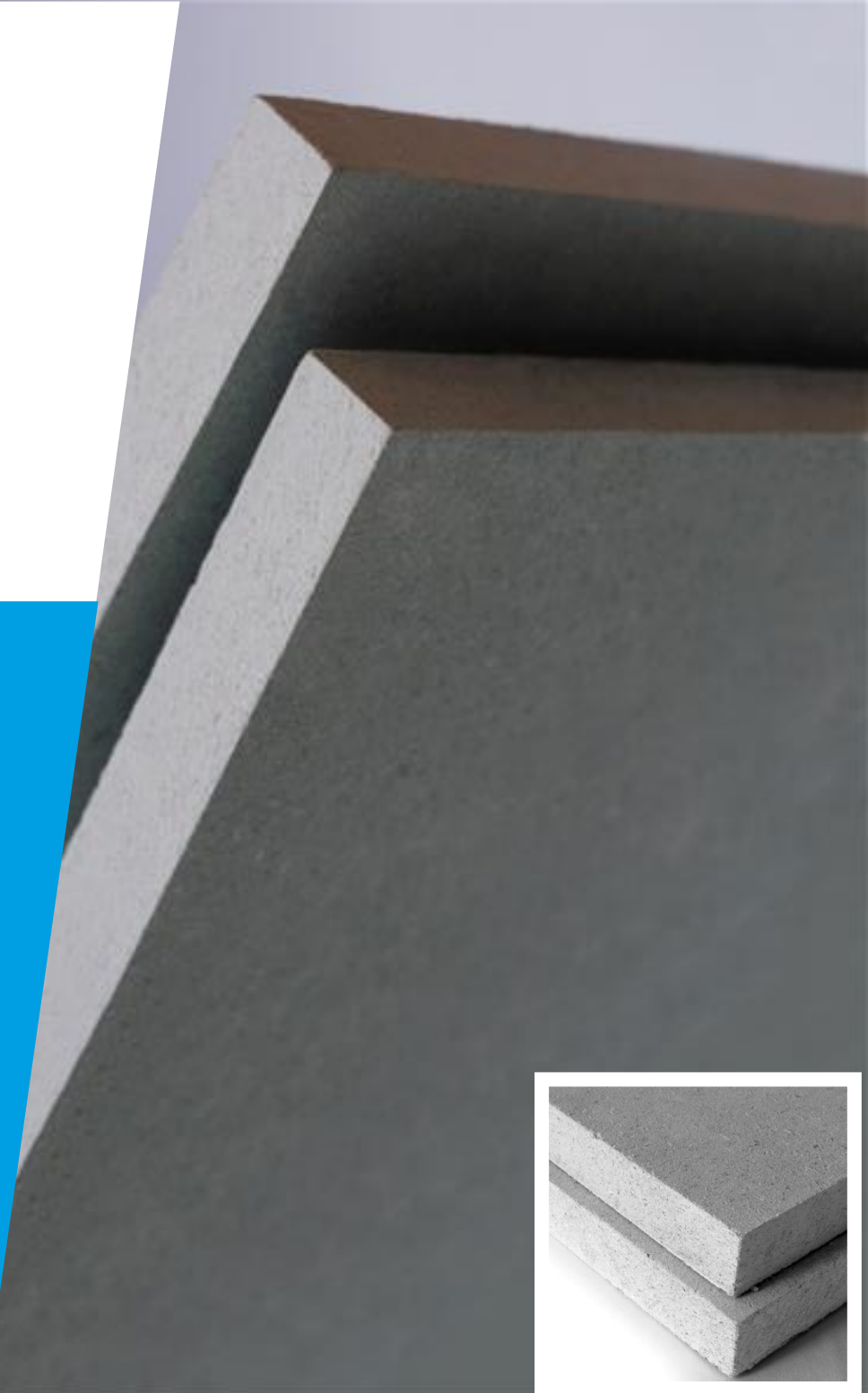
For

***Gypsum Fibre Boards:
Vidiwall
Vidifloor
Vidifire
Vidiphonic***

Manufactured by

Knauf Bulgaria EOOD

Build on us.



