ENVIRONMENTAL PRODUCT DECLARATION

In accordance with EN 15804+A2 & ISO 14025

ASPHALT MIXTURES

FROM AB "HISK"

HOLISTINĖS
INFRASTRUKTŪROS
STATYBŲ KOMPANIJOS

Programme operator: Rakennustieto Oy

EPD registration number: RTS_354_25

Publication date: 31.1.2025

Valid until: 31.1.2030

EPD of multiple products, based on worst-case results"
EPD of multiple products, based on the average results of the product group
EPD of a single product from a manufacturer/service provider

Created with One Click LCA

GENERAL INFORMATION

MANUFACTURER INFORMATION

Manufacturer	AB "HISK"
Address	Tiekimo st. 14, 35100 Panevėžys Žemaitės st. 2, 42164 Rokiškis Jogvilų st. 8, 20380 Jogvilai, Ukmergė district Kuosiškių village, Pakruojis district Partizanų st. 30, 30264 Kaniūkai, Ignalina district Ukmergės st. 2, 55101 Jonava
Contact details	info@hisk.lt
Website	https://www.hisk.lt/

PRODUCT IDENTIFICATION

Product name	Asphalt mixtures
Place(s) of production	Lithuania
Product number / reference	Asphalt mixtures (AC P, AC A, AC PD, AC V, SMA, MA, PA, SA)
CPC code	15330

The manufacturer 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.

EPD INFORMATION

EPD program operator	Rakennustieto Oy
EPD standards	This EPD is in accordance with EN 15804+A2 and ISO 14025 standards.
Product category rules	The CEN standard EN 15804 serves as the core PCR. In addition, the RTS PCR (English version, 26.8.2020) is used.
EPD author	Urtė Valdavičė, UAB “Vesta Consulting”
EPD verification	Independent verification of this EPD and data, according to ISO 14025: ☐ Internal verification ☒ External verification
Verification date	2025-01-14
EPD verifier	Mari Kirss, Rangi Maja OÜ
EPD number	RTS_354_25
Publishing date	31.1.2025
EPD valid until	31.1.2030

Jukka Seppänen
RTS EPD Committee Secretary

Laura Apilo
Managing Director

PRODUCT INFORMATION

PRODUCT DESCRIPTION

Asphalt mixture is a bituminous mixture composed of a bituminous binder and micro-fillers, fine and coarse mineral materials (such as sand and gravel), supplemented with used asphalt granules and technological additives. The manufacturer produces five asphalt mixture groups that are described below.

- **GROUP 1 -** Asphalt base layer mixture - AC P
- **GROUP 2 -** Asphalt base mix - AC A
- **GROUP 3 -** Base-cover asphalt mixture - AC PD
- **GROUP 4 -** Asphalt top layer mixture - AC V (Asphalt concrete, Crushed and mastic asphalt (SMA), Mastic asphalt (MA)
- **GROUP 5 –** soft asphalt SA

PRODUCT APPLICATION

Asphalt mixtures are used for surfacing roads, streets, and other traffic areas. Cold asphalt is used for asphalt surface repair.

TECHNICAL SPECIFICATIONS AND PRODUCT STANDARTS

- **Asphalt Concrete (AC)**: EN 13108-1:2006, EN 13108-1:2006/AC:2008
- **Mastic Asphalt (MA)**: EN 13108-6:2006, EN 13108-6:2006/AC:2008
- **Porous Asphalt (PA)**: EN 13108-7:2006, EN 13108-7:2006/AC:2008
- **Soft Asphalt (SA)**: EN 13108-3:2006, EN 13108-3:2006/AC:2008
- **Stone Mastic Asphalt (SMA)**: EN 13108-5:2006, EN 13108-5:2006/AC:2008
- **Cold Asphalt (0/8)**: ĮST 147710353-2:2019/K:2021

The company is certified according to **LST EN ISO 9001:2015** (Quality Management) and **LST EN ISO 14001:2015** (Environmental Management).

PHYSICAL PROPERTIES OF THE PRODUCT

Asphalt mixtures are composed of:

- Crushed granite and/or dolomite
- Recycled asphalt
- Sand
- Mineral filler
- Bitumen
- Technological additives

ADDITIONAL TECHNICAL INFORMATION

Further information can be found at https://www.hisk.lt/

PRODUCT RAW MATERIAL COMPOSITION

Material	Weight, kg					Post-consumer material, weight-%	Biogenic material, weight-%	Biogenic material, kg C/DU
	Group 1	Group 2	Group 3	Group 4	Group 5			
Crushed dolomite	557-788	860-874	638	384-576	688-813	0	0	0
Crushed granite	-	-	-	0-477	-	0	0	0
Recycled asphalt	0-192	-	-	-	-	100	0	0
Sand	211-270	38-57	257	0-312	134-239	0	0	0
Mineral filler	10-39	29-57	57	38-240	10-29	0	0	0
Bitumen	34-41	40-44	50	54-85	45	0	0	0
Additives	0.170-0.205	0.04-0.044	0.05	0-3.00	0.225	0	0	0
Total	1000	1000	1000	1000	1000	0	0	0

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass- %					Material origin
	Group 1	Group 2	Group 3	Group 4	Group 5	
Metals	-	-	-	-	-	-
Minerals	95.88-96.58	95.60-96.00	94.95	91.47-94.6	95.48	EU
Fossil materials	3.42-4.12	4.00-4.40	5.05	5.4-8.53	4.52	EU
Water	-	-	-	-	-	-
Bio-based materials	-	-	-	-	-	-

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

MANUFACTURING AND PACKAGING (A1-A3)

