



ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025

Aggregates
UAB METASTA



EPD HUB, HUB-7044

Published on 24.07.2026, last updated on 24.07.2026, valid until 23.07.2031

Life Cycle Assessment study has been performed in accordance with the requirements of EN 15804, EPD Hub PCR version 1.2 (24 Mar 2025) and JRC characterization factors EF 3.1.



Created with One Click LCA



GENERAL INFORMATION

MANUFACTURER

Manufacturer	UAB METASTA
Address	Placioji St. 29, 21146 Senieji Trakai village, Trakai district, Lithuania
Contact details	info@metasta.lt
Website	https://www.metasta.lt/

EPD STANDARDS, SCOPE AND VERIFICATION

Program operator	EPD Hub, hub@epdhub.com
Reference standard	EN 15804:2012+A2:2019/AC:2021 and ISO 14025
PCR	EPD Hub Core PCR Version 1.2, 24 Mar 2025
Sector	Construction product
Category of EPD	Third party verified EPD
Parent EPD number	-
Scope of the EPD	Cradle to gate with options, A4, and modules C1-C4, D
EPD author	Vida Gaubsaite AB VIAMATIKA
EPD verification	Independent verification of this EPD and data, according to ISO 14025: ☐ Internal verification ☒ External verification
EPD verifier	Magaly Gonzalez Vazquez as an authorized verifier for EPD Hub

This EPD is intended for business-to-business and/or business-to-consumer communication. The manufacturer has the sole ownership, liability, and responsibility for the EPD. EPDs within the same product category but from different programs may not be comparable. EPDs of construction products may not be comparable if they do not comply with EN 15804 and if they are not compared in a building context.

PRODUCT

Product name	Aggregates from UAB METASTA
Additional labels	-
Product reference	-
Place(s) of raw material origin	Bartu st. 1P, Aleksandriskės village, Rudiskės, Trakai district, Lithuania
Place of production	Bartu st. 1P, Aleksandriskės village, Rudiskės, Trakai district, Lithuania
Place(s) of installation and use	Europe (multiple countries)
Period for data	calendar year 2024
Averaging in EPD	No grouping
Variation in GWP-fossil for A1-A3 (%)	Not relevant
GTIN (Global Trade Item Number)	-
NOBB (Norwegian Building Product Database)	-
A1-A3 Specific data (%)	10,1

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 tonne of Aggregates
Declared unit mass	1000 kg
Mass of packaging	0 kg
GWP-fossil, A1-A3 (kgCO ₂ e)	13
GWP-total, A1-A3 (kgCO ₂ e)	13
Secondary material, inputs (%)	0,01
Total energy use, A1-A3 (kWh)	42,8
Net freshwater use, A1-A3 (m ³)	0,36

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

UAB "Metasta" was established in 2014. The main activity of the company is the extraction, processing and trade of aggregates. Over 20 different fractions of Aggregates as sand, gravel, crushed gravel and their mixtures are offered. The company currently operates a 41.2 ha plot of Aleksandriškės sand and gravel quarry in Trakai district, about 45 kilometers from Vilnius. Production capacity is about 1,1 mln tons per year of aggregates.

PRODUCT DESCRIPTION

The aggregates covered in this study consist of 100% natural sand, gravel, crushed gravel and their mixtures. Aggregates are classified by particle size and consistency. They can be produced as the natural stone aggregates

(sand and gravel) and crushed aggregates. Aggregates are produced in various fractions (Please see details in Annex I) and compliant to technical standards:

EN 12620:2002+A1:2008 - Aggregates for concrete.

EN 13043:2002, EN 13043:2002/AC:2004 - Aggregates for bituminous mixtures and surface treatments for roads, airfields and other trafficked areas.

EN 13285:2018 - Unbound mixtures - Specifications.

