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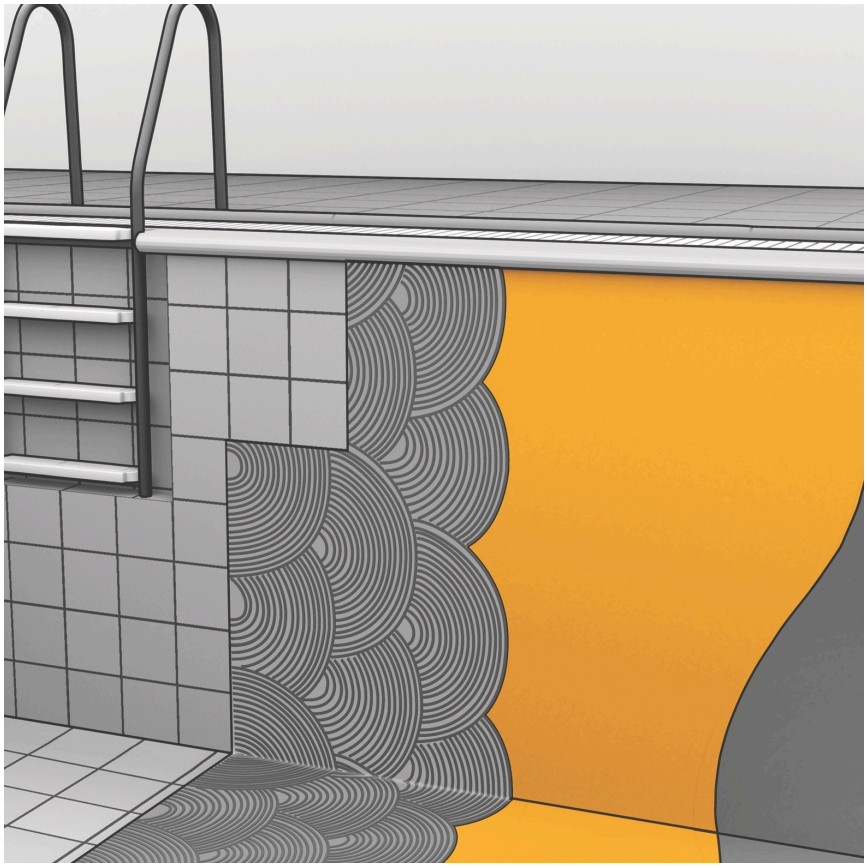
# ENVIRONMENTAL PRODUCT DECLARATION

In accordance with ISO 14025 and EN 15804+A2

## Sika Services AG
## Sikalastic®-1K ES



BUILDING TRUST

**Owner of the declaration**
Sika Services AG
16 Tüffenwies
8048 Zürich
Switzerland

**Product**
Sikalastic®-1K ES

**Declared product / Declared unit**
1 kg of applied mortar

**This declaration is based on Product Category Rules**
EN 15804:2012 + A2:2019,
NPCR Part A:2021 ,
NPCR 009 Part B for Technical chemical Products for Construction

**Program operator:**
EPD Global
Majorstuen P.O. Box 5250
N-0303 Oslo
Norway

**Declaration number**
NEPD-30355-30355-2

**Registration number**
NEPD-30355-30355-2

**Issue date**
06.11.2026

**Valid to**
05.11.2031

**EPD Software**
Emidat Platform v1.0.0

## General Information

**Product**
Sikalastic®-1K ES

**Program Operator**
EPD Global
Majorstuen P.O. Box 5250
N-0303 Oslo
Norway
Phone: +47 23 08 80 00
Email: post@epd-norge.no

**Declaration Number**
NEPD-30355-30355-2

**This declaration is based on Product Category Rules**
EN 15804:2012 + A2:2019,
NPCR Part A:2021 ,
NPCR 009 Part B for Technical chemical Products for Construction

**Statements**
The owner of the declaration shall be liable for the underlying information and evidence. The Norwegian EPD Foundation shall not be liable with respect to manufacturer, life cycle assessment data and evidences.

**Declared unit**
1 kg of applied mortar

**General information on verification of EPD from EPD tools**
Independent verification of data, other environmental information and the declaration according to ISO 14025:2011-10, § 8.1.3 and § 8.1.4. Verification of each EPD is made according to EPD Global's guidelines for verification and approval requiring that tools are i) integrated into the company's environmental management system, ii) the procedures for use of the EPD tool are approved by EPD Global, and iii) the process is reviewed annually by an independent third-party verifier. See Appendix G of EPD Global's General Programme Instructions for further information on EPD tools.