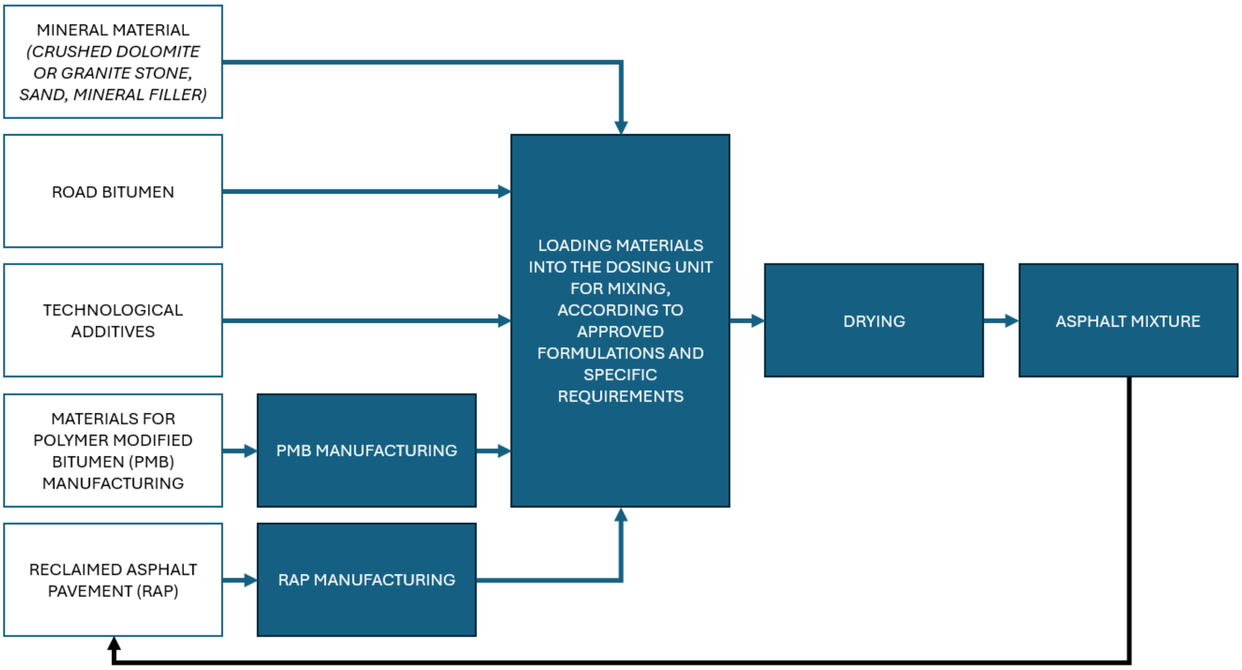
A1: This module considers the extraction and processing of raw materials.

A2: The raw materials are transported to the production site. Vehicle capacity utilization volume factor is assumed to be 1 which means full load. Empty returns are not considered.

A3: This module includes the manufacture of products. It has considered all the energy consumption in the production plant.

MANUFACTURING PROCESS

The asphalt production process begins with carefully prepared and approved formulations tailored for the specific requirements of the project. Using these formulations, the necessary proportions of raw materials are determined and introduced into the mixing system. Following the guidelines outlined in the technological process card, mineral aggregates, bitumen or emulsions, and mineral fillers are precisely measured and combined. These components are thoroughly mixed to create a high-quality asphalt concrete mixture, ensuring durability and performance for various construction applications. This meticulous process guarantees a consistent and reliable end product for road and infrastructure projects.



TRANSPORT AND INSTALLATION (A4-A5)

A4: 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.

A5: This EPD does not cover the Installation phase.

PRODUCT USE AND MAINTENANCE (B1-B7)

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

PRODUCT END OF LIFE (C1-C4, D)

C1: Demolition is assumed to be done by mobile machinery (10 kWh/t) and that 90% of asphalt is collected in end of life stage.

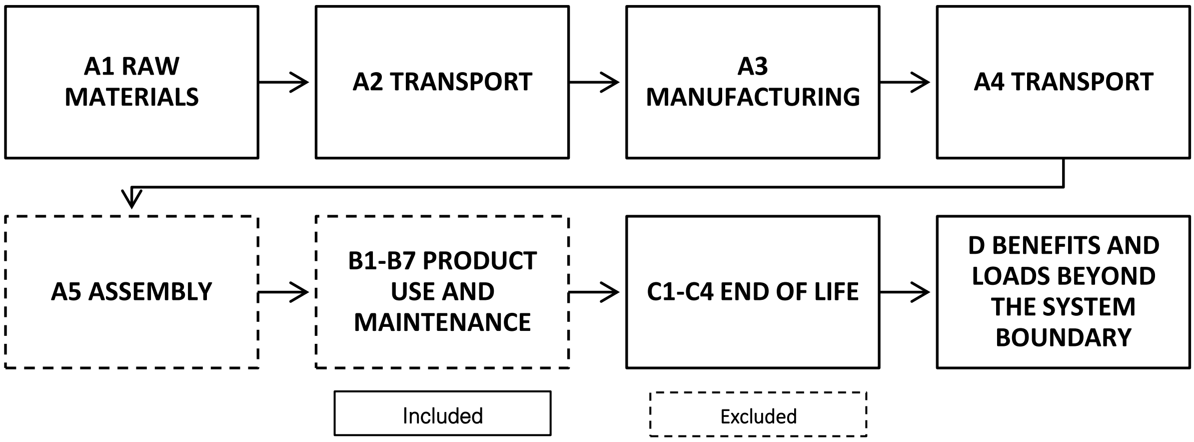
C2: Transportation distance to the closest recycling facility is estimated as 50 km and the transportation method is lorry which is the most common. It is considered that during the use stage due to pavement milling process parts of the asphalt is worn and are deposited as asphalt particles in areas near the roads and are not collected. Therefore, the end-of-life product is assumed to have 90 % weight of the declared product.

C3: Reclaimed (used) asphalt is collected, crushed, and reused as follows: as a base layer or fill beneath new surfaces, and in the production of asphalt mixtures.

C4: It is considered that 10 % of asphalt is worn and deposited as asphalt particles in areas near the roads and are not collected.

D: The recycled asphalt has been modelled to avoid gravel production.