Further information can be found at:

<https://www.metasta.lt/>

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	-	-
Minerals	100	LT
Fossil materials	-	-
Bio-based materials	--	-

BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

Biogenic carbon content in product, kg C	0
Biogenic carbon content in packaging, kg C	0

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 tonne of Aggregates
Mass per declared unit	1000 kg
Functional unit	-
Reference service life	-

SUBSTANCES, REACH - VERY HIGH CONCERN

The product does not contain any REACH SVHC substances in amounts greater than 0,1 % (1000 ppm).

PRODUCT LIFE-CYCLE

SYSTEM BOUNDARY

This EPD covers the life-cycle modules listed in the following table.

Product stage			Assembly stage		Use stage							End of life stage				Beyond the system boundaries	
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D	
x	x	x	x	ND	ND	ND	ND	ND	ND	ND	ND	x	x	x	x	x	x
Raw materials	Transport	Manufacturing	Transport	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction/ demolition	Transport	Waste processing	Disposal	Reuse	Recycling

Not declared = ND.

MANUFACTURING AND PACKAGING (A1-A3)

The environmental impacts considered for the product stage cover the manufacturing of raw materials used in the production as well as packaging materials and other ancillary materials. Also, fuels used by machines, and handling of waste formed in the production processes at the manufacturing facilities are included in this stage. The study also considers the material losses occurring during the manufacturing processes as well as losses during electricity transmission.

A market-based approach is used in modelling the electricity mix utilized in the factory.

The current EPD covers the following operations of sand, stones, gravel and crushed gravel production: First stage of production cycle implies the removal of the top layer of the ground (the overburden). The removed overburden is stored in the quarry and is used for the quarry site rehabilitation. After removal of the overburden, the stage of extraction of the natural sand and gravel mixture follows. The wheel loaders are being used for this purpose. The extracted soil is being instantly transported to the plant by wheel loaders (in Aleksandriskiu pit, average distance 5 km) and conveyers. Variety of aggregates size is being produced from the extracted soil at the plants. The produced aggregates are stored near quarry production site in stockpiles, from where they are sold to customers. The stage of aggregates' washing previews use of surface and groundwater (no chemicals are being used in the production). The water used for aggregates washing is permanently circulating inside the sediment retention pond system. The fine particles washed away from the aggregates sediments in a sedimentation basin located near the plants. The basin is being cleaned by an excavator upon the necessity. The sediment removed from the basin is being used for the quarry restoration purposes (rehabilitation of slopes, etc). This streamlined process generates no waste materials. All extracted aggregates (sand and gravel mix) is utilized in the production of the final crushed gravel product. UAB Metasta for their operations use 100% Lithuanian National Grid energy.

TRANSPORT AND INSTALLATION (A4-A5)

Transportation impacts occurred from final products delivery to construction site (A4) cover fuel direct exhaust emissions, environmental impacts of fuel production, as well as related infrastructure emissions.

The product is distributed in bulk by lorry. The average transported distance 25km was calculated based on weighted sale data in the reference year.

Installation is not covered by this study since it is heavily scenario-based. The environmental impacts of installation are highly dependent on the specific application and project scenario though, including factors such as: location and accessibility of the site. This influences the type of equipment needed and the distance travelled by construction vehicles.

Method of installation: Different techniques and machinery will have varying environmental impacts.

End use of the product: Whether the crushed rock is used for road construction, landscaping, or other purposes will affect the installation process and associated impacts.

Due to this high variability, a comprehensive assessment of installation impacts is beyond the scope of this particular EPD.

PRODUCT END OF LIFE (C1-C4, D)

This EPD considers the end-of-life stage of the crushed rock product for European union. It is assumed that 100% of the sand, gravel and crushed gravel is collected and separated from other construction and demolition waste. This is a crucial step in ensuring the material can be properly managed and its environmental impact minimized.

Aggregates has excellent recycling potential. At end-of-life, it can be recycled as a secondary raw material in various applications. This practice offers significant environmental benefits, including:

Conservation of natural resources: Utilizing recycled crushed gravel reduces the need to extract virgin raw materials from quarries, minimizing habitat disruption and resource depletion.