**Verification**
Independent third-party verification based on the verification of the EPD tool, background data and test-EPD in accordance with EPD Global's procedures and guidelines for verification and approval of EPD tools.
Third-party verifier: Charlotte Merlin, FORCE Technology

**Owner of the declaration**
Sika Services AG

**Contact person**
product.sustainability@ch.sika.com

**Phone**
+41 58 436 6800

**Email**
product.sustainability@ch.sika.com

**Manufacturer**
Sika Services AG
16 Tüffenwies
8048 Zürich, Switzerland

**Place of production**
Cabanillas del Campo, Spain

**Management system**
ISO 9001 , ISO 14001 , ISO 45001

**Organisation no**
Sika Services AG

**Issue date**
06.11.2026

**Valid to**
05.11.2031

**Year of study**
2025

**Comparability**
EPDs of construction products may not be comparable if they do not comply with EN 15804 and are not seen in a building context. EPD data may not be comparable if the datasets used are not developed in accordance with EN 15804 and if the background systems are not based on the same database (including primary and secondary data).

**Development and verification of EPD**
The declaration was created using the Emidat EPD tool v1.0, developed by Emidat GmbH which is third-party verified and approved as a Reference Flow Tool with internal review under administration and surveillance by EPD Global under provisions stated in general information on verification of EPD from EPD tools.

Developer of EPD: Ana Arenas
Reviewer of company-specific input data and EPD: Katherine Agapitos

**Approved**

Håkon Hauan, The Norwegian EPD Foundation

# Product

## Product description

Sikalastic-1K® ES is a one-component, fibre-reinforced, crack-bridging mortar based on cement modified with special alkali-resistant polymers. Sikalastic-1K® ES is suitable for brush or trowel application.

## Application description

Flexible waterproofing and protection of concrete structures, including tanks, ponds, pipes, etc.

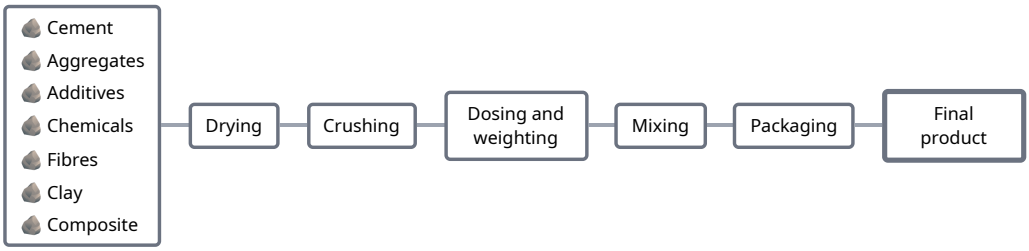
Waterproofing of bathrooms, showers, swimming pools under ceramic tiles bonded with adhesive.

Exterior waterproofing of buried walls.

Interior waterproofing of walls and basements with negative water pressures.

Flexible coating for reinforced concrete structures against freeze-thaw and carbon dioxide attack to improve their durability.

## Production process




## Product specification

| Name of ingredient | Share of total weight |
|---|---|
| Additives | 0 - 2 % |
| Aggregates | 50 - 70 % |
| Cement | 2 - 10 % |
| Chemicals | 0 - 2 % |
| Clay | 2 - 10 % |
| Composite | 10 - 30 % |
| Fibres | 0 - 2 % |

## Packaging

| Name | Quantity, kg |
|---|---|
| Plastic film | 1.12e-03 |
| Wooden pallets | 0.02 |
| Multi-layer bags (paper and plastic) | 2.09e-04 |

## Technical data

| | Unit | Value |
|---|---|---|
| Fresh mortar density | kg / m³ | 1500 |
| Mixing water demand | l / kg | 0.3 |

