

# ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH EN 15804+A2 & ISO 14025 / ISO 21930

**MicaFort PD900**  
LKAB Minerals Oy



**EPD HUB, HUB-1538**

Published on 06.06.2024, last updated on 06.06.2024, valid until 06.06.2029.

## GENERAL INFORMATION

### MANUFACTURER

|                 |                                                                                                         |
|-----------------|---------------------------------------------------------------------------------------------------------|
| Manufacturer    | LKAB Minerals Oy                                                                                        |
| Address         | Microkatu 1, 70210 Kuopio, Finland                                                                      |
| Contact details | minerals.finland@lkab.com                                                                               |
| Website         | <a href="https://www.lkabminerals.com/contact/finland">https://www.lkabminerals.com/contact/finland</a> |

### EPD STANDARDS, SCOPE AND VERIFICATION

|                    |                                                                                                                                                                                    |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Program operator   | EPD Hub, hub@epdhub.com                                                                                                                                                            |
| Reference standard | EN 15804+A2:2019 and ISO 14025                                                                                                                                                     |
| PCR                | EPD Hub Core PCR version 1.1, 5 Dec 2023                                                                                                                                           |
| Sector             | Construction product                                                                                                                                                               |
| Category of EPD    | Third party verified EPD                                                                                                                                                           |
| Scope of the EPD   | Cradle to gate                                                                                                                                                                     |
| EPD author         | Marcus Eriksson, LKAB Minerals                                                                                                                                                     |
| EPD verification   | Independent verification of this EPD and data, according to ISO 14025:<br><input type="checkbox"/> Internal verification <input checked="" type="checkbox"/> External verification |
| EPD verifier       | Haiha Nguyen, as an authorized verifier acting for EPD Hub Limited                                                                                                                 |

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

### PRODUCT

|                                   |                      |
|-----------------------------------|----------------------|
| Product name                      | MicaFort PD900       |
| Place of production               | Siilinjärvi, Finland |
| Period for data                   | 2022                 |
| Averaging in EPD                  | No averaging         |
| Variation in GWP-fossil for A1-A3 | 0 %                  |

### ENVIRONMENTAL DATA SUMMARY

|                                             |                                                                |
|---------------------------------------------|----------------------------------------------------------------|
| Declared unit                               | 1 metric tonne of PD900, including packaging in plastic BigBag |
| Declared unit mass                          | 1000 kg                                                        |
| GWP-fossil, A1-A3 (kgCO <sub>2</sub> e)     | 355                                                            |
| GWP-total, A1-A3 (kgCO <sub>2</sub> e)      | 356                                                            |
| Secondary material, inputs (%)              | 100 %                                                          |
| Total energy use, A1-A3 (kWh)               | 1520                                                           |
| Net freshwater use, A1-A3 (m <sup>3</sup> ) | 1.61                                                           |

## PRODUCT AND MANUFACTURER

### ABOUT THE MANUFACTURER

LKAB Minerals Oy is part of the LKAB group - an international mining and minerals group that offers sustainable iron ore, minerals and special products. LKAB Minerals delivers a diverse range of industrial minerals processed for a variety of applications from strategically located sites across Europe. Our distribution and logistics expertise allows us to serve our global customer base.

The LKAB Minerals Oy production site is located at the Yara phosphate mine in Siilinjärvi, where we extract minerals from the Yara mine waste stream.

### PRODUCT DESCRIPTION

MicaFort PD900 is a dried form of Phlogopite Mica flakes, which is a group of hydrogen aluminum silicate minerals. MicaFort PD900 can be used for various applications, mainly in the construction and automotive industries as an additive in coatings (industrial paints, decorative paints, mould coatings, etc), in gypsum wall boards and in polymers of different types.

In all cases, the PD900 is added to improve the material properties. It increases the temperature stability and mechanical properties in polymers and reinforces coatings as well as gypsum boards to prevent cracking and improve durability. In all application areas, the PD900 is used as an intermediary product to extend the life of the end product.

Further information can be found at <https://www.lkabminerals.com/contact/finland/>.