Reduced waste: Reusing the material diverts it from landfill, conserving space and reducing pollution.

Lower energy consumption: Processing recycled sand and gravel generally requires less energy compared to the extraction and processing of virgin materials.

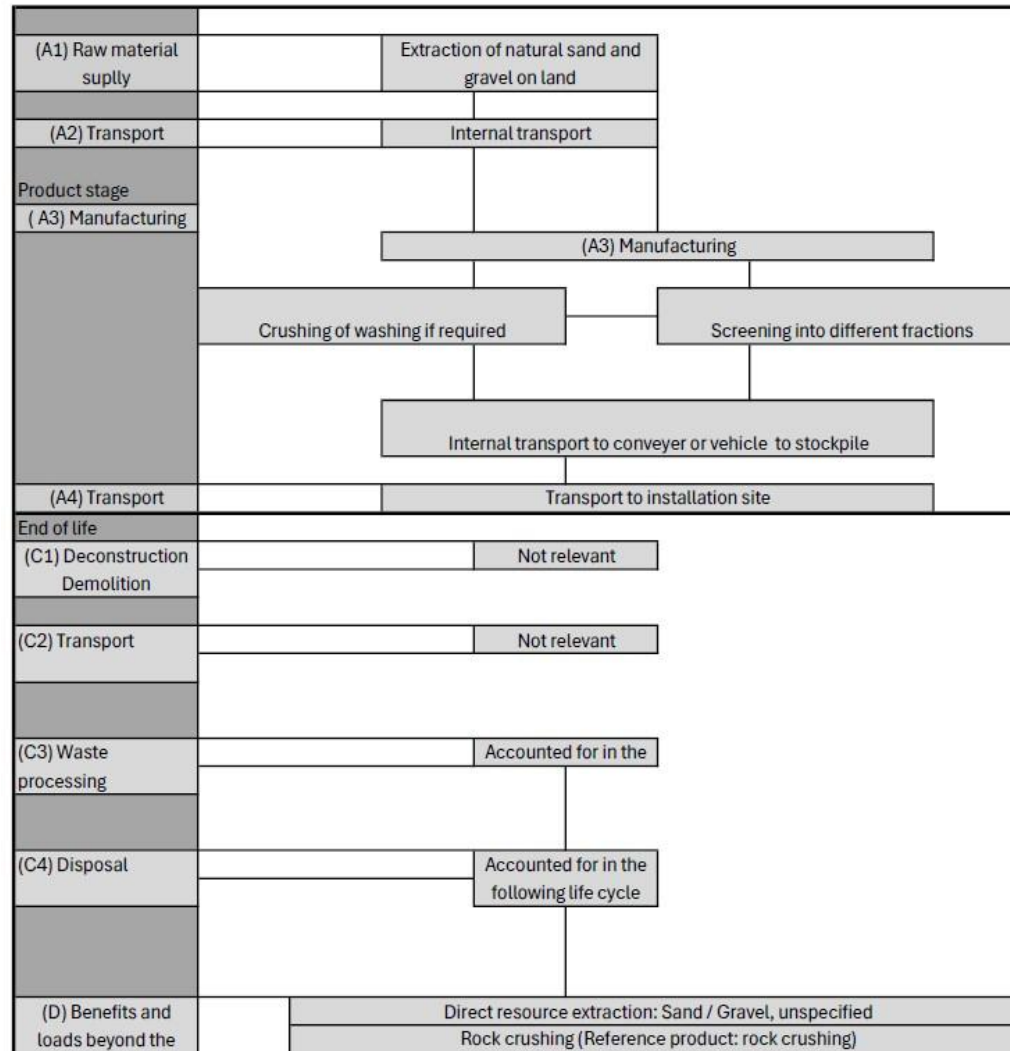
By facilitating the recycling of crushed gravel, this product contributes to a circular economy and helps minimize its overall environmental footprint.