**Market**
Spain

**Recipients**
B2B

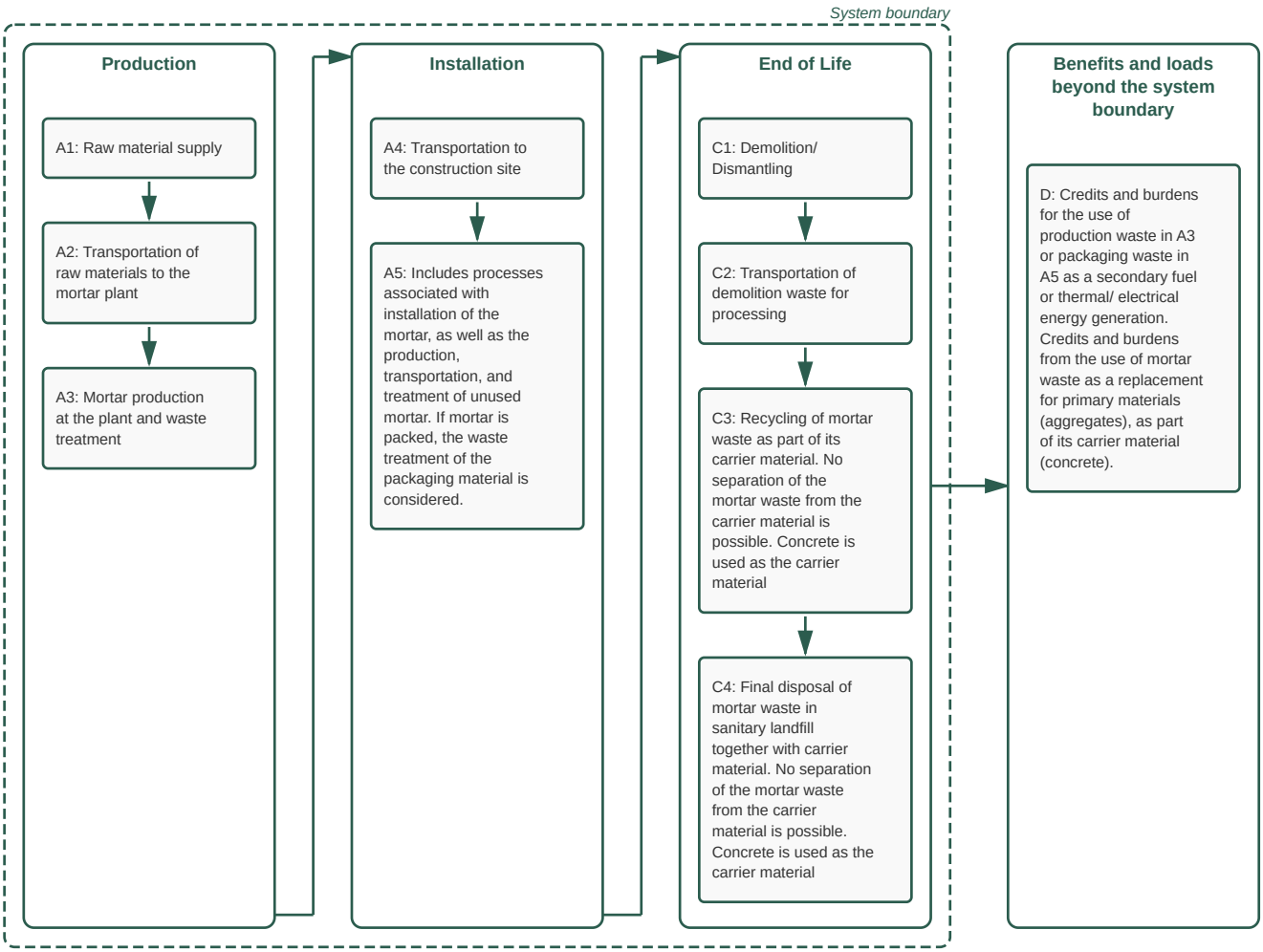
## LCA: Calculation rules

### Declared unit
1 kg of applied mortar

### Product lifetime
50 years
This value represents a conventional product lifespan, not a guaranteed performance duration, and assumes normal exposure conditions, adequate design, and routine maintenance.

### Reference service life
Not declared

### System boundary




### Data quality
The foreground data are based on extensive and detailed data collection at the production site of the manufacturer, covering key processes such as raw material sourcing, formulation, and manufacturing. These foreground data are fully linked with corresponding datasets from the background database (ecoinvent 3.10) or with EN15804+A2-compliant EPDs, ensuring consistency, reliability, and maintaining alignment with the latest industry standards.

The overall data representativeness is rated as fair with an overall score of 3.00/5, in accordance with EN 15804+A2 Annex E guidance on data quality assessment for the calculation of the environmental footprint of products (Table E.2), considering geographical, technical, and temporal representativeness.