THE PROCESS DIAGRAM



LIFE-CYCLE ASSESSMENT

LIFE-CYCLE ASSESSMENT INFORMATION

Period for data	2023
EPD types	EPD of multiple products, based on worst-case results EPD of multiple products, based on the average results of the product group EPD of a single product from a manufacturer/service provider

DECLARED AND FUNCTIONAL UNIT

Declared unit	1 tonne
Mass per declared unit	1000.0 kg

SYSTEM BOUNDARY

This EPD covers the cradle to gate with options scope with following modules: A1 (Raw material supply), A2 (Transport), and A3 (Manufacturing), optional modules A4 (transportation), C1 (Deconstruction), C2 (Transport at end-of-life), C3 (Waste processing) and C4 (Disposal). In addition, module D - benefits and loads beyond the system boundary is included.

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	D	D
x	x	x	x	MND	MND	MND	MND	MND	MND	MND	MND	x	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	Recovery	Recycling

Modules not declared = MND. Modules not relevant = MNR.

CUT-OFF CRITERIA

The study does not exclude any modules or processes which are stated mandatory in the Standards and PCR. The study does not exclude any hazardous materials or substances. The study includes all major raw material and energy consumption. The cut-off criteria were applied in the study due to the minimal contribution of the technological additive input, which accounted for only 0.005-0.3% of the total mass of the declared unit. Furthermore, datapoints for these technological additives were scarce and challenging to locate, making it difficult to gather comprehensive and accurate data for their inclusion in the analysis. The total excluded input and output flows do not exceed 5% of energy usage or mass.

ALLOCATION, ESTIMATES AND ASSUMPTIONS

Allocation is required if some material, energy, and waste data cannot be measured separately for the product under investigation.

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.

The allocations in the Ecoinvent 3.10 datasets used in this study follow the Ecoinvent system model 'Allocation, cut-off, EN15804'.

Scenarios included in the LCA are based on realistic scenarios which are currently in use and are representative for one of the most likely scenario alternatives.

Asphalt mixtures are categorized into five groups. The grouped products are with identical or similar functions, manufactured by a single company at several manufacturing sites, with the same major steps in the A3/core processes. For each group, best- and worst-case scenarios were evaluated, to see if A1-A3 GWP value differs more than 10 %.

Group 1 and Group 4 EPDs are based on worst-case scenario product, since A1-A3 GWP value differs more than 10%. For each indicator and module A-C, the highest result of the included products is declared, and for module D, the lowest benefit of avoided processes and the highest load of included processes is declared.

Given that GWP value of modules A1-A3 differs less than 10 % for Groups 2 and 5, the calculations are based on the average result.

Group 3 is an EPD of a single product from a manufacturer/service provider

Table 1. A1-A3 GWP value of product groups best- and worst-case scenarios

Product groups	A1-A3 GWP value of "best case" scenario	A1-A3 GWP value of "worst case" scenario	Difference, %	EPD type
Group 1	4.92E+01	5,57E+01	11.67%	Worst-case
Group 2	5.60+01	5.85+01	4.27%	Average
Group 3	5.77+01	5.77E+01	0.00%	Single product
Group 4	6.55+01	8.00E+02	18.13%	Worst-case
Group 5	5.52E+01	5.72+01	3.50%	Average

BIOGENIC CARBON CONTENT

The product and packaging do not have biogenic carbon content.

ENVIRONMENTAL IMPACT DATA

LCA RESULTS OF GROUP 1 – ASPHALT BASE LAYER MIXTURE

The grouped products are with identical or similar functions, manufactured by a single company at several manufacturing sites, with the same major steps in the A3/core processes. LCA results represent the worst-case scenario product which had the highest GWP value in modules A1-A3, at the year 2023.

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

Impact category	Unit	A1-A3	A4	C1	C2	C3	C4	D
GWP – total1)	kg CO_2e	5,57E+01	7,55E+00	3,25E+00	4,85E+00	2,23E-01	2,93E+00	-9,24E+00
GWP – fossil	kg CO_2e	5,56E+01	7,55E+00	3,25E+00	4,85E+00	2,22E-01	2,92E+00	-9,24E+00
GWP – biogenic	kg CO_2e	0,00E+00	0,00E+00	2,58E-04	7,74E-04	4,73E-04	6,39E-03	0,00E+00
GWP – LULUC	kg CO_2e	2,09E-02	3,02E-03	2,82E-04	1,94E-03	6,54E-04	4,98E-03	-8,59E-03
Ozone depletion pot.	kg CFC_{-11}e	3,24E-06	1,11E-07	4,97E-08	7,15E-08	3,72E-09	4,88E-08	-7,39E-08
Acidification potential	mol H^+e	4,16E-01	2,57E-02	2,93E-02	1,66E-02	1,12E-03	1,38E-02	-5,62E-02
EP-freshwater2)	kg Pe	7,43E-04	6,89E-05	1,14E-05	4,43E-05	2,04E-05	2,59E-05	-3,32E-04
EP-marine	kg Ne	9,98E-02	8,34E-03	1,36E-02	5,36E-03	1,53E-04	5,45E-03	-1,27E-02
EP-terrestrial	mol Ne	1,19E+00	9,20E-02	1,49E-01	5,91E-02	1,74E-03	5,50E-02	-1,60E-01
POCP (“smog”)3)	kg NMVOCe	3,74E-01	3,79E-02	4,44E-02	2,44E-02	5,87E-04	1,91E-02	-4,43E-02
ADP-minerals & metals4)	kg Sbe	5,72E-05	2,10E-05	1,16E-06	1,35E-05	5,37E-07	6,44E-06	-4,87E-05
ADP-fossil resources	MJ	8,29E+02	1,09E+02	4,25E+01	7,04E+01	5,10E+00	4,21E+01	-1,13E+02
Water use5)	m^3e depr.	2,48E+00	5,26E-01	1,04E-01	3,38E-01	1,30E-01	2,37E-01	-1,36E+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.