### PRODUCT RAW MATERIAL MAIN COMPOSITION

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

### BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

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

### FUNCTIONAL UNIT AND SERVICE LIFE

|                        |                                                                                            |
|------------------------|--------------------------------------------------------------------------------------------|
| Declared unit          | 1 metric tonne of PD900, including packaging in plastic BigBag                             |
| Mass per declared unit | 1000 kg                                                                                    |
| Functional unit        | N/A                                                                                        |
| Reference service life | The service life is determined by the final use product with which the PD900 is integrated |

### SUBSTANCES, REACH - VERY HIGH CONCERN

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

# PRODUCT LIFE-CYCLE

## SYSTEM BOUNDARY

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

| Product stage |           |               | Assembly stage |          | Use stage |             |        |             |               |                        |                       | End of life stage |           |                  |          | Beyond the system boundaries |          |           |
|---------------|-----------|---------------|----------------|----------|-----------|-------------|--------|-------------|---------------|------------------------|-----------------------|-------------------|-----------|------------------|----------|------------------------------|----------|-----------|
| A1            | A2        | A3            | A4             | A5       | B1        | B2          | B3     | B4          | B5            | B6                     | B7                    | C1                | C2        | C3               | C4       | D                            |          |           |
| X             | X         | X             | MND            | MND      | MND       | MND         | MND    | MND         | MND           | MND                    | MND                   | MND               | MND       | MND              | MND      | MND                          |          |           |
| Raw materials | Transport | Manufacturing | Transport      | Assembly | Use       | Maintenance | Repair | Replacement | Refurbishment | Operational energy use | Operational water use | Deconstr./demol.  | Transport | Waste processing | Disposal | Reuse                        | Recovery | Recycling |

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

## MANUFACTURING AND PACKAGING (A1-A3)

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

The raw material for the PD900 is a secondary, crushed, Mica-rich, rock stream which is diverted after the primary mineral extraction (phosphate) is complete. The main product line is phosphoric acid and mineral fertilizers, which uses the phosphate in the mined rock.

After the phosphate has been mined, extracted and the remaining rock has become a waste stream heading for a landfill, a small share of the

remaining rock is diverted to the LKAB Minerals facility after screening (~5%).

LKAB Minerals conducts screening together with magnetic and chemical sorting of the diverted rock in two more steps to isolate the Mica particles and reach the desired size and quality for PD900. After this, the Mica is dried using flash dryers and stored before delivery. The production process uses electricity and fuel oil as energy inputs.

Approximately 75 % (weight) of all PD900 is delivered by bulk without using any packaging materials. The majority of the rest is delivered by large, plastic bags, each one carrying 1200 kilos of PD900. The declared unit in this EPD is including packaging, but as the environmental impact from packaging is insignificant in relation to the product (>0,5 % of GWP), the results are valid for packaged PD900 as well as PD900 delivered by bulk.

## TRANSPORT, INSTALLATION, PRODUCT USE AND MAINTENANCE (A4-A5, B1-B7)

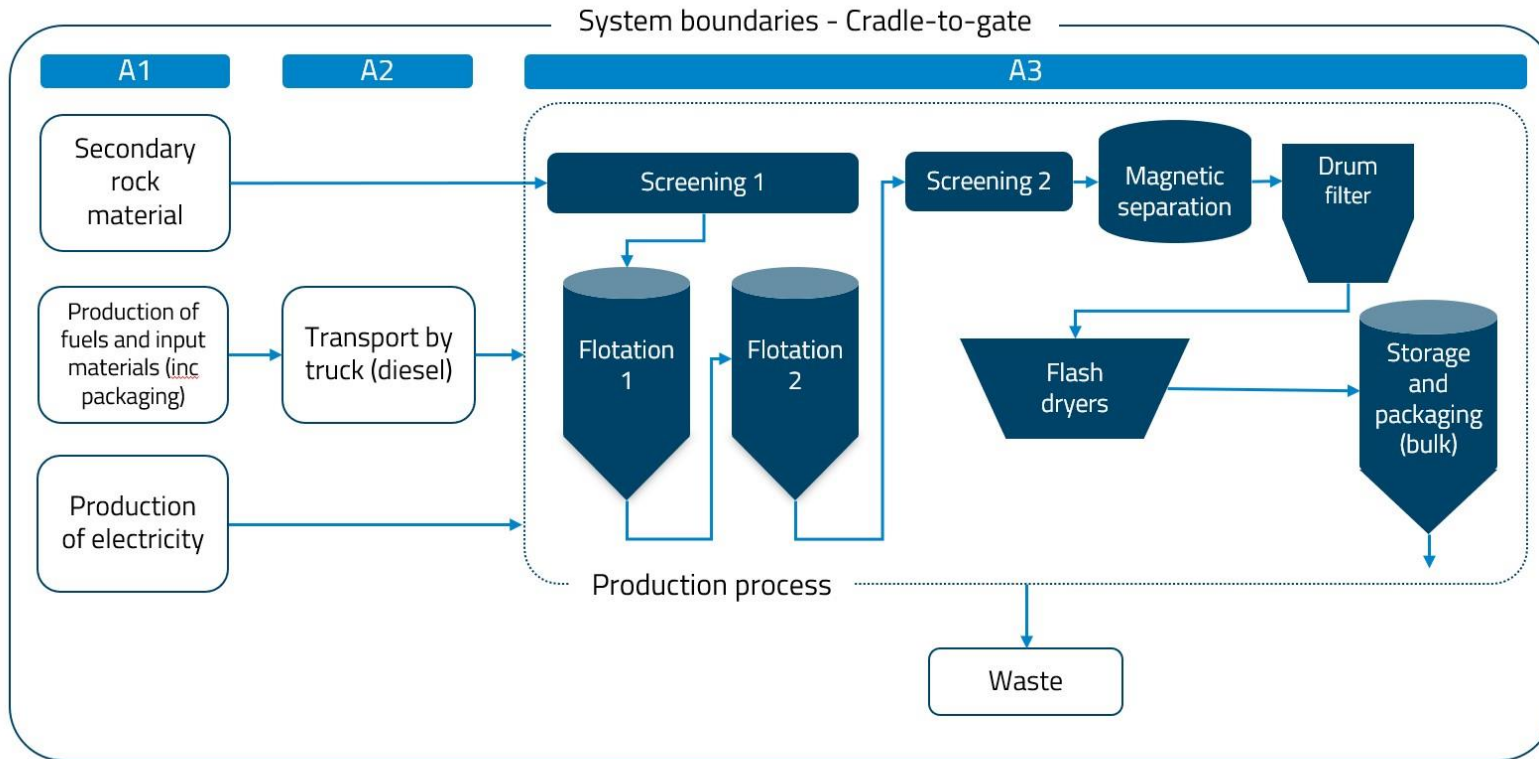
As per the system boundaries, this EPD does not cover stages A4-A5 and B. Air, soil, and water impacts during the use phase have not been studied.