The following table discloses all processes or activities assessed with very poor or poor data representativeness according to EN 15804+A2, as well as those assessed as fair that contribute more than 30 % to any core impact indicator in A1–A3:

| Element | Source | Year |
|---|---|---|
| Additives | ecoinvent 3.10 | 2023 |
| Aggregates | ecoinvent 3.10 | 2023 |
| Clay | ecoinvent 3.10 | 2023 |
| Composite | ecoinvent 3.10 | 2023 |
| Landfill | ecoinvent 3.10 | 2023 |
| Packaging | ecoinvent 3.10 | 2023 |
| Wastewater | ecoinvent 3.10 | 2023 |
| Composite | ecoinvent 3.10 | 2023 |

## System boundaries (X=included, MND=module not declared)

| | Production | | | Installation | | Use stage | | | | | | | End-of-Life | | | | Next product system |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Raw material supply | Transport | Manufacturing | Transport | Installation Process | Use | Maintenance | Repair | Replacement | Refurbishment | Operational Energy Use | Operational Water Use | Demolition | Transport | Waste Processing | Disposal | Benefits and loads beyond the system boundary |
| Module | A1 | A2 | A3 | A4 | A5 | B1 | B2 | B3 | B4 | B5 | B6 | B7 | C1 | C2 | C3 | C4 | D |
| Modules declared | x | x | x | x | x | MND | MND | MND | MND | MND | MND | MND | x | x | x | x | x |
| Geography | | | ES | ES | ES | MND | MND | MND | MND | MND | MND | MND | ES | ES | ES | ES | ES |

For the geographies modeled in A1 and A2, refer to *Product specification*.

Type of EPD: Cradle to gate with options, modules A4, A5, C1-C4 + D

**Product and construction stage**

Module A1: Raw material supply

Module A2: Transportation of raw materials to the mortar plant

Module A3: Mortar production at the plant and waste treatment

Module A4: Transportation to the construction site

Module A5: Includes processes associated with installation of the mortar, as well as the production, transportation, and treatment of unused mortar. If mortar is packed, the waste treatment of the packaging material is considered.

**Disposal Stage**

Module C1: Demolition/Dismantling

Module C2: Transportation of demolition waste for processing

Module C3: Recycling of mortar waste as part of its carrier material. No separation of the mortar waste from the carrier material is possible. Concrete is used as the carrier material

Module C4: Final disposal of mortar waste in sanitary landfill together with carrier material. No separation of the mortar waste from the carrier material is possible. Concrete is used as the carrier material

**Credits and burdens outside the system boundaries**

Module D: Credits and burdens for the use of production waste in A3 or packaging waste in A5 as a secondary fuel or thermal/electrical energy generation. Credits and burdens from the use of mortar waste as a replacement for primary materials (aggregates), as part of its carrier material (concrete).

### Cut-off criteria

All inputs and outputs related to the declared modules of Mortar, including raw materials, packaging, transportation, energy usage and ancillary materials, were comprehensively considered in line with EN 15804+A2 and if applicable the product-specific PCR. Furthermore, all known hazardous substances (within the REACH list and the Norwegian Priority List), regulated materials, and significant emissions were declared and are not excluded under the cut-off rules.

The following processes are considered below the EN 15804+A2 cut-off threshold and were excluded:

- Impacts related to the manufacturer's infrastructure and assets
- Manufacturing of means of production, buildings or other capital goods
- Transportation of personnel to the plant
- Transportation of personnel within the plant
- Research and development activities
- Long-term emissions

### Allocation

Foreground inventory data (energy and fuels, ancillary materials, emissions and waste) was collected at the production process level. Allocation based on mass was applied to allocate the total output of the production process in 2025 to the reference product.

### Key assumptions and estimates

Production process flows are allocated to the reference product, as described under allocation. If applied, mass-based allocation assumes a uniform distribution of production impacts across products of the same production process. Where it is applied, foreground inventory data is checked for consistency of production process, to ensure the validity of the allocated results.

## LCA: Scenarios and additional technical information

The following information describe the scenarios in the different modules of the EPD. Mass and energy flows are reported per 1 kg of product.

| Transport to the building site (A4) | Value | Unit |
|---|---|---|
| Location of the production site | Spain | |
| Location of the installation site | Spain | |
| Transported mass: Product and packaging | 1.02 | kg |
| Transport modality: Truck | transport, freight, lorry >32 metric ton, EURO6 | - |
| Distance | 300.00 | km |
| Litres of fuel | 36.48 | l / 100km |
| Energy demand | 1.58 | MJ / t*km |
| Energy demand (km) | 1.62e-03 | MJ / km |
| Capacity utilization | 53.30 | % |

Transport of the product and its packaging from the production site to the installation site. Transport distances are based on external sources such as reported market averages, standards or PCRs. Vehicle type, fuel consumption and capacity utilization assumptions stem from the underlying background transport datasets and are stated below.