USE OF NATURAL RESOURCES

Impact category	Unit	A1-A3	A4	C1	C2	C3	C4	D
Renew. PER as energy8)	MJ	1,61E+01	1,44E+00	2,60E-01	9,24E-01	1,16E+00	6,28E-01	-1,10E+01
Renew. PER as material	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Total use of renew. PER	MJ	1,61E+01	1,44E+00	2,60E-01	9,24E-01	1,16E+00	6,28E-01	-1,10E+01
Non-re. PER as energy	MJ	8,29E+02	1,09E+02	4,25E+01	7,04E+01	5,10E+00	-1,67E+02	-1,13E+02
Non-re. PER as material	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,04E+03	1,15E+02	0,00E+00
Total use of non-re. PER	MJ	8,29E+02	1,09E+02	4,25E+01	7,04E+01	1,04E+03	-5,20E+01	-1,13E+02
Secondary materials	kg	1,47E-01	4,66E-02	1,76E-02	2,99E-02	3,14E-03	1,68E-02	9,00E+02
Renew. secondary fuels	MJ	1,01E-03	5,91E-04	4,61E-05	3,80E-04	3,41E-06	2,66E-04	-8,35E-04
Non-ren. secondary fuels	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of net fresh water	m^3	4,48E-01	1,58E-02	2,76E-03	1,02E-02	4,16E-03	-3,68E-01	-3,24E-01

8) PER = Primary energy resources

END OF LIFE – WASTE

Impact category	Unit	A1-A3	A4	C1	C2	C3	C4	D
Hazardous waste	kg	7,28E-01	1,86E-01	4,74E-02	1,20E-01	1,38E-02	8,25E-02	-8,58E-01
Non-hazardous waste	kg	4,96E+01	3,46E+00	6,48E-01	2,22E+00	9,41E-01	5,00E+02	-1,60E+01
Radioactive waste	kg	1,01E-03	2,37E-05	4,66E-06	1,52E-05	3,55E-05	1,00E-05	-2,19E-04

END OF LIFE – OUTPUT FLOWS

Impact category	Unit	A1-A3	A4	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
Materials for recycling	kg	2,43E-05	0,00E+00	0,00E+00	0,00E+00	9,00E+02	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	0,00E+00	0,00E+00
Exported energy	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

KEY INFORMATION TABLE (RTS) – KEY INFORMATION PER KG OF PRODUCT

Impact category	Unit	A1-A3	A4	C1	C2	C3	C4	D
GWP – total	kg CO2e	5,57E-02	7,55E-03	3,25E-03	4,85E-03	2,23E-04	2,93E-03	-9,25E-03
ADP-minerals & metals	kg Sbe	4,55E-08	2,05E-08	1,13E-09	1,32E-08	5,32E-10	6,27E-09	-4,80E-08
ADP-fossil	MJ	7,76E-01	1,09E-01	4,25E-02	7,04E-02	5,09E-03	4,21E-02	-1,13E-01
Water use	m3e depr.	2,48E-03	5,26E-04	1,04E-04	3,38E-04	1,30E-04	2,37E-04	-1,36E-02
Secondary materials	kg	1,47E-04	4,66E-05	1,76E-05	2,99E-05	3,14E-06	1,68E-05	9,00E-01
Biog. C in product9)	kg C	0,00E+00	N/A	N/A	N/A	N/A	N/A	N/A
Biog. C in packaging	kg C	0,00E+00	N/A	N/A	N/A	N/A	N/A	N/A

9) Biog. C in product = Biogenic carbon content in product

LCA RESULTS OF GROUP 2 – ASPHALT BASE MIX

Group 2 is an EPD of multiple products, based on the average results of the product group

CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, PEF

Impact category	Unit	A1-A3	A4	C1	C2	C3	C4	D
GWP – total1)	kg CO2e	5,84E+01	7,55E+00	3,25E+00	4,85E+00	2,23E-01	2,93E+00	-9,24E+00
GWP – fossil	kg CO2e	5,84E+01	7,55E+00	3,25E+00	4,85E+00	2,22E-01	2,92E+00	-9,24E+00
GWP – biogenic	kg CO2e	0,00E+00	0,00E+00	2,58E-04	7,74E-04	4,73E-04	6,39E-03	0,00E+00
GWP – LULUC	kg CO2e	2,03E-02	3,02E-03	2,82E-04	1,94E-03	6,54E-04	4,98E-03	-8,59E-03
Ozone depletion pot.	kg CFC-11e	3,38E-06	1,11E-07	4,97E-08	7,15E-08	3,72E-09	4,88E-08	-7,39E-08
Acidification potential	mol H+e	3,86E-01	2,57E-02	2,93E-02	1,66E-02	1,12E-03	1,38E-02	-5,62E-02
EP-freshwater2)	kg Pe	4,47E-04	6,89E-05	1,14E-05	4,43E-05	2,04E-05	2,59E-05	-3,32E-04
EP-marine	kg Ne	8,76E-02	8,34E-03	1,36E-02	5,36E-03	1,53E-04	5,45E-03	-1,27E-02
EP-terrestrial	mol Ne	9,85E-01	9,20E-02	1,49E-01	5,91E-02	1,74E-03	5,50E-02	-1,60E-01
POCP (“smog”)3)	kg NMVOCe	3,42E-01	3,79E-02	4,44E-02	2,44E-02	5,87E-04	1,91E-02	-4,43E-02
ADP-minerals & metals4)	kg Sbe	6,01E-05	2,10E-05	1,16E-06	1,35E-05	5,37E-07	6,44E-06	-4,87E-05
ADP-fossil resources	MJ	8,91E+02	1,09E+02	4,25E+01	7,04E+01	5,10E+00	4,21E+01	-1,13E+02
Water use5)	m3e depr.	2,47E+00	5,26E-01	1,04E-01	3,38E-01	1,30E-01	2,37E-01	-1,36E+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.