Programme: The International EPD® System, www.environdec.com
Programme operator: EPD International AB
EPD registration number: EPD-IES-0021606
Publication date: 2025-04-17
Validation date: 2030-04-16

EPD of multiple products, based on the average results of the product group. For full list of included products please, refer to section Product Information.

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.



PROGRAMME INFORMATION

Programme: The International EPD® System
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Accountabilities for PCR, LCA and independent, third-party verification

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 1.3.4, March 1st, 2024, c-PCR-031 Gypsum-Based Construction Products.*

PCR review was conducted by: *The Technical Committee of the International EPD® System.* See www.environdec.com for a list of members.
Review chair: *Claudia A. Peña, University of Concepción, Chile.* The review panel may be contacted via the Secretariat www.environdec.com/contact.

Life Cycle Assessment (LCA)

LCA accountability: *Knauf Bulgaria EOOD*

Third-party verification

Independent third-party verification of the declaration and data, according to ISO 14025:2006, via:

☒ EPD verification by individual verifier

Third-party verifier: *Dr.-Ing. Nikolay Minkov, greentability Ltd.*

Approved by: The 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, 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.



COMPANY INFORMATION

EPD owner:

KNAUF Bulgaria EOOD

Contact:

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Knauf Bulgaria EOOD

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Description of the organization:

Knauf Bulgaria EOOD is part of the Knauf Group - a globally leading manufacturer of building materials and construction systems. Knauf Bulgaria EOOD consists of headquarters in Sofia and two factories where several products are produced: gypsum fibre boards, gypsum plaster boards, perforated gypsum plaster boards and metal profiles.

Product-related or management system-related certifications:

ISO 9001:2015 No. Q-05662/0 since 2006

ISO 14001:2015 No. U-01846/0 since 2012

ISO 45001:2018 No. 00294/0 since 2019

Name and location of production site:

One production site at Knauf Bulgaria EOOD, located in Vidin, Bulgaria



PRODUCT INFORMATION

Gypsum fibre boards for panelling and lining of building components in public, residential and industrial buildings.

This EPD is elaborated based on average product. This study analyses all products manufactured by the plant under the following product groups which are categorised based on their use and application:

- Vidiwall
- Vidiwall HI, Vidiwall MD, Vidiwall HD
- Vidifloor, Vidifloor Solo
- Vidifire
- Vidiphonic

Each of the above-listed product groups is represented by a range of products with a varying size and thickness and is sold under a distinct trade name.

Product description:

Knauf Bulgaria gypsum fibre boards are manufactured from high-quality calcined gypsum reinforced with dispersed cellulose fibres originated from selected types of recycled wastepaper. Each product group is categorized on the basis of their use and application (e.g. floor, wall or ceiling installation, fire protection etc.) and is represented by a range of products with a varying thickness.

The average product is characterized by the following physical and technical characteristics:

Parameter	Value	Unit
Gross density	1100 – 1450	kg/m ³
Bending strength (longitudinal)	≥5.5	N/mm ²
Modulus of elasticity	≥3300	N/mm ²
Brinell hardness	25-40	kg/m ³
Calculation value for thermal conductivity	<0.30	W/(mK)
Water vapour diffusion resistance factor	21	-
Moisture content at 20 °C, 65% humidity	<1.3	M.-%
Elongation/Vibration when humidity changes by 30% (20°C) to EN 318 [mm/m]	Max 0.3	Mm/m

UN CPC code:

37990 - Non-metallic mineral products (including mineral wool, expanded mineral materials, worked mica, articles of mica, non-electrical articles of graphite or other carbon and articles of peat).

Geographical scope:

Bulgaria and global for raw materials production and supply, Bulgaria for gypsum fibre boards production (modules A1-A3).

Global for end-of-life modelling, benefits and loads (C1-C4 and D).