Benefits and Loads:

The benefit in life cycle stage D is the avoidance of extraction of raw minerals to produce gravels by the recycling of product.

The load in the life cycle stage D is the gravel crushing of the product to create recycled gravels.

LIFE CYCLE FLOW DIAGRAM



LIFE-CYCLE ASSESSMENT

CUT-OFF CRITERIA

The study does not exclude any modules or processes which are stated mandatory in the reference standard and the applied PCR. The study does not exclude any hazardous materials or substances. The study includes all major raw material and energy consumption. All inputs and outputs of the unit processes, for which data is available for, are included in the calculation. There is no neglected unit process more than 1% of total mass or energy flows. The module specific total neglected input and output flows also do not exceed 5% of energy usage or mass.

The production of capital equipment, construction activities, and infrastructure, maintenance and operation of capital equipment, personnel-related activities, energy and water use related to company management and sales activities are excluded.

All industrial processes from raw material acquisition and pre-processing, production, product distribution, installation, use/application of product and end-of-life management are included. For easier modelling and because of lack of accuracy in available modelling resources many constituents under 0,1% of product mass are excluded. These include ancillary materials in very small amounts and have no serious impact on the emissions of the product. This study includes the quarrying and crushing processes, internal transport, as well as equipment maintenance and infrastructure.

List of exclusions:

- Construction activities, and infrastructure, personnel-related activities, energy and water use related to company management and sales activities;

VALIDATION OF DATA

Data collection for production, transport, and packaging was conducted using time and site-specific information, as defined in the general

information section on page 1 and 2. Upstream process calculations rely on generic data as defined in the Bibliography section. Manufacturer-provided specific and generic data were used for the product's manufacturing stage. The analysis was performed in One Click LCA EPD Generator, with the 'Cut-Off, EN 15804+A2' allocation method, and characterization factors according to EN 15804:2012+A2:2019/AC:2021 and JRC EF 3.1.

ALLOCATION, ESTIMATES AND ASSUMPTIONS

Allocation is required if some material, energy, and waste data cannot be measured separately for the product under investigation. All allocations are done as per the reference standards and the applied PCR. In this study, allocation has been done in the following ways:

Data type	Allocation
Raw materials	Physical Properties
Packaging material	Not applicable
Ancillary materials	Physical Properties
Manufacturing energy and waste	Physical Properties

In this study allocation could not be avoided for raw materials, ancillary material, energy consumption and waste production as the information was only measured on factory or production process level. The inputs were allocated to studied product based on annual production volume (mass allocation) except for machinery, which were allocated based on annual production volume (mass allocation) by the number of service years. The values for 1 tonne of aggregates (includes: sand, gravel or their mix also crushed gravel in different fractions) are calculated by considering the total product weight per annual production. In the factory, several kinds of gravel are produced; since the production processes of these products are similar,

the annual production in mass are taken into consideration for allocation. This LCA study is conducted in accordance with all methodological considerations, such as performance, system boundaries, data quality, allocation procedures, and decision rules to evaluate inputs and outputs. Allocation used in Ecoinvent 3.6 environmental data sources follow the methodology 'allocation, cut-off by classification'. This methodology is in line with the requirements of the EN 15804-standard.

All estimations and assumptions are given below.

- Modules A2, A4 & C2: Vehicle capacity utilization volume factor is assumed to be <1 which means 50% (return empty). Empty returns are considered.
- Module A4: The product is distributed in bulk by lorry. The average transported distance was calculated based on weighted sale data in the reference year. No assumption was made.
- Module A5: Installation is excluded from the scope of this study as it depends on the final product requirement such as asphalt or concrete.
- Modules C1 - C4, D: End of life is not relevant as gravel is usually used as a raw material in the manufacture of other construction materials like asphalt and concrete, and hence, it become inseparable at the end of life. In such cases, C1-C4, D may be omitted from the declaration as per section 5.2 of EN 15804+A2:2019.