USE OF NATURAL RESOURCES

Impact category	Unit	A1-A3	A4	C1	C2	C3	C4	D
Renew. PER as energy8)	MJ	2,96E+01	1,44E+00	2,60E-01	9,24E-01	1,16E+00	6,28E-01	-1,10E+01
Renew. PER as material	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Total use of renew. PER	MJ	2,96E+01	1,44E+00	2,60E-01	9,24E-01	1,16E+00	6,28E-01	-1,10E+01
Non-re. PER as energy	MJ	8,93E+02	1,09E+02	4,25E+01	7,04E+01	5,10E+00	-1,67E+02	-1,13E+02
Non-re. PER as material	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-1,06E+03	-1,18E+02	0,00E+00
Total use of non-re. PER	MJ	8,93E+02	1,09E+02	4,25E+01	7,04E+01	-1,06E+03	-2,85E+02	-1,13E+02
Secondary materials	kg	1,53E-01	4,66E-02	1,76E-02	2,99E-02	3,14E-03	1,68E-02	9,00E+02
Renew. secondary fuels	MJ	2,63E-03	5,91E-04	4,61E-05	3,80E-04	3,41E-06	2,66E-04	-8,35E-04
Non-ren. secondary fuels	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of net fresh water	m3	2,07E-01	1,58E-02	2,76E-03	1,02E-02	4,16E-03	-3,68E-01	-3,24E-01

8) PER = Primary energy resources

END OF LIFE – WASTE

Impact category	Unit	A1-A3	A4	C1	C2	C3	C4	D
Hazardous waste	kg	8,24E-01	1,86E-01	4,74E-02	1,20E-01	1,38E-02	8,25E-02	-8,58E-01
Non-hazardous waste	kg	2,43E+01	3,46E+00	6,48E-01	2,22E+00	9,41E-01	5,00E+02	-1,60E+01
Radioactive waste	kg	1,06E-03	2,37E-05	4,66E-06	1,52E-05	3,55E-05	1,00E-05	-2,19E-04

END OF LIFE – OUTPUT FLOWS

Impact category	Unit	A1-A3	A4	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
Materials for recycling	kg	6,88E-02	0,00E+00	0,00E+00	0,00E+00	9,00E+02	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	0,00E+00	0,00E+00
Exported energy	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

KEY INFORMATION TABLE (RTS) – KEY INFORMATION PER KG OF PRODUCT

Impact category	Unit	A1-A3	A4	C1	C2	C3	C4	D
GWP – total	kg CO2e	5,84E-02	7,55E-03	3,25E-03	4,85E-03	2,23E-04	2,93E-03	-9,25E-03
ADP-minerals & metals	kg Sbe	5,47E-08	2,05E-08	1,13E-09	1,32E-08	5,32E-10	6,27E-09	-4,80E-08
ADP-fossil	MJ	8,55E-01	1,09E-01	4,25E-02	7,04E-02	5,09E-03	4,21E-02	-1,13E-01
Water use	m3e depr.	2,47E-03	5,26E-04	1,04E-04	3,38E-04	1,30E-04	2,37E-04	-1,36E-02
Secondary materials	kg	1,53E-04	4,66E-05	1,76E-05	2,99E-05	3,14E-06	1,68E-05	-9,00E-01
Biog. C in product9)	kg C	0,00E+00	N/A	N/A	N/A	N/A	N/A	N/A
Biog. C in packaging	kg C	0,00E+00	N/A	N/A	N/A	N/A	N/A	N/A

9) Biog. C in product = Biogenic carbon content in product

LCA RESULTS OF GROUP 3 – BASE-COVER ASPHALT MIXTURE

Group 3 is an EPD of a single product from a manufacturer/service provider

CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, PEF

Impact category	Unit	A1-A3	A4	C1	C2	C3	C4	D
GWP – total[1)]	kg CO_2e	5,77E+01	7,55E+00	3,25E+00	4,85E+00	2,23E-01	2,93E+00	-9,24E+00
GWP – fossil	kg CO_2e	5,77E+01	7,55E+00	3,25E+00	4,85E+00	2,22E-01	2,92E+00	-9,24E+00
GWP – biogenic	kg CO_2e	0,00E+00	0,00E+00	2,58E-04	7,74E-04	4,73E-04	6,39E-03	0,00E+00
GWP – LULUC	kg CO_2e	2,60E-02	3,02E-03	2,82E-04	1,94E-03	6,54E-04	4,98E-03	-8,59E-03
Ozone depletion pot.	kg $CFC_{-11}e$	3,77E-06	1,11E-07	4,97E-08	7,15E-08	3,72E-09	4,88E-08	-7,39E-08
Acidification potential	mol H^+e	4,16E-01	2,57E-02	2,93E-02	1,66E-02	1,12E-03	1,38E-02	-5,62E-02
EP-freshwater[2)]	kg Pe	3,35E-04	6,89E-05	1,14E-05	4,43E-05	2,04E-05	2,59E-05	-3,32E-04
EP-marine	kg Ne	9,21E-02	8,34E-03	1,36E-02	5,36E-03	1,53E-04	5,45E-03	-1,27E-02
EP-terrestrial	mol Ne	1,01E+00	9,20E-02	1,49E-01	5,91E-02	1,74E-03	5,50E-02	-1,60E-01
POCP (“smog”)[3)]	kg NMVOCe	3,55E-01	3,79E-02	4,44E-02	2,44E-02	5,87E-04	1,91E-02	-4,43E-02
ADP-minerals & metals[4)]	kg Sbe	5,53E-05	2,10E-05	1,16E-06	1,35E-05	5,37E-07	6,44E-06	-4,87E-05
ADP-fossil resources	MJ	8,68E+02	1,09E+02	4,25E+01	7,04E+01	5,10E+00	4,21E+01	-1,13E+02
Water use[5)]	m^3e depr.	2,29E+00	5,26E-01	1,04E-01	3,38E-01	1,30E-01	2,37E-01	-1,36E+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.

USE OF NATURAL RESOURCES

Impact category	Unit	A1-A3	A4	C1	C2	C3	C4	D
Renew. PER as energy8)	MJ	2,89E+01	1,44E+00	2,60E-01	9,24E-01	1,16E+00	6,28E-01	-1,10E+01
Renew. PER as material	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Total use of renew. PER	MJ	2,89E+01	1,44E+00	2,60E-01	9,24E-01	1,16E+00	6,28E-01	-1,10E+01
Non-re. PER as energy	MJ	8,69E+02	1,09E+02	4,25E+01	7,04E+01	5,10E+00	-1,67E+02	-1,13E+02
Non-re. PER as material	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,26E+03	1,40E+02	0,00E+00
Total use of non-re. PER	MJ	8,69E+02	1,09E+02	4,25E+01	7,04E+01	1,27E+03	-2,70E+01	-1,13E+02
Secondary materials	kg	1,51E-01	4,66E-02	1,76E-02	2,99E-02	3,14E-03	1,68E-02	9,00E+02
Renew. secondary fuels	MJ	2,47E-03	5,91E-04	4,61E-05	3,80E-04	3,41E-06	2,66E-04	-8,35E-04
Non-ren. secondary fuels	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of net fresh water	m3	4,90E-01	1,58E-02	2,76E-03	1,02E-02	4,16E-03	-3,68E-01	-3,24E-01