LCA INFORMATION

Functional / Declared unit

The declared unit is 1 square meter (m²) of gypsum fibre board with a thickness of 12.5 mm and weight of 14.4 kg/m².

Reference service life

The gypsum fibre boards have long life span as they are used in building construction and their reference service life is consistent with the service life of the building. The reference service life is considered to be at least 50 years (2017, BBSR), however is not implemented in this study because the use phase (module B) is outside of the EPD system boundary.

Time representativeness

The study covers data from January 2023 to December 2023.

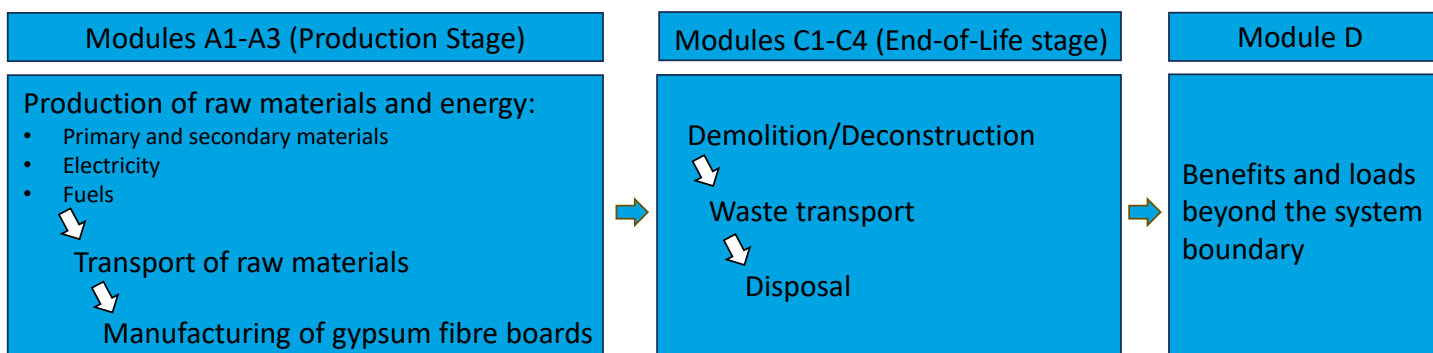
Database and software used

SimaPro software, version 9.6.0.1 with Ecoinvent 3.10.0 database, EF 3.1 reference package

Description of system boundaries

The EPD is type a) - Cradle to gate with modules C1–C4 and module D (A1 - A3 + C + D).

System diagram

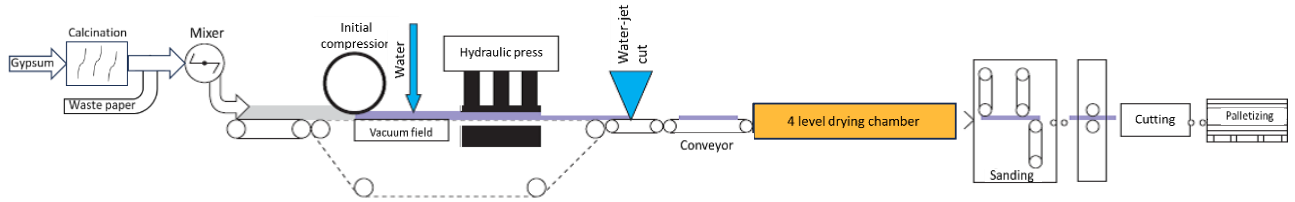


Description of the included modules

Modules A1-A3: Production stage

- **A1 Raw materials supply:** this module includes the raw materials extraction and production. The main materials for the production of the gypsum fibre boards are gypsum and waste paper. Impacts, related to dewatering and refinement of FGD gypsum slurry prior to its transportation to Knauf's factory are accounted for in module A1.
- **A2 Transport:** this module includes the transport of the different raw materials to the production plant. The transport is mainly by lorries and in few cases by ship. The distances and the quantities of the transported materials are provided per supplier by the commissioner of the study.
- **A3 Manufacturing:** this module includes the consumption of energy for raw gypsum calcination, energy and water during the manufacturing process of the gypsum fibre boards as well as the transport and management of the factory-produced

waste. The manufacturing process is represented by one production line. The manufacturing process is as follows:



The electricity consumption modelling is done using Ecoinvent 3.10 emission factor for the residual mix in Bulgaria, based on energy mix data provided in the Association of Issuing bodies' report for European residual mixes for 2022. The GWP-GHG indicator of the used electricity mix is 0.638 kg CO₂e/kWh (this is a life-cycle value calculated by Ecoinvent based on AIB report). According to the AIB report, the details of the mix are as follows:

Renewable, unspecified	Biomass	Solar	Geothermal	Wind	Hydro	Nuclear	Fossil, unspecified	Hard coal	Lignite	Oil	Gas
0.01%	4.26%	3.44%	0.00%	2.98%	3.29%	36.65%	0.00%	44.30%	0.00%	0.85%	4.21%

Modules C1-C4: End-of-Life stage

- **C1 Deconstruction/demolition of the studied products:** Due to the long service life of the product, it is assumed that the de-construction and/or dismantling of the product takes part of the demolition of the entire building. For correctly reflecting the emissions for C1 (dismantling/demolishing at end-of-life), emission factor from the Ecoinvent database was used which represents the energy a diesel burning machine needs for dismantling and the particulates emissions occurring during the dismantling/demolishing.
- **C2 Transport at End-of-Life stage:** This module includes the environmental impacts related to the transport of the end-of-life waste to a landfill or a treatment site. As there is no data available for this transport, it was assumed a 50 km transport distance to such sites.
- **C3 Processing at end-of-life:** This module reflects the environmental impacts which are associated with the recycling of the product at its end-of-life. For the studied products no concrete data was found where it is stated that this product is recyclable at its End-of-Life stage. Generally, at the time of the decommissioning of the product, which in most cases coincides with the decommissioning of the structure that the product is part of, the product has already lost its physical characteristics and cannot be reused or recycled into reusable raw materials. Therefore, no emissions are attributed to this stage.
- **C4 Disposal at end-of-life:** This module includes the impacts related to the disposal of the product at its End-of-Life stage. As per EN 17328:2024, if no data for recycling is available, landfilling shall be modelled as default end-of-life option, therefore in this study 100% of the end-of-life waste is modelled as landfilled.
- **Module D: Benefits and Loads:** in coherence with the scenario for module C3 as gypsum fibre boards are not recycled at their end-of-life, no benefits and loads related to recycling and reuse of gypsum fibre boards are accounted for in this module.

Cut-off criteria

Cut-off criteria are set to be not more than 1% of renewable and non-renewable primary energy usage and 1% of the total

mass input of that unit process, with total neglected input flows per module not exceeding 5% of energy usage and mass. Data on material quantities used are process specific and provided by the manufacturer. During the lifecycle inventory stage, the manufacturer had been asked to collect data for all production relevant input and output material and energy flows, which are expected to be above the cut-off threshold. However, if data had already been collected and provided, although insignificant, inputs or waste flows with less than 1% contribution are also included. Transportation of all flows (inputs and waste) is included.

Calculation methodology

The LCA impacts were calculated using characterization factors from the Ecoinvent 3.10 LCA database and assessment methods, referred as EF 3.1. For each impact category the appropriate impact factor was multiplied by the respective quantity of inputs/outputs. In the case of energy used, inputs in natural units are converted to the corresponding energy units using country-specific or generic net calorific values.

According to EN 17328:2024 –impacts related to the dewatering and refinement of the FGD gypsum slurry shall be accounted for. This is modelled through data taken from the Integrated permit for the FGD gypsum storage facility of Maritza Iztok 2 thermal power plant⁸ where this process takes place.