PRODUCT & MANUFACTURING SITES GROUPING

Type of grouping	No grouping
Grouping method	Not applicable
Variation in GWP-fossil for A1-A3, %	Not relevant

Although crushed gravel required more crushing energy than sand and gravel production, in environmental impact terms, no distinction between

gravel sizes was done due to lack of detailed information.

There is no average result considered in this study since this EPD refers to one specific product produced in one production plant.

LCA SOFTWARE AND BIBLIOGRAPHY

This EPD has been created using One Click LCA EPD Generator for EPD Hub V3 and EPD Process Certification v3.2.5. The LCA and EPD have been prepared according to the reference standards and ISO 14040/14044. The EPD Generator uses Ecoinvent v3.10.1/3.11/3.12 and One Click LCA databases as sources of environmental data. Allocation used in Ecoinvent 3.10.1/3.11/3.12 environmental data sources follow the methodology 'allocation, Cut-off, EN 15804+A2'.

European Environment Agency (2020)

https://www.eea.europa.eu/en/analysis/maps-and-charts/mineral-waste-fromconstructionand#tabgooglechartid_chart_13_filters=%7B%22rowFilters%22%3A%7B%7D%3B%22columnFilters%22%3A%7B%7D%3B%22sortFilter%22%3A%5B%22__default__%22%5D%7D%7D;

Gervasio, H. & Dimova, S., JRC Technical report: Model for Life Cycle Assessment (LCA) of buildings, 2018);

EN 15804:2012+A2:2019/AC2021 Sustainability of construction works — Environmental product declarations — Core rules for the product category of construction products;

EN ISO 14025:2006 Environmental labels and declarations — Type III environmental declarations — Principles and procedures;

EN ISO 14040:2006+A1:2020 Environmental management — Life cycle assessment — Principles and guidelines;

EN ISO 14044:2006+A2:2020 Environmental management — Life cycle assessment — Requirements and guidelines;

cPCR v. 1.2 24, EPD Hub Limited, March 2025.

ENVIRONMENTAL IMPACT DATA

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

CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, EF 3.1

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP – total ¹⁾	kg CO ₂ e	9,93E+00	5,57E-01	2,51E+00	1,30E+01	2,64E+00	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	4,84E+00	1,27E+01	4,00E-01	-9,37E+00
GWP – fossil	kg CO ₂ e	9,90E+00	5,57E-01	2,51E+00	1,30E+01	2,64E+00	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	4,84E+00	1,26E+01	4,00E-01	-9,37E+00
GWP – biogenic	kg CO ₂ e	1,91E-02	1,28E-04	3,67E-03	2,29E-02	1,37E-03	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	9,59E-04	-1,30E-02	-1,27E-04	0,00E+00
GWP – LULUC	kg CO ₂ e	9,61E-03	2,48E-04	6,98E-04	1,06E-02	9,27E-04	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,71E-03	2,24E-02	2,28E-04	-8,47E-03
Ozone depletion pot.	kg CFC-11e	8,44E-08	8,11E-09	5,58E-08	1,48E-07	6,00E-08	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	9,62E-08	1,91E-07	1,16E-08	-7,30E-08
Acidification potential	mol H ⁺ e	6,17E-02	1,94E-03	5,30E-03	6,89E-02	8,54E-03	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,51E-02	8,71E-02	2,83E-03	-5,72E-02
EP-freshwater ²⁾	kg Pe	3,45E-03	6,04E-05	3,79E-04	3,89E-03	1,88E-04	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,21E-04	3,72E-03	3,28E-05	-2,86E-03
EP-marine	kg Ne	1,48E-02	6,40E-04	1,40E-03	1,69E-02	3,00E-03	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	5,10E-03	3,21E-02	1,08E-03	-1,36E-02
EP-terrestrial	mol Ne	1,78E-01	6,92E-03	1,47E-02	2,00E-01	3,26E-02	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	5,54E-02	3,47E-01	1,18E-02	-1,64E-01
POCP (“smog”) ³⁾	kg NMVOCe	4,91E-02	2,84E-03	7,66E-03	5,96E-02	1,41E-02	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,37E-02	1,09E-01	4,22E-03	-4,54E-02
ADP-minerals & metals ⁴⁾	kg Sbe	5,92E-05	1,59E-06	5,46E-06	6,63E-05	7,66E-06	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,58E-05	3,37E-05	6,35E-07	-5,01E-05
ADP-fossil resources	MJ	1,25E+02	7,94E+00	3,53E+01	1,68E+02	3,84E+01	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	6,79E+01	1,82E+02	9,80E+00	-1,12E+02
Water use ⁵⁾	m ³ e depr.	1,52E+01	4,64E-02	1,57E-01	1,54E+01	2,21E-01	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,34E-01	1,25E+00	2,83E-02	-1,40E+01

