

# ENVIRONMENTAL PRODUCT DECLARATION

In accordance with ISO 14025 and EN 15804+A2



## **Secil Agregados, S.A.** **AREIA (1/4) PREMIUM**



### **Owner of the declaration**

Secil Agregados, S.A.  
Travessa do Esporão  
4990 Ponte de Lima  
Portugal

### **Product**

AREIA (1/4) PREMIUM

### **Declared product / Declared unit**

1 t

### **This declaration is based on Product Category Rules**

EN 15804:2012 + A2:2019,  
NPCR 018 Part B for Natural Stone,  
Aggregates, and Fillers,  
NPCR Part A:2021

### **Program operator:**

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

### **Declaration number**

NEPD-10342-10342-2

### **Registration number**

NEPD-10342-10342-2

### **Issue date**

30.09.2025

### **Valid to**

29.09.2030

### **EPD Software**

Emidat EPD Tool v1.0.0

## General Information

### Product

AREIA (1/4) PREMIUM

### 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-10342-10342-2

### This declaration is based on Product Category Rules

EN 15804:2012 + A2:2019,  
 NPCR 018 Part B for Natural Stone, Aggregates, and  
 Fillers,  
 NPCR Part A:2021

### 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 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 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 of EPD tool

Charlotte Merlin, FORCE Technology  
 (no signature required)

### Owner of the declaration

Secil Agregados, S.A.

### Contact person

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### Phone

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### Manufacturer

Secil Agregados, S.A.  
 Travessa do Esporão  
 4990 Ponte de Lima, Portugal

### Place of production

Ponte de Lima, Portugal

### Management system

ISO 9001

### Organisation no

8121

### Issue date

30.09.2025

### Valid to

29.09.2030

### 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 Global.

Developer of EPD: Daniela Faísca

Reviewer of company-specific input data and EPD: Raquel Sofia Venâncio Madeira do Nascimento Paulo

### Approved



Håkon Hauan, The Norwegian EPD Foundation

# Product

## Product description

Natural granitic aggregates are materials commonly used in construction and civil engineering that are sourced directly from natural deposits. These aggregates are typically formed through natural processes and are widely utilized in various construction applications due to their physical properties and availability.

The product complies with the established standard NP EN 12620 and NP EN 13242 and can be consulted in its performance declaration.



Aggregates have specific properties that make them suitable for various civil engineering applications, including their use in the production of concrete and mortar, in unbound applications without any hydraulic or other binder, and in hydraulic engineering works for protection or regulation.

## Product specification

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

## Technical data

|               | Unit                | Value  |
|---------------|---------------------|--------|
| Gross density | kg / m <sup>3</sup> | 2660.0 |

## Market

Portugal

## 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 3.95/5, 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                                           |
| Geography        |                     |           | PT            | 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

Foreground inventory data (energy and fuels, ancillary materials, emissions and waste) was collected at the production-process level. Using the total output of the production process in 2024, these flows are allocated to one declared unit based on mass.

## LCA: Results

### Core environmental impact indicators

| Indicator      | Unit                             | A1-3     |
|----------------|----------------------------------|----------|
| GWP-total      | kg CO <sub>2</sub> -eq.          | 5.18e+00 |
| GWP-fossil     | kg CO <sub>2</sub> -eq.          | 5.17e+00 |
| GWP-biogenic   | kg CO <sub>2</sub> -eq.          | 1.71e-03 |
| GWP-luluc      | kg CO <sub>2</sub> -eq.          | 5.22e-03 |
| ODP            | kg CFC-11-Eq                     | 9.18e-08 |
| AP             | mol H <sup>+</sup> -Eq           | 2.98e-02 |
| EP-freshwater  | kg P-Eq                          | 6.93e-04 |
| EP-marine      | kg N-Eq                          | 1.22e-02 |
| EP-terrestrial | mol N-Eq                         | 1.33e-01 |
| POCP           | kg NMVOC-Eq                      | 4.03e-02 |
| ADPE           | kg Sb-Eq                         | 6.48e-06 |
| ADPF           | MJ, net calorific value          | 7.37e+01 |
| WDP            | m <sup>3</sup> world Eq deprived | 8.40e-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 | 6.77e-07 |
| IRP       | kBq U235-Eq       | 3.41e-01 |
| ETP-fw    | CTUe              | 1.24e+01 |
| HTP-c     | CTUh              | 1.88e-08 |
| HTP-nc    | CTUh              | 2.15e-08 |
| SQP       | dimensionless     | 1.50e+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 experience with these indicators.

## Use of resources

| Indicator | Unit           | A1-3     |
|-----------|----------------|----------|
| PERE      | MJ             | 2.25e+00 |
| PERM      | MJ             | 0        |
| PERT      | MJ             | 2.25e+00 |
| PENRE     | MJ             | 7.37e+01 |
| PENRM     | MJ             | 0        |
| PENRT     | MJ             | 7.37e+01 |
| SM        | kg             | 0        |
| RSF       | MJ             | 0        |
| NRSF      | MJ             | 0        |
| FW        | m <sup>3</sup> | 4.08e-01 |

**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   | 2.34e-01 |
| NHWD      | kg   | 3.77e+00 |
| RWD       | kg   | 8.41e-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   | 1.74e-01 |
| MER       | kg   | 0        |
| EEE       | MJ   | 1.93e-02 |
| EET       | MJ   | 2.52e-01 |

**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 source below. Electricity is represented by data in ecoinvent 3.10 regionalised for Portugal.

| Electricity           | Unit                          | Value |
|-----------------------|-------------------------------|-------|
| Electricity from grid | kg CO <sub>2</sub> -eq. / kWh | 0.60  |

#### 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. | 5.18e+00 |

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

## Bibliography

|                       |                                                                                                                                          |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| CEN/TR 15941:2010     | Sustainability of construction works - Environmental product declarations - Methodology for selection and use of generic data            |
| EN 15804:2012+A2:2019 | Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products |
| EN 15942:2022-04      | Sustainability of construction works - Environmental product declarations - Communication format business-to-business                    |
| ISO 14025:2011-10     | Environmental labels and declarations - Type III environmental declarations - Principles and procedures                                  |
| ISO 14040:2021-02     | Environmental management - Life cycle assessment - Principles and framework                                                              |
| ISO 14044:2021-02     | Environmental management - Life cycle assessment - Requirements and guidelines                                                           |
| ecoinvent v3.10       | ecoinvent, Zurich, Switzerland, database version 3.10                                                                                    |
| NPCR 018:2022         | Product category rules, Part B: Natural stone products, aggregates and fillers. Issue date: 20.01.2022; validity extended to 31.12.2026. |
| NPCR Part A:2021      | Construction products and services, Version 2.0. Issue date: 24.03.2021; validity extended to 24.03.2026.                                |

|                                                                                                                                             |                                                     |       |                                                                         |
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