

# ENVIRONMENTAL PRODUCT DECLARATION

In accordance with ISO 14025 and EN 15804+A2 

## **CEMEX Deutschland AG** **natural aggregates from Friedrichswalde**



**Owner of the declaration**

CEMEX Deutschland AG  
Niederseidewitz 23  
01819 Bahretal  
Germany

**Product**

natural aggregates from Friedrichswalde

**Declared product / Declared unit**

1 t

**This declaration is based on Product**

**Category Rules**

EN 15804:2012 + A2:2019,  
NPCR Part B for natural stone products,  
aggregates and fillers (v1.0)

**Program operator:**

EPD Norway  
Majorstuen P.O. Box 5250  
N-0303 Oslo  
Norway

**Declaration number**

NEPD-10195-10195-2

**Registration number**

NEPD-10195-10195-2

**Issue date**

12.08.2025

**Valid to**

11.08.2030

**EPD Software**

Emidat EPD Tool v1.0.0

## General Information

### Product

natural aggregates from Friedrichswalde

### Program Operator

EPD Norway  
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N-0303 Oslo  
Norway  
Phone: +47 23 08 80 00  
Email: post@epd-norge.no

### Declaration Number

NEPD-10195-10195-2

### This declaration is based on Product Category Rules

EN 15804:2012 + A2:2019,  
NPCR Part B for natural stone products, aggregates and  
fillers (v1.0)

### Statements

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

### Declared unit

1 t

### General information on verification of EPD from EPD tools

Independent verification of data, other environmental  
information and the declaration according to ISO  
14025:2010, § 8.1.3 and § 8.1.4. Verification of each EPD  
is made according to EPDNorway'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-Norway, and iii) the  
process is reviewed annually by an independent third  
party verifier. See Appendix G of EPD-Norway's General  
Programme Instructions for further information on EPD  
tools.

### Verification of EPD tool

Charlotte Merlin, FORCE Technology  
(no signature required)

### Owner of the declaration

CEMEX Deutschland AG

### Contact person

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### Manufacturer

CEMEX Deutschland AG  
Niederseidewitz 23  
01819 Bahretal, Germany

### Place of production

Bahretal, Germany

### Management system

-

### Issue date

12.08.2025

### Valid to

11.08.2030

### Year of study

2024

### 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. The EPD tool has been  
approved by EPD Norway.

Developer of EPD: Thomas Zohm

Reviewer of company-specific input data and EPD:  
Karsten Schubert

### Approved



Håkon Hauan, CEO EPD-Norge

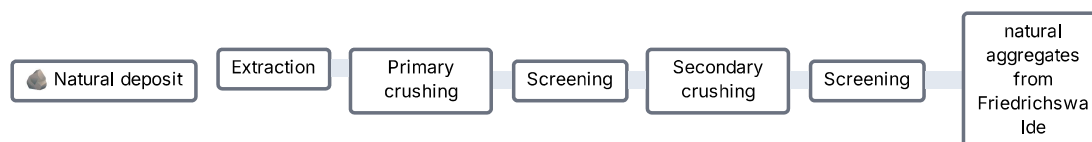
## Product

### Product description

This EPD applies to fine and coarse natural aggregates from Friedrichswalde.

For example:

0/2;0/32; 0/45; 1/3; 2/5; 2/8; 2/11; 5/8; 5/16; 8/11; 16/22; 16/32



Can be used in various scenarios, including:

- Asphalt
- Concrete
- frost protection and gravel base layer

### Product specification

| Name of ingredient | Share of total weight | Country of origin |
|--------------------|-----------------------|-------------------|
| Aggregates         | 100 %                 | Germany           |

### Technical data

|               | Unit                | Value  |
|---------------|---------------------|--------|
| Gross density | kg / m <sup>3</sup> | 3000.0 |

### Market

Germany

## LCA: Calculation rules

### Declared unit

1 t

### Reference service life

Not defined

### 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 good with an overall score of 3.98/5, in accordance with EN 15804+A2 Annex E guidance on data quality assessment, considering geographical, technical, and temporal representativeness.

### 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             | MND          | MND                  | MND       | MND         | MND    | MND         | MND           | MND                    | MND                   | MND         | MND       | MND              | MND      | MND   | MND |
| Geography        |                     |           | DE            | MND          | MND                  | MND       | MND         | MND    | MND         | MND           | MND                    | MND                   | MND         | MND       | MND              | MND      | MND   | MND |

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

Type of EPD: Cradle to gate

#### Stage of Material Production and Construction

Module A1: Production of ancillary materials

Module A2: Transportation to the quarry

Module A3: Aggregates extraction, crushing and sizing at the site and waste treatment

### Cut-off criteria

No cut-offs were applied.

### Allocation

Elementary flows (energy and fuels, ancillary materials and waste) data was collected on production-process-level. Using the total output of the production process in 2024, elementary flows are assigned to 1 declared unit based on mass.