| Installation into the building (A5) | Value | Unit |
|---|---|---|
| Ancillary materials for installation | 0 | kg |
| Water use during installation | 3.00e-04 | $m^3$ |
| Use of other resources during installation | 0 | kg |
| Energy consumption during installation | | |
| Energy impacts of mixing plaster mass | 1.00 | kg |
| Material waste on the construction site before waste processing | | |
| Plastic film | 1.12e-03 | kg |
| Wooden pallets | 0.02 | kg |
| Multi-layer bags (paper and plastic) | 2.09e-04 | kg |
| Installation loss rate | 5.00 | % |
| Installation loss amount | 0.05 | kg |
| Direct emissions to ambient air, soil and water | 0 | kg |
| Treatment of packaging waste | Plastic film | |
| Landfill | 23.00 | % |
| Recycling | 42.00 | % |
| Incineration | 35.00 | % |
| Treatment of packaging waste | Wooden pallets | |
| Reuse | 100.00 | % |
| Treatment of packaging waste | Multi-layer bags (paper and plastic) | |
| Incineration | 100.00 | % |
| Treatment of installation loss waste | | |

| Installation into the building (A5) | Value | Unit |
|---|---|---|
| Landfill | 100.00 | % |
| Product mass after installation | 1.30 | kg |

Installation losses are accounted for by scaling up the quantity of product required at the construction site by the loss percentage. The production, transportation and treatment of the lost material is assigned to A5. During installation, water is added to the product. For the remaining lifecycle stages, this LCA considers the total mass of the product including the water. The use of mechanized construction equipment during product installation is included as energy use under module A5.

| End-of-life scenario (C1-C4) | Value | Unit |
|---|---|---|
| Diesel for dismantling | 0.08 | MJ |
| PM 2.5 emissions | 2.16e-05 | kg |
| PM 10 emissions | 8.24e-05 | kg |
| Collection process specified by type | | |
| Collected individually | 0 | kg |
| Collected with mixed construction and demolition waste | 1.30 | kg |
| Recovery system specified by type | | |
| Destined for reuse | 0 | kg |
| Recycling rate | 10.00 | % |
| Destined for recycling | 0.13 | kg |
| Destined for energy recovery | 0 | kg |
| Disposal specified by type | | |
| Product or material destined for final disposal | 1.17 | kg |
| Transport | | |
| Distance to landfill | 50.00 | km |
| Distance to recycling | 50.00 | km |
| Transport modality: Truck | transport, freight, lorry >32 metric ton, EURO6 | - |
| Energy demand | 1.58 | MJ / t*km |
| Energy demand (km) | 2.05e-03 | MJ / km |
| Capacity utilization | 53.30 | % |

Module C2 includes the impact of transportation of material after deconstruction, during the End-of-Life stage.

| Reuse, recovery and/or recycling potentials (D) | Value | Unit |
|---|---|---|
| Amount of secondary material that the system takes in | 0.04 | kg |
| Installation (packaging): Material for recycling/reuse | 4.69e-04 | kg |
| Installation (packaging): Net flow of secondary material | 4.69e-04 | kg |
| End-of-life (product): Material for recycling/reuse | 0.13 | kg |
| End-of-life (product): Net flow of secondary material | 0.09 | kg |
| Substitution of gravel | 0.09 | kg |
| Substitution of plastics | 4.69e-04 | kg |
| Installation (packaging): Material eligible for incineration credits | 6.00e-04 | kg |
| Installation (packaging): Exported energy eligible for credits | 9.20e-03 | MJ |
| Installation (production loss): Material eligible for incineration credits | 0 | kg |
| Installation (production loss): Exported energy eligible for credits | 0 | MJ |
| End-of-life (product): Material eligible for incineration credits | 0 | kg |
| End-of-life (product): Exported energy eligible for credits | 0 | MJ |
| Substitution of electricity production, grid mix | 2.61e-03 | MJ |
| Substitution of heat production from natural gas | 6.59e-03 | MJ |

Calculation of loads and benefits per EN 15804+A2. Exported energy is credited only where it originates from the incineration of primary material; landfilled fractions receive no exported-energy credit and therefore no avoided primary energy consumption. Recycling or reuse benefits are credited for the net flow of secondary material.

# LCA: Results

The following results are based on the market-based electricity approach applied to the foreground system (A3). Further details on electricity data are provided in the Additional Requirements section.