8) PER = Primary energy resources

END OF LIFE – WASTE

Impact category	Unit	A1-A3	A4	C1	C2	C3	C4	D
Hazardous waste	kg	7,58E-01	1,86E-01	4,74E-02	1,20E-01	1,38E-02	8,25E-02	-8,58E-01
Non-hazardous waste	kg	1,47E+01	3,46E+00	6,48E-01	2,22E+00	9,41E-01	5,00E+02	-1,60E+01
Radioactive waste	kg	1,15E-03	2,37E-05	4,66E-06	1,52E-05	3,55E-05	1,00E-05	-2,19E-04

END OF LIFE – OUTPUT FLOWS

Impact category	Unit	A1-A3	A4	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
Materials for recycling	kg	6,29E-02	0,00E+00	0,00E+00	0,00E+00	9,00E+02	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	0,00E+00	0,00E+00
Exported energy	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

KEY INFORMATION TABLE (RTS) – KEY INFORMATION PER KG OF PRODUCT

Impact category	Unit	A1-A3	A4	C1	C2	C3	C4	D
GWP – total	kg CO_2e	5,77E-02	7,55E-03	3,25E-03	4,85E-03	2,23E-04	2,93E-03	-9,25E-03
ADP-minerals & metals	kg Sbe	5,21E-08	2,05E-08	1,13E-09	1,32E-08	5,32E-10	6,27E-09	-4,80E-08
ADP-fossil	MJ	8,20E-01	1,09E-01	4,25E-02	7,04E-02	5,09E-03	4,21E-02	-1,13E-01
Water use	m^3e depr.	2,29E-03	5,26E-04	1,04E-04	3,38E-04	1,30E-04	2,37E-04	-1,36E-02
Secondary materials	kg	1,51E-04	4,66E-05	1,76E-05	2,99E-05	3,14E-06	1,68E-05	9,00E-01
Biog. C in product[9)]	kg C	0,00E+00	N/A	N/A	N/A	N/A	N/A	N/A
Biog. C in packaging	kg C	0,00E+00	N/A	N/A	N/A	N/A	N/A	N/A

9) Biog. C in product = Biogenic carbon content in product

LCA RESULTS OF GROUP 4 – ASPHALT TOP LAYER MIXTURE

LCA results represent the worst-case scenario product which had the highest GWP value in modules A1-A3, at the year 2023.

CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, PEF

Impact category	Unit	A1-A3	A4	C1	C2	C3	C4	D
GWP – total[1)]	kg CO_2e	8,00E+01	7,55E+00	3,25E+00	4,85E+00	2,23E-01	2,93E+00	-9,24E+00
GWP – fossil	kg CO_2e	8,00E+01	7,55E+00	3,25E+00	4,85E+00	2,22E-01	2,92E+00	-9,24E+00
GWP – biogenic	kg CO_2e	0,00E+00	0,00E+00	2,58E-04	7,74E-04	4,73E-04	6,39E-03	0,00E+00
GWP – LULUC	kg CO_2e	8,13E-02	3,02E-03	2,82E-04	1,94E-03	6,54E-04	4,98E-03	-8,59E-03
Ozone depletion pot.	kg $CFC_{-11}e$	6,25E-06	1,11E-07	4,97E-08	7,15E-08	3,72E-09	4,88E-08	-7,39E-08
Acidification potential	mol H^+e	6,89E-01	2,57E-02	2,93E-02	1,66E-02	1,12E-03	1,38E-02	-5,62E-02
EP-freshwater[2)]	kg Pe	4,99E-04	6,89E-05	1,14E-05	4,43E-05	2,04E-05	2,59E-05	-3,32E-04
EP-marine	kg Ne	1,51E-01	8,34E-03	1,36E-02	5,36E-03	1,53E-04	5,45E-03	-1,27E-02
EP-terrestrial	mol Ne	1,67E+00	9,20E-02	1,49E-01	5,91E-02	1,74E-03	5,50E-02	-1,60E-01
POCP (“smog”)[3)]	kg NMVOCe	5,57E-01	3,79E-02	4,44E-02	2,44E-02	5,87E-04	1,91E-02	-4,43E-02
ADP-minerals & metals[4)]	kg Sbe	6,15E-05	2,10E-05	1,16E-06	1,35E-05	5,37E-07	6,44E-06	-4,87E-05
ADP-fossil resources	MJ	1,14E+03	1,09E+02	4,25E+01	7,04E+01	5,10E+00	4,21E+01	-1,13E+02
Water use[5)]	m^3e depr.	3,13E+00	5,26E-01	1,04E-01	3,38E-01	1,30E-01	2,37E-01	-1,36E+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.

USE OF NATURAL RESOURCES

Impact category	Unit	A1-A3	A4	C1	C2	C3	C4	D
Renew. PER as energy[8)]	MJ	5,12E+01	1,44E+00	2,60E-01	9,24E-01	1,16E+00	6,28E-01	-1,10E+01
Renew. PER as material	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Total use of renew. PER	MJ	5,12E+01	1,44E+00	2,60E-01	9,24E-01	1,16E+00	6,28E-01	-1,10E+01
Non-re. PER as energy	MJ	1,14E+03	1,09E+02	4,25E+01	7,04E+01	5,10E+00	-1,67E+02	-1,13E+02
Non-re. PER as material	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,14E+03	2,38E+02	0,00E+00
Total use of non-re. PER	MJ	1,14E+03	1,09E+02	4,25E+01	7,04E+01	2,15E+03	7,10E+01	-1,13E+02
Secondary materials	kg	1,67E-01	4,66E-02	1,76E-02	2,99E-02	3,14E-03	1,68E-02	9,00E+02
Renew. secondary fuels	MJ	2,29E-03	5,91E-04	4,61E-05	3,80E-04	3,41E-06	2,66E-04	-8,35E-04
Non-ren. secondary fuels	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of net fresh water	m^3	4,00E-01	1,58E-02	2,76E-03	1,02E-02	4,16E-03	-3,68E-01	-3,24E-01