## LCA: Results

### Core environmental impact indicators

| Indicator      | Unit                             | A1-3     |
|----------------|----------------------------------|----------|
| GWP-total      | kg CO <sub>2</sub> -eq.          | 3.46e+00 |
| GWP-fossil     | kg CO <sub>2</sub> -eq.          | 3.44e+00 |
| GWP-biogenic   | kg CO <sub>2</sub> -eq.          | 7.42e-03 |
| GWP-luluc      | kg CO <sub>2</sub> -eq.          | 6.74e-03 |
| ODP            | kg CFC-11-Eq                     | 1.34e-07 |
| AP             | mol H <sup>+</sup> -Eq           | 1.99e-02 |
| EP-freshwater  | kg P-Eq                          | 7.48e-04 |
| EP-marine      | kg N-Eq                          | 7.63e-03 |
| EP-terrestrial | mol N-Eq                         | 8.43e-02 |
| POCP           | kg NMVOC-Eq                      | 2.43e-02 |
| ADPE           | kg Sb-Eq                         | 1.14e-05 |
| ADPF           | MJ, net calorific value          | 4.62e+01 |
| WDP            | m <sup>3</sup> world Eq deprived | 5.59e-01 |

**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              | A1-3     |
|-----------|-------------------|----------|
| PM        | disease incidence | 4.09e-07 |
| IRP       | kBq U235-Eq       | 1.71e-01 |
| ETP-fw    | CTUe              | 1.16e+01 |
| HTP-c     | CTUh              | 1.09e-08 |
| HTP-nc    | CTUh              | 2.35e-08 |
| SQP       | dimensionless     | 2.25e+01 |

**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 and 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           | A1-3     |
|-----------|----------------|----------|
| PERE      | MJ             | 7.84e+00 |
| PERM      | MJ             | 0        |
| PERT      | MJ             | 7.84e+00 |
| PENRE     | MJ             | 4.62e+01 |
| PENRM     | MJ             | 0        |
| PENRT     | MJ             | 4.62e+01 |
| SM        | kg             | 0        |
| RSF       | MJ             | 0        |
| NRSF      | MJ             | 0        |
| FW        | m <sup>3</sup> | 1.45e-02 |

**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 | A1-3     |
|-----------|------|----------|
| HWD       | kg   | 1.85e-01 |
| NHWD      | kg   | 4.62e+00 |
| RWD       | kg   | 4.79e-05 |

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

### Output flows

| Indicator | Unit | A1-3     |
|-----------|------|----------|
| CRU       | kg   | 0        |
| MFR       | kg   | 0        |
| MER       | kg   | 0        |
| EEE       | MJ   | 4.64e-03 |
| EET       | MJ   | 6.26e-02 |

**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                | 0     | kg C |
| Biogenic carbon content in accompanying packaging | 0     | 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 certified by Guarantee of Origin. Electricity is represented by data in ecoinvent 3.10 regionalised for Germany.

| Electricity   | Unit                          | Value    |
|---------------|-------------------------------|----------|
| Nuclear       | kg CO <sub>2</sub> -eq. / kWh | 6.56e-03 |
| Solar         | kg CO <sub>2</sub> -eq. / kWh | 0.10     |
| Wind          | kg CO <sub>2</sub> -eq. / kWh | 0.03     |
| Hydro         | kg CO <sub>2</sub> -eq. / kWh | 0.72     |
| Bioenergy     | kg CO <sub>2</sub> -eq. / kWh | 0.05     |
| Gas           | kg CO <sub>2</sub> -eq. / kWh | 0.76     |
| Oil           | kg CO <sub>2</sub> -eq. / kWh | 0.95     |
| Coal and peat | kg CO <sub>2</sub> -eq. / kWh | 1.05     |

### Dangerous substances

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

## Additional environmental information

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

| Indicator | Unit                    | A1-3     |
|-----------|-------------------------|----------|
| GWP-IOBC  | kg CO <sub>2</sub> -eq. | 3.45e+00 |

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

## Bibliography

|                          |  |
|--------------------------|--|
| DIN EN ISO 14025:2011-10 | Environmental labels and declarations - Type III environmental declarations - Principles and procedures  |
| DIN EN ISO 14040:2021-02 | Environmental management - Life cycle assessment - Principles and framework  |
| DIN EN ISO 14044:2021-02 | Environmental management - Life cycle assessment - Requirements and guidelines   |
| EN 15804:2012+A2:2019    | Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products   |
| DIN CENTR 15941:2010-11  | Sustainability of construction works - Environmental product declarations - Methodology for selection and use of generic data  |
| DIN EN 15942:2022-04     | Sustainability of construction works - Environmental product declarations - Communication format business-to-business  |
| ISO 21930:2017-07        | Sustainability in buildings and civil engineering works - Core rules for environmental product declarations of construction products and services  |
| ecoinvent v3.10          | ecoinvent, Zurich, Switzerland, database version 3.10  |
| PCR                      | NPCR Part B for natural stone products, aggregates and fillers (v1.0)<br><br>Basic principles and recommendations for describing the dismantling, post use, and disposal stage of construction products: <a href="https://www.umweltbundesamt.de/sites/default/files/medien/1410/publikationen/2020-07-06_texte_130-2020_guidance-document-construction-industry.pdf">https://www.umweltbundesamt.de/sites/default/files/medien/1410/publikationen/2020-07-06_texte_130-2020_guidance-document-construction-industry.pdf</a><br><br>ILCD Handbook: <a href="https://eplca.jrc.ec.europa.eu/uploads/ILCD-Handbook-LCIA-Background-analysis-online-12March2010.pdf">https://eplca.jrc.ec.europa.eu/uploads/ILCD-Handbook-LCIA-Background-analysis-online-12March2010.pdf</a> |

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|  | ECO Platform<br>ECO Portal  | Web   | <a href="http://www.eco-platform.org">www.eco-platform.org</a> |
|  |   | Web   | <a href="#">ECO Portal</a>                                     |
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