## Core environmental impact indicators

| Indicator | Unit | A1-A3 | A4 | A5 | C1 | C2 | C3 | C4 | D |
|---|---|---|---|---|---|---|---|---|---|
| GWP-total | kg $CO_2$-eq. | 8.41e-01 | 3.18e-02 | 8.70e-02 | 7.97e-03 | 6.74e-03 | 1.67e-03 | 1.72e-02 | -1.89e-03 |
| GWP-fossil | kg $CO_2$-eq. | 8.76e-01 | 3.18e-02 | 4.97e-02 | 7.97e-03 | 6.73e-03 | 5.69e-04 | 7.32e-03 | -1.87e-03 |
| GWP-biogenic | kg $CO_2$-eq. | -3.55e-02 | 1.60e-05 | 3.73e-02 | 7.96e-07 | 3.38e-06 | 1.10e-03 | 9.89e-03 | -1.21e-05 |
| GWP-luluc | kg $CO_2$-eq. | 5.04e-04 | 1.13e-05 | 2.89e-05 | 6.93e-07 | 2.39e-06 | 4.95e-08 | 3.80e-06 | -2.43e-06 |
| ODP | kg CFC-11-Eq | 6.02e-07 | 6.63e-10 | 3.02e-08 | 1.22e-10 | 1.40e-10 | 8.71e-12 | 2.12e-10 | -7.66e-11 |
| AP | mol H+-Eq | 2.89e-03 | 7.51e-05 | 1.66e-04 | 7.19e-05 | 1.59e-05 | 5.14e-06 | 5.18e-05 | -5.56e-06 |
| EP-freshwater | kg P-Eq | 1.83e-04 | 2.24e-06 | 1.03e-05 | 2.32e-07 | 4.74e-07 | 1.66e-08 | 6.07e-07 | -1.76e-07 |
| EP-marine | kg N-Eq | 6.13e-04 | 1.97e-05 | 3.61e-05 | 3.34e-05 | 4.17e-06 | 2.38e-06 | 1.98e-05 | -1.48e-06 |
| EP-terrestrial | mol N-Eq | 6.16e-03 | 2.13e-04 | 3.62e-04 | 3.65e-04 | 4.51e-05 | 2.61e-05 | 2.16e-04 | -1.65e-05 |
| POCP | kg NMVOC-Eq | 3.94e-03 | 1.30e-04 | 2.18e-04 | 1.09e-04 | 2.76e-05 | 7.78e-06 | 7.73e-05 | -9.45e-06 |
| ADPE | kg Sb-Eq | 7.03e-06 | 9.09e-08 | 4.35e-07 | 2.86e-09 | 1.92e-08 | 2.04e-10 | 1.16e-08 | -1.14e-08 |
| ADPF | MJ, net calorific value | 2.09e+01 | 4.78e-01 | 1.32e+00 | 1.04e-01 | 1.01e-01 | 7.44e-03 | 1.79e-01 | -4.93e-02 |
| WDP | $m^3$ world Eq deprived | 2.37e-01 | 2.40e-03 | 4.99e-02 | 2.55e-04 | 5.08e-04 | 1.82e-05 | 5.02e-04 | -4.81e-04 |

**GWP-total**: Global Warming Potential - total , **GWP-fossil**: Global warming potential - fossil , **GWP-biogenic**: Global Warming Potential - biogenic , **GWP-luluc**: Global Warming Potential - luluc , **ODP**: Depletion potential of the stratospheric ozone layer , **AP**: Acidification potential, Accumulated Exceedance , **EP-freshwater**: Eutrophication potential - freshwater , **EP-marine**: Eutrophication potential - marine , **EP-terrestrial**: Eutrophication potential - terrestrial , **POCP**: Photochemical Ozone Creation Potential , **ADPE**: Abiotic depletion potential - non-fossil resources , **ADPF**: Abiotic depletion potential - fossil resources , **WDP**: Water (user) deprivation potential

## Additional indicators

| Indicator | Unit | A1-A3 | A4 | A5 | C1 | C2 | C3 | C4 | D |
|---|---|---|---|---|---|---|---|---|---|
| PM | disease incidence | 2.98e-08 | 3.10e-09 | 1.93e-09 | 1.17e-08 | 6.56e-10 | 1.11e-09 | 1.18e-09 | -7.28e-11 |
| IRP | kBq U235-Eq | 6.16e-02 | 5.80e-04 | 1.66e-02 | 4.67e-05 | 1.23e-04 | 3.33e-06 | 1.14e-04 | -2.57e-04 |
| ETP-fw | CTUe | 5.36e+00 | 1.13e-01 | 3.20e-01 | 1.48e-02 | 2.39e-02 | 1.05e-03 | 2.45e-02 | -5.62e-03 |
| HTP-c | CTUh | 3.00e-09 | 2.04e-10 | 2.34e-10 | 3.12e-11 | 4.31e-11 | 2.22e-12 | 3.31e-11 | -8.46e-12 |
| HTP-nc | CTUh | 9.68e-09 | 3.15e-10 | 5.96e-10 | 1.41e-11 | 6.66e-11 | 1.01e-12 | 3.22e-11 | -1.13e-11 |
| SQP | dimensionless | 3.39e+00 | 4.80e-01 | 3.02e-01 | 7.30e-03 | 1.02e-01 | 5.22e-04 | 3.53e-01 | -9.32e-03 |