The impacts related to natural gypsum use are calculated based on measured data for natural gypsum mining provided by the owner of the gypsum quarry at Koshava, Bulgaria where the mining takes place.

Data for input materials transportation was provided per supplier and aggregated through weighted average method to account for different vehicle types and points of origin.

Allocation

In the present study, there are no by-products, and all production is included in the average product, which is in the scope of this study, thus no relevant allocation is considered necessary since all inputs and waste outflows are converted to the main product described above. The total environmental burden is associated with the products delivered to the customers.

Infrastructure/Capital goods

Capital goods, such as buildings, machinery, vehicles, infrastructure as well as commodities not directly related with the production processes (consumption related to office buildings) are excluded from the system boundaries for practical reasons, as those usually do not have the potential to cause significant impacts.

Restrictions to the use of the EPD

The presented results should be considered as an assessment of the environmental performance of the studied Knauf Bulgaria EOOD's product, and when compared with results from other LCA studies, they should be compared with highest care and if possible taking into an account any underlying assumptions as those might differ. The results of this LCA study might be used to inform LCA studies of other products, of which the gypsum fibre boards are part of. The use of the results for modules A1-A3 should not be used without considering the results of module C.

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	ND	ND	ND	ND	ND	ND	ND	ND	ND	X	X	X	X	X
Geography	GLO	GLO	BG										GLO	GLO	GLO	GLO	GLO
Specific data used	>90%																
Variation – products**	Up to -33% / +77%*																
Variation – sites	0%																

*Module A5 is included only for balancing-out reporting of packaging-related biogenic carbon emissions.

**Data for the variation of the results for each environmental impact indicator results between the included products and the declared average product results are presented in Appendix I. Although the differences exceed +/-10% they are a result from scaling factors related to difference thicknesses of the included products and not related to differences in composition, manufacturing processes, etc. Therefore, the grouping of the products in one EPD justified.

CONTENT INFORMATION

Components	kg per declared unit	Products in scope, weight %	Post-consumer material, weight-%	Biogenic material, kg C/Declared unit
Gypsum	12.49	82-91%	0%	0
Waste paper	1.87	9.-18%	100%	8.40E-01
Auxiliary materials	0.04	0.3-0.5%	0%	0
TOTAL	14.40		13 %	8.40E-01

Packaging materials	Weight, kg per declared unit	Weight-% (versus the product)	Weight biogenic carbon, kg C/kg product
Plastic	0.00	0.03%	N/A
Wood	0.28	1.58%	7.4.E-03
TOTAL	0.23	1.61%	7.4.E-03

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).

RESULTS OF THE ENVIRONMENTAL PERFORMANCE INDICATORS

Mandatory impact category indicators according to EN 15804

Indicator	Unit	A1-A3	C1	C2	C3	C4	D
GWP-fossil	kg CO2 eq.	6.11E+00	5.18E-02	1.37E-01	0.00E+00	4.87E-01	0.00E+00
GWP-biogenic	kg CO2 eq.	-3.38E+00	5.66E-06	9.48E-05	0.00E+00	3.38E+00	0.00E+00
GWP-luluc	kg CO2 eq.	1.54E-03	4.50E-06	4.54E-05	0.00E+00	2.71E-04	0.00E+00
GWP-total	kg CO2 eq.	2.72E+00	5.18E-02	1.37E-01	0.00E+00	3.87E+00	0.00E+00
ODP	kg CFC 11 eq.	1.93E-07	7.93E-10	2.72E-09	0.00E+00	9.63E-09	0.00E+00
AP	mol H+ eq.	2.32E-02	4.67E-04	2.85E-04	0.00E+00	4.07E-01	0.00E+00
EP-freshwater	kg P eq.	1.10E-03	1.51E-06	9.27E-06	0.00E+00	7.62E-05	0.00E+00
EP-marine	kg N eq.	5.38E-03	2.17E-04	6.84E-05	0.00E+00	4.11E-03	0.00E+00
EP-terrestrial	mol N eq.	5.52E-02	2.37E-03	7.38E-04	0.00E+00	1.04E-02	0.00E+00
POCP	kg NMVOC eq.	2.03E-02	7.08E-04	4.73E-04	0.00E+00	2.88E-02	0.00E+00
ADPE*	kg Sb eq.	1.28E-05	1.85E-08	4.45E-07	0.00E+00	1.49E-06	0.00E+00
ADPF*	MJ	1.00E+02	6.77E-01	1.92E+00	0.00E+00	7.70E+00	0.00E+00
WDP*	m ³	2.57E+00	1.47E-03	7.99E-03	0.00E+00	-1.62E+00	0.00E+00
GWP-GHG**	kg CO2 eq	5.54E+00	5.17E-02	1.36E-01	0.00E+00	3.15E+00	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; ADPE = Abiotic depletion potential for non-fossil resources; ADPF = 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.