8) PER = Primary energy resources

END OF LIFE – WASTE

Impact category	Unit	A1-A3	A4	C1	C2	C3	C4	D
Hazardous waste	kg	8,59E-01	1,86E-01	4,74E-02	1,20E-01	1,38E-02	8,25E-02	-8,58E-01
Non-hazardous waste	kg	1,67E+01	3,46E+00	6,48E-01	2,22E+00	9,41E-01	5,00E+02	-1,60E+01
Radioactive waste	kg	2,00E-03	2,37E-05	4,66E-06	1,52E-05	3,55E-05	1,00E-05	-2,19E-04

END OF LIFE – OUTPUT FLOWS

Impact category	Unit	A1-A3	A4	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
Materials for recycling	kg	5,12E-02	0,00E+00	0,00E+00	0,00E+00	9,00E+02	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	0,00E+00	0,00E+00
Exported energy	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

KEY INFORMATION TABLE (RTS) – KEY INFORMATION PER KG OF PRODUCT

Impact category	Unit	A1-A3	A4	C1	C2	C3	C4	D
GWP – total	kg CO_2e	8,01E-02	7,55E-03	3,25E-03	4,85E-03	2,23E-04	2,93E-03	-9,25E-03
ADP-minerals & metals	kg Sbe	5,77E-08	2,05E-08	1,13E-09	1,32E-08	5,32E-10	6,27E-09	-4,80E-08
ADP-fossil	MJ	9,40E-01	1,09E-01	4,25E-02	7,04E-02	5,09E-03	4,21E-02	-1,13E-01
Water use	m^3e depr.	3,13E-03	5,26E-04	1,04E-04	3,38E-04	1,30E-04	2,37E-04	-1,36E-02
Secondary materials	kg	1,67E-04	4,66E-05	1,76E-05	2,99E-05	3,14E-06	1,68E-05	9,00E-01
Biog. C in product[9)]	kg C	0,00E+00	N/A	N/A	N/A	N/A	N/A	N/A
Biog. C in packaging	kg C	0,00E+00	N/A	N/A	N/A	N/A	N/A	N/A

9) Biog. C in product = Biogenic carbon content in product

LCA RESULTS OF GROUP 5 – SOFT ASPHALT SA

Group 5 is an EPD of multiple products, based on the average results of the product group

CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, PEF

Impact category	Unit	A1-A3	A4	C1	C2	C3	C4	D
GWP – total[1)]	kg CO_2e	5,62E+01	7,55E+00	3,25E+00	4,85E+00	2,23E-01	2,93E+00	-9,24E+00
GWP – fossil	kg CO_2e	5,62E+01	7,55E+00	3,25E+00	4,85E+00	2,22E-01	2,92E+00	-9,24E+00
GWP – biogenic	kg CO_2e	0,00E+00	0,00E+00	2,58E-04	7,74E-04	4,73E-04	6,39E-03	0,00E+00
GWP – LULUC	kg CO_2e	1,99E-02	3,02E-03	2,82E-04	1,94E-03	6,54E-04	4,98E-03	-8,59E-03
Ozone depletion pot.	kg $CFC_{-11}e$	3,39E-06	1,11E-07	4,97E-08	7,15E-08	3,72E-09	4,88E-08	-7,39E-08
Acidification potential	mol H^+e	4,28E-01	2,57E-02	2,93E-02	1,66E-02	1,12E-03	1,38E-02	-5,62E-02
EP-freshwater[2)]	kg Pe	6,54E-04	6,89E-05	1,14E-05	4,43E-05	2,04E-05	2,59E-05	-3,32E-04
EP-marine	kg Ne	1,00E-01	8,34E-03	1,36E-02	5,36E-03	1,53E-04	5,45E-03	-1,27E-02
EP-terrestrial	mol Ne	1,18E+00	9,20E-02	1,49E-01	5,91E-02	1,74E-03	5,50E-02	-1,60E-01
POCP ("smog")[3)]	kg NMVOCe	3,78E-01	3,79E-02	4,44E-02	2,44E-02	5,87E-04	1,91E-02	-4,43E-02
ADP-minerals & metals[4)]	kg Sbe	5,71E-05	2,10E-05	1,16E-06	1,35E-05	5,37E-07	6,44E-06	-4,87E-05
ADP-fossil resources	MJ	8,40E+02	1,09E+02	4,25E+01	7,04E+01	5,10E+00	4,21E+01	-1,13E+02
Water use[5)]	m^3e depr.	2,43E+00	5,26E-01	1,04E-01	3,38E-01	1,30E-01	2,37E-01	-1,36E+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.

USE OF NATURAL RESOURCES

Impact category	Unit	A1-A3	A4	C1	C2	C3	C4	D
Renew. PER as energy[8)]	MJ	1,78E+01	1,44E+00	2,60E-01	9,24E-01	1,16E+00	6,28E-01	-1,10E+01
Renew. PER as material	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Total use of renew. PER	MJ	1,78E+01	1,44E+00	2,60E-01	9,24E-01	1,16E+00	6,28E-01	-1,10E+01
Non-re. PER as energy	MJ	8,41E+02	1,09E+02	4,25E+01	7,04E+01	5,10E+00	-1,67E+02	-1,13E+02
Non-re. PER as material	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,13E+03	5,80E+01	0,00E+00
Total use of non-re. PER	MJ	8,41E+02	1,09E+02	4,25E+01	7,04E+01	1,14E+03	-1,09E+02	-1,13E+02
Secondary materials	kg	1,48E-01	4,66E-02	1,76E-02	2,99E-02	3,14E-03	1,68E-02	9,00E+02
Renew. secondary fuels	MJ	1,32E-03	5,91E-04	4,61E-05	3,80E-04	3,41E-06	2,66E-04	-8,35E-04
Non-ren. secondary fuels	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Use of net fresh water	m^3	3,88E-01	1,58E-02	2,76E-03	1,02E-02	4,16E-03	-3,68E-01	-3,24E-01