1) GWP = Global Warming Potential; 2) EP = Eutrophication potential. Required characterisation method and data are in kg P-eq. Multiply by 3,07 to get PO₄e; 3) POCP = Photochemical ozone formation; 4) ADP = Abiotic depletion potential; 5) EN 15804+A2 disclaimer for Abiotic depletion and Water use and optional indicators except Particulate matter and Ionizing radiation, human health. The results of these environmental impact indicators shall be used with care as the uncertainties on these results are high or as there is limited experience with the indicator.

ADDITIONAL (OPTIONAL) ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, EF 3.1

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Particulate matter	Incidence	9,69E-07	5,45E-08	3,60E-08	1,06E-06	2,67E-07	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,80E-07	8,85E-06	6,45E-08	-8,70E-07
Ionizing radiation ⁶⁾	kBq 11235e	9,41E-01	6,66E-03	1,10E-01	1,06E+00	4,13E-02	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	8,66E-02	4,50E-01	6,16E-03	-7,90E-01
Ecotoxicity (freshwater)	CTUe	3,43E+01	1,65E+00	2,27E+01	5,87E+01	5,17E+00	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	8,92E+00	6,29E+01	8,22E-01	-2,68E+01
Human toxicity, cancer	CTUh	2,54E-09	8,74E-11	3,70E-10	3,00E-09	4,17E-10	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	8,24E-10	2,74E-09	7,37E-11	-2,50E-09
Human tox. non-cancer	CTUh	8,27E-08	4,94E-09	1,08E-08	9,84E-08	2,39E-08	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	4,26E-08	1,15E-07	1,69E-09	-7,31E-08
SQP ⁷⁾	-	1,57E+02	7,92E+00	2,55E+00	1,67E+02	3,88E+01	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	4,04E+01	1,42E+02	1,93E+01	-1,05E+02

6) EN 15804+A2 disclaimer for Ionizing radiation, human health. 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; 7) SQP = Land use related impacts/soil quality.

USE OF NATURAL RESOURCES

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Renew. PER as energy ⁸⁾	MJ	1,23E+01	1,10E-01	5,61E-01	1,29E+01	5,97E-01	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,17E+00	6,68E+00	9,46E-02	-1,02E+01
Renew. PER as material	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Total use of renew. PER	MJ	1,23E+01	1,10E-01	5,61E-01	1,29E+01	5,97E-01	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,17E+00	6,68E+00	9,46E-02	-1,02E+01
Non-re. PER as energy	MJ	1,25E+02	7,94E+00	8,34E+00	1,41E+02	3,84E+01	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	6,79E+01	1,82E+02	9,81E+00	-1,12E+02
Non-re. PER as material	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Total use of non-re. PER	MJ	1,25E+02	7,94E+00	8,34E+00	1,41E+02	3,84E+01	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	6,79E+01	1,82E+02	9,81E+00	-1,12E+02
Secondary materials	kg	1,38E-01	3,33E-03	2,11E-02	1,62E-01	1,63E-02	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,11E-02	7,08E-02	2,46E-03	-1,25E-01
Renew. secondary fuels	MJ	9,87E-04	4,34E-05	5,17E-05	1,08E-03	2,15E-04	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	3,93E-04	6,48E-04	5,10E-05	-8,65E-04
Non-ren. secondary fuels	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of net fresh water	m ³	3,50E-01	1,14E-03	5,33E-03	3,57E-01	5,08E-03	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	9,14E-03	-4,07E-01	1,02E-02	-3,33E-01