**Disclaimer: The GWP-GHG indicator is identical to GWP-total except that the characterization factor (CF) for biogenic CO2 is set to zero as per the requirements of the PCR.

Additional mandatory and voluntary impact category indicators

Indicator	Unit	A1-A3	C1	C2	C3	C4	D
PM	Disease incidence	1.71E-07	1.20E-07	1.01E-08	0.00E+00	3.57E-07	0.00E+00
IRP	kBq U235 eq.	9.08E-01	3.04E-04	2.50E-03	0.00E+00	2.87E-02	0.00E+00
ETP-fw	CTUe	1.50E+01	9.60E-02	5.24E-01	0.00E+00	9.19E+01	0.00E+00
HTP-c	CTUh	1.76E-08	2.02E-10	9.71E-10	0.00E+00	2.71E-09	0.00E+00
HTP-nc	CTUh	3.34E-08	8.38E-11	1.21E-09	0.00E+00	6.19E-08	0.00E+00
SQP	dimensionless (Pt)	4.71E+01	4.76E-02	1.16E+00	0.00E+00	9.58E+00	0.00E+00
Acronyms	PM - Particulate matter emissions; IRP - Ionizing radiation, human health; ETP-fw - Eco-toxicity – freshwater; HTP-c - Human toxicity, cancer effect; HTP-nc - Human toxicity, non-cancer effects; SQP - Land use related impacts/Soil quality						

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

Resource use indicators

Indicator	Unit	A1-A3	C1	C2	C3	C4	D
PERE	MJ	7.67E+00	4.04E-03	3.19E-02	0.00E+00	2.97E-01	0.00E+00
PERM	MJ	3.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	3.86E+01	4.04E-03	3.19E-02	0.00E+00	2.97E-01	0.00E+00
PENRE	MJ	1.00E+02	6.77E-01	4.63E-01	0.00E+00	4.63E-01	0.00E+00
PENRM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRT	MJ	1.00E+02	6.77E-01	4.63E-01	0.00E+00	4.63E-01	0.00E+00
SM	kg	1.10E+01	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
NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m ³	1.20E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	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 indicators

Indicator	Unit	A1-A3	C1	C2	C3	C4	D
HWD	kg	3.81E-04	4.69E-06	1.30E-05	0.00E+00	6.33E-05	0.00E+00
NHWD	kg	8.71E-01	4.16E-04	4.16E-04	0.00E+00	1.47E+01	0.00E+00
RWD	kg	2.17E-04	7.45E-08	6.20E-07	0.00E+00	7.27E-06	0.00E+00
Acronyms	HWD= Hazardous waste disposed, NHWD= Non-hazardous waste disposed; RWD= Radioactive waste disposed						

Output flow indicators

Indicator	Unit	A1-A3	C1	C2	C3	C4	D
CRU	kg	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
MER	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EEE	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EET	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Acronyms	CRU= Components for re-use; MFR= Material for recycling; MER= Materials for energy recovery; EEE= Exported energy, electricity; EET= Exported energy, thermal						

Disclaimer: 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.