8) PER = Primary energy resources

END OF LIFE – WASTE

Impact category	Unit	A1-A3	A4	C1	C2	C3	C4	D
Hazardous waste	kg	7,33E-01	1,86E-01	4,74E-02	1,20E-01	1,38E-02	8,25E-02	-8,58E-01
Non-hazardous waste	kg	4,24E+01	3,46E+00	6,48E-01	2,22E+00	9,41E-01	5,00E+02	-1,60E+01
Radioactive waste	kg	1,06E-03	2,37E-05	4,66E-06	1,52E-05	3,55E-05	1,00E-05	-2,19E-04

END OF LIFE – OUTPUT FLOWS

Impact category	Unit	A1-A3	A4	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
Materials for recycling	kg	1,69E-02	0,00E+00	0,00E+00	0,00E+00	9,00E+02	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	0,00E+00	0,00E+00
Exported energy	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

KEY INFORMATION TABLE (RTS) – KEY INFORMATION PER KG OF PRODUCT

Impact category	Unit	A1-A3	A4	C1	C2	C3	C4	D
GWP – total	kg CO_2e	5,62E-02	7,55E-03	3,25E-03	4,85E-03	2,23E-04	2,93E-03	-9,25E-03
ADP-minerals & metals	kg Sbe	4,72E-08	2,05E-08	1,13E-09	1,32E-08	5,32E-10	6,27E-09	-4,80E-08
ADP-fossil	MJ	7,94E-01	1,09E-01	4,25E-02	7,04E-02	5,09E-03	4,21E-02	-1,13E-01
Water use	m^3e depr.	2,43E-03	5,26E-04	1,04E-04	3,38E-04	1,30E-04	2,37E-04	-1,36E-02
Secondary materials	kg	1,48E-04	4,66E-05	1,76E-05	2,99E-05	3,14E-06	1,68E-05	9,00E-01
Biog. C in product[9)]	kg C	0,00E+00	N/A	N/A	N/A	N/A	N/A	N/A
Biog. C in packaging	kg C	0,00E+00	N/A	N/A	N/A	N/A	N/A	N/A

9) Biog. C in product = Biogenic carbon content in product

SCENARIO DOCUMENTATION

Manufacturing energy scenario documentation

Scenario parameter	Value	Source
Residual mix (Lithuania) from the grid	0.626 kg CO2e/kWh	Average Lithuanian residual mix of last three last years (2021, 2022 and 2023) has been modelled according to the Association of Issuing Bodies data (https://www.aib-net.org/facts/european-residual-mix). Data sources: ecoinvent 3.10
Diesel, burned in building machine	0.1 kg CO2e / MJ	Data sources: ecoinvent 3.10 Country: World
Heat production, natural gas, at industrial furnace >100kW	0.0773 kg CO2e / MJ	Data source: ecoinvent 3.10 Country: Europe

Transport scenario documentation (A4)

Scenario parameter	Value				
	Group 1	Group 2	Group 3	Group 4	Group 5
Transport, freight, lorry >32 metric ton, EURO5, kg CO_2e / tkm	0.11				
Average transport distance, km	70				
Capacity utilization (including empty return) %	100				
Bulk density of transported products, kg/m^3	2413	2399	2461	2400	2363
Volume capacity utilization factor	1				

End of life scenario documentation

Scenario parameter	Value
Collection process – kg collected separately	900.0
Collection process – kg collected with mixed waste	100.0
Recovery process – kg for re-use	0
Recovery process – kg for recycling	900.0
Recovery process – kg for energy recovery	0
Disposal (total) – kg for final deposition	100.0
Scenario assumptions e.g. transportation	Transported 50 km with an average lorry.

BIBLIOGRAPHY

1. Rakennustieto Oy. (2018). *RTS Environmental Product Declaration (EPD) Guideline* (RTS EPD No. 180221). https://tiedostot.rakennustieto.fi/ymparisto/epd/rts-epd-guideline-_180221_valid-3.pdf
2. Rakennustieto Oy. (2020). *RTS Product Category Rules (PCR), English version* (26.8.2020).
3. EN 15804+A2 Sustainability in construction works – Environmental product declarations – Core rules for the product category of construction products.
4. ISO 14025:2010 Environmental labels and declarations – Type III environmental declarations Principles and procedures.
5. ISO 14040:2006 Environmental management. Life cycle assessment. Principles and frameworks.
6. ISO 14044:2006 Environmental management. Life cycle assessment. Requirements and guidelines.
7. Asphalt mixtures LCA background report 19.11.2024
8. One Click LCA tool
9. Ecoinvent database v3.10 (2023)

ABOUT THE MANUFACTURER

The company was established on June 28, 1993. It has implemented and certified management systems in compliance with LST EN ISO 9001:2015, LST EN ISO 14001:2015, and LST EN ISO 45001:2018 standards.

The mission (policy) of AB HISK is to manage all interconnected processes to ensure the quality of constructed buildings and manufactured construction products while continuously improving quality indicators, environmental protection, and occupational health and safety performance. This policy is implemented through:

- Consistently meeting client, legal, and other applicable requirements;
- Continuously improving the quality, environmental management, and occupational health and safety systems;
- Enhancing existing technologies and adopting new, safe, and environmentally friendly solutions aligned with sustainability goals;
- Selecting appropriate materials and subcontractors;
- Implementing measures to prevent environmental pollution and ensure employee safety and health;
- Fostering employee training and development, encouraging every team member to contribute to the improvement of the company's management system, and promoting awareness of the impact of their actions on the environment and human well-being.

Manufacturer	AB "HISK"
EPD author	Urtė Valdavičė, UAB "Vesta Consulting"
EPD verifier	Mari Kirss, Rangi Maja OÜ
EPD program operator	Rakennustieto Oy
Background data	This EPD is based on Ecoinvent 3.10 (Allocation, cut-off, EN15804) database.
LCA software	The LCA and EPD have been created using One Click LCA tool. The EN 15804 reference package used is based on EF 3.1.