**PM**: Potential incidence of disease due to PM emissions , **IRP**: Potential Human exposure efficiency relative to U235 , **ETP-fw**: Potential Comparative Toxic Unit for ecosystems , **HTP-c**: Potential Comparative Toxic Unit for humans - cancer effects , **HTP-nc**: Potential Comparative Toxic Unit for humans - non-cancer effects , **SQP**: Potential Soil quality index . **IRP**: 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. **ETP-fw, HTP-c, HTP-nc, SQP**: 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 experienced with these indicators.

## Use of resources

| Indicator | Unit | A1-A3 | A4 | A5 | C1 | C2 | C3 | C4 | D |
|---|---|---|---|---|---|---|---|---|---|
| PERE | MJ | 8.18e-01 | 7.58e-03 | 2.94e-01 | 6.38e-04 | 1.60e-03 | 4.55e-05 | 1.66e-03 | -2.80e-03 |
| PERM | MJ | 3.31e-01 | 0.00e+00 | -3.10e-01 | 0.00e+00 | 0.00e+00 | -4.42e-04 | 0.00e+00 | 0.00e+00 |
| PERT | MJ | 1.15e+00 | 7.58e-03 | -1.61e-02 | 6.38e-04 | 1.60e-03 | -3.97e-04 | 1.66e-03 | -2.80e-03 |
| PENRE | MJ | 1.24e+01 | 4.78e-01 | 9.21e-01 | 1.04e-01 | 1.01e-01 | 7.44e-03 | 1.79e-01 | -2.94e-02 |
| PENRM | MJ | 8.46e+00 | 0.00e+00 | 3.61e-01 | 0.00e+00 | 0.00e+00 | -8.39e-01 | 0.00e+00 | -1.99e-02 |
| PENRT | MJ | 2.09e+01 | 4.78e-01 | 1.28e+00 | 1.04e-01 | 1.01e-01 | -8.31e-01 | 1.79e-01 | -4.93e-02 |
| SM | kg | 3.59e-02 | 0.00e+00 | 1.80e-03 | 0.00e+00 | 0.00e+00 | 0.00e+00 | 0.00e+00 | 9.46e-02 |
| RSF | MJ | 0.00e+00 | 0.00e+00 | 0.00e+00 | 0.00e+00 | 0.00e+00 | 0.00e+00 | 0.00e+00 | 0.00e+00 |
| NRSF | MJ | 0.00e+00 | 0.00e+00 | 0.00e+00 | 0.00e+00 | 0.00e+00 | 0.00e+00 | 0.00e+00 | 0.00e+00 |
| FW | $m^3$ | 7.03e-03 | 6.94e-05 | 1.54e-03 | 6.77e-06 | 1.47e-05 | 4.84e-07 | 1.86e-04 | -1.42e-04 |

**PERE**: Primary energy resources - renewable: use as energy carrier , **PERM**: Primary energy resources - renewable: used as raw materials , **PERT**: Primary energy resources - renewable: total , **PENRE**: Primary energy resources - non-renewable: use as energy carrier , **PENRM**: Primary energy resources - non-renewable: used as raw materials , **PENRT**: Primary energy resources - non-renewable: total , **SM**: Use of secondary material , **RSF**: Renewable secondary fuels , **NRSF**: Non-renewable secondary fuels , **FW**: Net use of fresh water

## Waste flows

| Indicator | Unit | A1-A3 | A4 | A5 | C1 | C2 | C3 | C4 | D |
|---|---|---|---|---|---|---|---|---|---|
| HWD | kg | 0.00e+00 | 0.00e+00 | 0.00e+00 | 0.00e+00 | 0.00e+00 | 0.00e+00 | 0.00e+00 | 0.00e+00 |
| NHWD | kg | 2.68e-02 | 0.00e+00 | 5.22e-02 | 0.00e+00 | 0.00e+00 | 0.00e+00 | 1.17e+00 | 0.00e+00 |
| RWD | kg | 0.00e+00 | 0.00e+00 | 0.00e+00 | 0.00e+00 | 0.00e+00 | 0.00e+00 | 0.00e+00 | 0.00e+00 |