## PRODUCT END OF LIFE (C1-C4, D)

MicaFort PD900 fulfils the criteria specified in the relevant PCR (EN 15804:2012+A2:2019) for excluding the end-of-life stage, and this stage is therefore not included in this EPD.

1. The product is physically integrated with the end product during installation so they cannot be physically separated at end of life
2. The product is no longer identifiable at end of life as a result of a physical or chemical transformation process
3. The product does not contain any biogenic carbon

# MANUFACTURING PROCESS



Life cycle stages A4-A5, B, C and D are outside of system boundaries



## LIFE-CYCLE ASSESSMENT

### CUT-OFF CRITERIA

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

### ALLOCATION, ESTIMATES AND ASSUMPTIONS

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

| Data type                      | Allocation                  |
|--------------------------------|-----------------------------|
| Raw materials                  | Allocated by revenue        |
| Packaging materials            | No allocation               |
| Ancillary materials            | No allocation               |
| Manufacturing energy and waste | Allocated by mass or volume |

The raw material (mica-rich rock) fulfils the criteria for end-of-life, and is thus to be considered a secondary co-product from the primary phosphate production process per EN 15804:A1+A2:2019. The allocation between Mica-rich rock and phosphate has been done using economic allocation as the value of the products differs substantially.

The LCA data used to model the covered processes are generic data coming from the Ecoinvent database and are considered conservative.

### AVERAGES AND VARIABILITY

|                                   |                |
|-----------------------------------|----------------|
| Type of average                   | No averaging   |
| Averaging method                  | Not applicable |
| Variation in GWP-fossil for A1-A3 | 0 %            |

### LCA SOFTWARE AND BIBLIOGRAPHY

This EPD has been created using One Click LCA EPD Generator. The LCA and EPD have been prepared according to the reference standards and ISO 14040/14044. The EPD Generator uses Ecoinvent v3.8, Plastics Europe, Federal LCA Commons and One Click LCA databases as sources of environmental data.