8) PER = Primary energy resources.

END OF LIFE – WASTE

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste	kg	2,42E+00	5,08E-02	7,79E-02	2,55E+00	2,17E-01	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	9,74E-02	4,65E-01	1,08E-02	-8,78E-01
Non-hazardous waste	kg	2,06E+01	1,00E+00	1,61E+00	2,32E+01	4,51E+00	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,06E+00	5,99E+02	2,48E-01	-1,57E+01
Radioactive waste	kg	2,27E-04	1,59E-06	2,25E-05	2,51E-04	9,97E-06	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,15E-05	1,10E-04	1,50E-06	-1,90E-04

END OF LIFE – OUTPUT FLOWS

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	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	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	9,36E+02	0,00E+00	0,00E+00
Materials for recycling	kg	0,00E+00	0,00E+00	2,62E-02	2,62E-02	0,00E+00	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for energy rec	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	ND	ND	ND	ND	ND	ND	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	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy – Heat	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

ENVIRONMENTAL IMPACTS – EN 15804+A1, CML

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Global Warming Pot.	kg CO ₂ e	9,88E+00	5,54E-01	2,49E+00	1,29E+01	2,62E+00	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	4,80E+00	1,26E+01	3,96E-01	-9,32E+00
Ozone depletion Pot.	kg CFC-11e	7,07E-08	6,47E-09	4,53E-08	1,22E-07	4,76E-08	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	7,66E-08	1,53E-07	9,19E-09	-6,16E-08
Acidification	kg SO ₂ e	4,78E-02	1,48E-03	4,21E-03	5,35E-02	6,43E-03	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,15E-02	6,52E-02	2,10E-03	-4,44E-02
Eutrophication	kg PO ₄ ³ e	1,02E-02	4,00E-04	8,82E-04	1,15E-02	1,72E-03	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	2,92E-03	1,54E-02	6,66E-04	-8,63E-03
POCP ("smog")	kg C ₂ H ₄ e	4,18E-03	1,29E-04	3,54E-04	4,66E-03	6,04E-04	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,10E-03	4,71E-03	1,98E-04	-3,92E-03
ADP-elements	kg Sbe	5,83E-05	1,55E-06	5,37E-06	6,53E-05	7,48E-06	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	1,55E-05	3,31E-05	6,22E-07	-4,93E-05
ADP-fossil	MJ	1,10E+02	7,84E+00	3,35E+01	1,51E+02	3,77E+01	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	6,65E+01	1,75E+02	9,71E+00	-9,99E+01

ADDITIONAL INDICATOR – GWP-GHG

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-GHG ⁹⁾	kg CO ₂ e	9,91E+00	5,57E-01	2,51E+00	1,30E+01	2,64E+00	ND	ND	ND	ND	ND	ND	ND	ND	0,00E+00	4,84E+00	1,27E+01	4,00E-01	-9,37E+00

9) This indicator includes all greenhouse gases excluding biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. In addition, the characterisation factors for the flows – CH₄ fossil, CH₄ biogenic and Dinitrogen monoxide – were updated. This indicator is identical to the GWP-total of EN 15804:2012+A2:2019 except that the characterisation factor for biogenic CO₂ is set to zero