**HWD**: Hazardous waste disposed , **NHWD**: Non hazardous waste disposed , **RWD**: Radioactive waste disposed

## Output flows

| Indicator | Unit | A1-A3 | A4 | A5 | C1 | C2 | C3 | C4 | D |
|---|---|---|---|---|---|---|---|---|---|
| CRU | kg | 0.00e+00 | 0.00e+00 | 2.27e-02 | 0.00e+00 | 0.00e+00 | 0.00e+00 | 0.00e+00 | 0.00e+00 |
| MFR | kg | 0.00e+00 | 0.00e+00 | 4.69e-04 | 0.00e+00 | 0.00e+00 | 1.30e-01 | 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 | 0.00e+00 | 0.00e+00 |
| EEE | MJ | 2.03e-02 | 0.00e+00 | 3.62e-03 | 0.00e+00 | 0.00e+00 | 0.00e+00 | 0.00e+00 | 0.00e+00 |
| EET | MJ | 4.16e-02 | 0.00e+00 | 8.67e-03 | 0.00e+00 | 0.00e+00 | 0.00e+00 | 0.00e+00 | 0.00e+00 |

**CRU**: Components for re-use , **MFR**: Materials for recycling , **MER**: Materials for energy recovery , **EEE**: Exported electrical energy , **EET**: Exported thermal energy

| Name | Value | Unit |
|---|---|---|
| Biogenic carbon content in product | 3.00e-03 | kg C |
| Biogenic carbon content in accompanying packaging | 1.02e-02 | kg C |

## Additional requirements

### Greenhouse gas emissions from the use of electricity in the manufacturing phase

Electricity consumption in the manufacturing phase is composed from the sources below. This EPD follows the market-based approach.

| Approach | Electricity | Quantity [kWh] | Emission Factor [kg $CO_2$e/kWh] |
|---|---|---|---|
| market-based | ecoinvent: electricity production, wind, >3MW turbine, onshore (ES) | 0.02 | 0.03 |
| ( location-based ) | ( ecoinvent: market for electricity, low voltage (ES) ) | ( 0.02 ) | ( 0.21 ) |
| market- and location-based | ecoinvent: electricity production, photovoltaic, 3kWp slanted-roof installation, single-Si, panel, mounted (ES) | 1.17e-03 | 0.08 |

Rows marked with () are provided for reference and not used in the assessment.

### Dangerous substances

The product contains no hazardous substances given by the REACH Candidate List or the Norwegian Priority List.

## Additional environmental information

### Secondary content

The product contains 3.50 % secondary material. Secondary material includes recycled, recovered and by-product content.

### Additional environmental impact indicators required in NPCR Part A for construction products

| Indicator | Unit | A1-A3 | A4 | A5 | C1 | C2 | C3 | C4 | D |
|---|---|---|---|---|---|---|---|---|---|
| GWP-IOBC | kg $CO_2$-eq. | 8.84e-01 | 3.18e-02 | 5.02e-02 | 7.97e-03 | 6.73e-03 | 5.69e-04 | 7.32e-03 | -1.87e-03 |

**GWP-IOBC**: Global Warming Potential - Instantaneous oxidation of biogenic carbon

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|---|---|---|---|
| epd-global Powered by EPD-Norway | **Program Operator** | Phone | +47 23 08 80 00 |
| | EPD Global | | |
| | P.O. Box 5250 Majorstuen, N-0303 Oslo | Email | post@epd-norge.no |
| | Norway | Web | www.epd-global.no |
| epd-global Powered by EPD-Norway | **Publisher** | Phone | +47 23 08 80 00 |
| | EPD Global | | |
| | P.O. Box 5250 Majorstuen, N-0303 Oslo | Email | post@epd-norge.no |
| | Norway | Web | www.epd-global.no |
| BUILDING TRUST | **Owner of the declaration** | Phone | +41 58 436 6800 |
| | Sika Services AG | | |
| | 16 Tüffenwies, 8048 Zürich | Email | product.sustainability@ch.sika.com |
| | Switzerland | Web | https://www.sika.com/ |
| BUILDING TRUST | **Author of the life cycle assessment** | Phone | +41 58 436 6800 |
| | Sika Services AG | | |
| | 16 Tüffenwies, 8048 Zürich | Email | product.sustainability@ch.sika.com |
| | Switzerland | Web | https://www.sika.com/ |
| ECO PLATFORM EPD VERIFIED | ECO Platform | Web | www.eco-platform.org |
| | ECO Portal | Web | ECO Portal |
| EMIDAT | **Developer of EPD generator** | Phone | +49 176 56 96 77 91 |
| | Emidat GmbH | | |
| | Sandstraße 33, 80335 München | Email | epd@emidat.com |
| | Germany | Web | www.emidat.com |