REFERENCES:

1. ISO 14040:2006 Environmental management – Life cycle assessment – Principles and framework
2. ISO 14044:2006 Environmental management – Life cycle assessment – Requirements and guidelines
3. EN 15804:2012+A2:2019+AC:2021, Sustainability of construction works — Environmental Product Declarations — Core rules for the product category of construction products.
4. EN ISO 14025:2011, Environmental labels and declarations — Type III environmental declarations — Principles and procedures
5. PCR 2019:14 Construction products (EN 15804:A2) (1.3.4) prepared by IVL Swedish Environmental Research Institute, EPD International Secretariat
6. c-PCR-003 (to PCR 2019:14), version: 2024-04-30
7. 2022 European Residual Mixes, Association of Issuing Bodies
8. [2023 Integrated permit for the FGD gypsum storage facility of Maritza Iztok 2 thermal power plant](#)
9. 2017 BBSR (Federal Institute for Research on Building, Urban Affairs and Spatial Development). Service lives of components for LCA in accordance with BNB
10. 2019 Deviatkin, Horttanainen. Carbon footprint of an EUR-sized wooden and a plastic pallet
11. 1995 U.S. Environmental Protection Agency. Gypsum Manufacturing

APPENDIX I

Variations in results for each indicator in respect to the declared average product*

Core environmental impact indicators	Unit	Variations
Global warming potential - fossil fuels (GWP-fossil)	kg CO2 eq.	-33% / +77%
Global warming potential - land use and land use change (GWP-luluc)	kg CO2 eq.	-33% / +77%
Global warming potential - total (GWP-total)	kg CO2 eq.	-33% / +77%
Depletion potential of the stratospheric ozone layer (ODP)	kg CFC 11 eq.	-33% / +77%
Acidification potential, accumulated exceedance (AP)	mol H+ eq.	-33% / +77%
Eutrophication potential - freshwater (EP-freshwater)	kg P eq.	-33% / +77%
Eutrophication potential - marine (EP-marine)	kg N eq.	-33% / +77%
Eutrophication potential - terrestrial (EP-terrestrial)	mol N eq.	-33% / +77%
Photochemical ozone creation potential (POCP)	kg NMVOC eq.	-33% / +77%
Abiotic depletion potential - non-fossil resources (ADPE)	kg Sb eq.	-33% / +77%
Abiotic depletion potential - fossil resources (ADPF)	MJ	-33% / +77%
Water (user) deprivation potential (WDP)	m ³	-33% / +77%
Global warming potential (GWP-GHG)	kg CO2 eq.	-33% / +77%
Particulate matter emissions (PM)	Disease incidence	-33% / +77%
Ionizing radiation, human health (IRP)	kBq U235 eq.	-33% / +77%
Eco-toxicity - freshwater (ETP-fw)	CTUe	-33% / +77%
Human toxicity, cancer effect (HTP-c)	CTUh	-33% / +77%
Human toxicity, non-cancer effects (HTP-nc)	CTUh	-33% / +77%
Land use related impacts/Soil quality (SQP)	dimensionless (Pt)	-33% / +77%
Resource Use		
Use of renewable primary energy as energy carrier (PERE)	MJ	-33% / +77%
Use of renewable primary energy resources used as raw materials (PERM)	MJ	-33% / +77%
Total use of renewable primary energy (PERT)	MJ	-33% / +77%
Use of non renewable primary energy as energy carrier (PENRE)	MJ	-33% / +77%
Total use of non renewable primary energy resource (PENRT)	MJ	-33% / +77%
Use of secondary material (SM)	kg	-33% / +77%
Net use of fresh water (FW)	m ³	-33% / +77%
Waste categories		
Hazardous waste disposed (HWD)	kg	-33% / +77%
Non-hazardous waste disposed (NHWD)	kg	-33% / +77%
Radioactive waste disposed (RWD)	kg	-33% / +77%

*Indicators for which the variation is 0% are not included