# ENVIRONMENTAL IMPACT DATA

## CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, PEF

| Impact category                     | Unit                   | A1       | A2       | A3        | A1-A3     | A4  | A5  | B1  | B2  | B3  | B4  | B5  | B6  | B7  | C1  | C2  | C3  | C4  | D   |
|-------------------------------------|------------------------|----------|----------|-----------|-----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| GWP – total <sup>1)</sup>           | kg CO <sub>2</sub> e   | 3,81E+01 | 1,96E-03 | 3,18E+02  | 3,56E+02  | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND |
| GWP – fossil                        | kg CO <sub>2</sub> e   | 3,69E+01 | 1,96E-03 | 3,18E+02  | 3,55E+02  | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND |
| GWP – biogenic                      | kg CO <sub>2</sub> e   | 6,69E-02 | 7,57E-07 | -2,25E-01 | -1,58E-01 | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND |
| GWP – LULUC                         | kg CO <sub>2</sub> e   | 1,14E+00 | 7,22E-07 | 2,57E-02  | 1,16E+00  | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND |
| Ozone depletion pot.                | kg CFC <sub>11</sub> e | 3,83E-06 | 4,50E-10 | 4,55E-05  | 4,94E-05  | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND |
| Acidification potential             | mol H <sup>+</sup> e   | 1,28E-01 | 8,28E-06 | 2,96E+00  | 3,09E+00  | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND |
| EP-freshwater <sup>2)</sup>         | kg Pe                  | 8,28E-03 | 1,60E-08 | 5,81E-03  | 1,41E-02  | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND |
| EP-marine                           | kg Ne                  | 2,91E-02 | 2,46E-06 | 9,74E-01  | 1,00E+00  | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND |
| EP-terrestrial                      | mol Ne                 | 2,12E-01 | 2,72E-05 | 1,10E+01  | 1,12E+01  | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND |
| POCP (“smog”) <sup>3)</sup>         | kg NMVOCe              | 5,86E-02 | 8,69E-06 | 2,98E+00  | 3,04E+00  | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND |
| ADP-minerals & metals <sup>4)</sup> | kg Sbe                 | 3,20E-04 | 4,59E-09 | 5,89E-06  | 3,26E-04  | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND |
| ADP-fossil resources                | MJ                     | 4,84E+02 | 2,94E-02 | 3,11E+01  | 5,15E+02  | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND |
| Water use <sup>5)</sup>             | m <sup>3</sup> e depr. | 2,06E+01 | 1,31E-04 | 8,73E+01  | 1,08E+02  | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND |

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

### ADDITIONAL (OPTIONAL) ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, PEF

| Impact category                  | Unit      | A1       | A2       | A3       | A1-A3    | A4  | A5  | B1  | B2  | B3  | B4  | B5  | B6  | B7  | C1  | C2  | C3  | C4  | D   |
|----------------------------------|-----------|----------|----------|----------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Particulate matter               | Incidence | 1,95E-06 | 2,25E-10 | 5,13E-05 | 5,33E-05 | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND |
| Ionizing radiation <sup>6)</sup> | kBq U235e | 8,75E+00 | 1,40E-04 | 4,26E+01 | 5,14E+01 | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND |
| Ecotoxicity (freshwater)         | CTUe      | 4,97E+02 | 2,64E-02 | 2,87E+03 | 3,37E+03 | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND |
| Human toxicity, cancer           | CTUh      | 1,51E-08 | 6,49E-13 | 6,96E-08 | 8,47E-08 | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND |
| Human tox. non-cancer            | CTUh      | 2,54E-07 | 2,62E-11 | 1,95E-06 | 2,21E-06 | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND |
| SQP <sup>7)</sup>                | -         | 1,41E+03 | 3,39E-02 | 2,16E+02 | 1,62E+03 | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND |

6) EN 15804+A2 disclaimer for ionizing radiation, human health. This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator; 7) SQP = Land use related impacts/soil quality.

### USE OF NATURAL RESOURCES

| Impact category                    | Unit           | A1       | A2       | A3       | A1-A3    | A4  | A5  | B1  | B2  | B3  | B4  | B5  | B6  | B7  | C1  | C2  | C3  | C4  | D   |
|------------------------------------|----------------|----------|----------|----------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Renew. PER as energy <sup>8)</sup> | MJ             | 7,83E+01 | 3,31E-04 | 1,84E+02 | 2,62E+02 | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND |
| Renew. PER as material             | MJ             | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND |
| Total use of renew. PER            | MJ             | 7,83E+01 | 3,31E-04 | 1,84E+02 | 2,62E+02 | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND |
| Non-re. PER as energy              | MJ             | 4,83E+02 | 2,94E-02 | 4,71E+03 | 5,20E+03 | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND |
| Non-re. PER as material            | MJ             | 0,00E+00 | 0,00E+00 | 1,37E+01 | 1,37E+01 | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND |
| Total use of non-re. PER           | MJ             | 4,83E+02 | 2,94E-02 | 4,73E+03 | 5,21E+03 | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND |
| Secondary materials                | kg             | 1,00E+03 | 8,16E-06 | 2,17E-01 | 1,00E+03 | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND |
| Renew. secondary fuels             | MJ             | 8,00E-04 | 8,23E-08 | 2,63E+00 | 2,64E+00 | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND |
| Non-ren. secondary fuels           | MJ             | 0,00E+00 | 0,00E+00 | 2,80E+01 | 2,80E+01 | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND |
| Use of net fresh water             | m <sup>3</sup> | 5,06E-01 | 3,81E-06 | 1,10E+00 | 1,61E+00 | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND |

8) PER = Primary energy resources.