SCENARIO DOCUMENTATION

DATA SOURCES

Manufacturing energy scenario documentation

1. Electricity, medium voltage, residual mix, Lithuania, Ecoinvent, 0.73 kgCO₂e/kWh

Transport scenario documentation - A4 (Transport resources)

1. Transport, freight, lorry, >32 metric ton, diesel, EURO 5, 25.0 km

Transport to the building site (A4) - Scenario documentation

Scenario parameter	Value
Capacity utilization (including empty return) %	50
Bulk density of transported products	1550
Volume capacity utilization factor	<1

End of life (C1-C4) - Scenario documentation

Scenario information	Value
Collection process: collected separately (kg)	Assumptions made from the most likely scenario in products region of production of 93.6 % recycled & 6.4 % waste is landfill. Aggregate and stone products recycling: 93.6 % recycling rate assumed (source: European Environment Agency (2020)); C2 transport 5: 25 km assumed. Aggregate and stone products landfill: 6.4 % landfill rate assumed (source: European Environment Agency (2020)); The scenario is considered for European union as the product is primarily is sold in the region.
Collection process: Mixed waste (kg)	-
Recovery: re-use (kg)	936
Recovery: recycling (kg)	0
Recovery: energy recovery (kg)	0
Disposal (kg)	0
Scenario assumptions e.g. transportation (mode, km) & other	Landfill, 25km. Incineration, 25km. Recycling, 25km.

THIRD-PARTY VERIFICATION STATEMENT

EPD Hub declares that this EPD is verified in accordance with ISO 14025 by an independent, third-party verifier. The project report on the Life Cycle Assessment and the report(s) on features of environmental relevance are filed at EPD Hub. EPD Hub PCR and ECO Platform verification checklist are used.

EPD Hub is not able to identify any unjustified deviations from the PCR and EN 15804+A2 in the Environmental Product Declaration and its project report.

EPD Hub maintains its independence as a third-party body; it was not involved in the execution of the LCA or in the development of the declaration and has no conflicts of interest regarding this verification.

The company-specific data and upstream and downstream data have been examined as regards plausibility and consistency. The publisher is responsible for ensuring the factual integrity and legal compliance of this declaration.

The software used in creation of this LCA and EPD is verified by EPD Hub to conform to the procedural and methodological requirements outlined in ISO 14025:2010, ISO 14040/14044, EN 15804+A2, and EPD Hub Core Product Category Rules and General Program Instructions.

Verified tools

Tool verifier: Magaly Gonzalez Vazquez

Tool verification validity: 27 March 2025 - 26 March 2028

Magaly Gonzalez Vazquez as an authorized verifier for EPD Hub Limited
24.07.2026



ANNEX 1

AGGREGATES FRACTION SIZES

Aggregates	Size
Sand fr. 0/2 (washed)	0/2 mm
Sand 0/4 (washed)	0/4 mm
Gravel 4/16 washed)	4/16 mm
Crushed gravel 0/5 (washed)	0/5 mm
Crushed gravel 5/8 (washed)	5/8 mm
Crushed gravel 2/8 (washed)	2/8 mm
Crushed gravel 5/11 (washed)	5/11 mm
Crushed gravel 8/11 (washed)	8/11 mm
Crushed gravel 11/16 (washed)	11/16 mm
Crushed gravel 0/45	0/45 mm
Sand and gravel mix 0/5 (Protective frost-resistant layer)	0/5 mm
Sand and gravel mix 0/16 (Protective frost-resistant layer)	0/16 mm
Sand and gravel mix 0/32 (Protective frost-resistant layer)	0/32 mm
Sand and gravel mix 0/16 (Binder free surface layer)	0/16 mm
Sand and gravel mix 0/32 (binder free surface layer))	0/32 mm
Sand and gravel mix 0/32 (Gravel base layer)	0/32 mm
Gravel 16/100	16/100 mm
Gravel 32/100	32/100 mm
Natural gravel	-
Stones100<	100/100 mm