### END OF LIFE – WASTE

| Impact category     | Unit | A1       | A2       | A3       | A1-A3    | A4  | A5  | B1  | B2  | B3  | B4  | B5  | B6  | B7  | C1  | C2  | C3  | C4  | D   |
|---------------------|------|----------|----------|----------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Hazardous waste     | kg   | 1,36E+00 | 3,90E-05 | 5,46E+00 | 6,81E+00 | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND |
| Non-hazardous waste | kg   | 4,72E+01 | 6,40E-04 | 2,35E+02 | 2,82E+02 | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND |
| Radioactive waste   | kg   | 2,14E-03 | 1,97E-07 | 1,33E-02 | 1,54E-02 | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND |

### END OF LIFE – OUTPUT FLOWS

| Impact category          | Unit | A1       | A2       | A3       | A1-A3    | A4  | A5  | B1  | B2  | B3  | B4  | B5  | B6  | B7  | C1  | C2  | C3  | C4  | D   |
|--------------------------|------|----------|----------|----------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Components for re-use    | kg   | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND |
| Materials for recycling  | kg   | 0,00E+00 | 0,00E+00 | 9,52E-02 | 9,52E-02 | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND |
| Materials for energy rec | kg   | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND |
| Exported energy          | MJ   | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND |

### ENVIRONMENTAL IMPACTS – EN 15804+A1, CML / ISO 21930

| Impact category      | Unit                               | A1       | A2       | A3       | A1-A3    | A4  | A5  | B1  | B2  | B3  | B4  | B5  | B6  | B7  | C1  | C2  | C3  | C4  | D   |
|----------------------|------------------------------------|----------|----------|----------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Global Warming Pot.  | kg CO <sub>2</sub> e               | 3,76E+01 | 1,94E-03 | 3,16E+02 | 3,53E+02 | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND |
| Ozone depletion Pot. | kg CFC <sub>-11</sub> e            | 3,24E-06 | 3,56E-10 | 3,59E-05 | 3,92E-05 | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND |
| Acidification        | kg SO <sub>2</sub> e               | 1,07E-01 | 6,44E-06 | 1,23E+00 | 1,34E+00 | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND |
| Eutrophication       | kg PO <sub>4</sub> <sup>3</sup> e  | 7,14E-02 | 1,47E-06 | 2,63E-01 | 3,34E-01 | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND |
| POCP ("smog")        | kg C <sub>2</sub> H <sub>4</sub> e | 5,78E-03 | 2,51E-07 | 6,04E-02 | 6,62E-02 | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND |
| ADP-elements         | kg Sbe                             | 3,11E-04 | 4,44E-09 | 5,08E-04 | 8,19E-04 | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND |
| ADP-fossil           | MJ                                 | 4,83E+02 | 2,94E-02 | 4,73E+03 | 5,21E+03 | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND | MND |

## VERIFICATION STATEMENT

### VERIFICATION PROCESS FOR THIS EPD

This EPD has been verified in accordance with ISO 14025 by an independent, third-party verifier by reviewing results, documents and compliancy with reference standard, ISO 14025 and ISO 14040/14044, following the process and checklists of the program operator for:

- This Environmental Product Declaration
- The Life-Cycle Assessment used in this EPD
- The digital background data for this EPD

Why does verification transparency matter? [Read more online](#)

This EPD has been generated by One Click LCA EPD generator, which has been verified and approved by the EPD Hub.

### THIRD-PARTY VERIFICATION STATEMENT

I hereby confirm that, following detailed examination, I have not established any relevant deviations by the studied Environmental Product Declaration (EPD), its LCA and project report, in terms of the data collected and used in the LCA calculations, the way the LCA-based calculations have been carried out, the presentation of environmental data in the EPD, and other additional environmental information, as present with respect to the procedural and methodological requirements in ISO 14025:2010 and reference standard.

I confirm that the company-specific data has been examined as regards plausibility and consistency; the declaration owner is responsible for its factual integrity and legal compliance.

I confirm that I have sufficient knowledge and experience of construction products, this specific product category, the construction industry, relevant standards, and the geographical area of the EPD to carry out this verification.

I confirm my independence in my role as verifier; I have not been involved in the execution of the LCA or in the development of the declaration and have no conflicts of interest regarding this verification.

HaiHa Nguyen, as an authorized verifier acting for EPD Hub Limited  
06.06.2024

