epd-norge
Global program operatør

# Environmental product declaration

in accordance with ISO 14025 and EN 15804+A2

## Redirep 25 RSF



The Norwegian EPD Foundation

**Owner of the declaration:**
Mapei

**Product:**
Redirep 25 RSF

**Declared unit:**
1 kg

**This declaration is based on Product Category Rules:**
CEN Standard EN 15804:2012+A2:2019 serves as core PCR
NPCR 009:2021 Part B for Technical - Chemical products for building and construction industry

**Program operator:**
The Norwegian EPD Foundation

**Declaration number:**
NEPD-9020-9020-1

**Registration number:**
NEPD-9020-9020-1

**Issue date:**
22.08.2025

**Valid to:**
22.08.2030

**EPD software:**
LCAno EPD generator ID: 1138158

## General information

**Product**

Redirep 25 RSF

**Owner of the declaration:**

Mapei
Contact person: Environmental sustainability
Phone: + 39 02 37673036
e-mail: corporate.sustainability@mapei.it

**Program operator:**

The Norwegian EPD Foundation
Post Box 5250 Majorstuen, 0303 Oslo, Norway
Phone: +47 977 22 020
web: www.epd-norge.no

**Manufacturer:**

Mapei AS

**Declaration number:**

NEPD-9020-9020-1

**Place of production:**

Mapei AS
Vallsetvegen 6
2120 Sagstua, Norway

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

CEN Standard EN 15804:2012+A2:2019 serves as core PCR
NPCR 009:2021 Part B for Technical - Chemical products for building and construction industry

**Management system:**

ISO 9001, ISO 14001 and ISO 45001

**Statement of liability:**

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

**Organisation no:**

911 103 079

**Declared unit:**

1 kg Redirep 25 RSF

**Issue date:**

22.08.2025

**Declared unit with option:**

A1-A3, A4, A5, C1, C2, C3, C4, D

**Valid to:**

22.08.2030

**Year of study:**

2024

**Functional unit:**

Functional unit is not covered by this PCR.

**Comparability:**

EPD of construction products may not be comparable if they not comply with EN 15804 and seen in a building context.

**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-Norway'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

**Development and verification of EPD:**

The declaration is created using EPD tool lca.tools ver EPD2022.03, developed by LCA.no. The EPD tool is integrated in the company's management system, and has been approved by EPD Norway. NEPDT105

Developer of EPD: Laura Carettoni

Reviewer of company-specific input data and EPD: Marco Mazzetti

**Verification of EPD tool:**

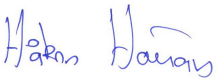
Independent third party verification of the EPD tool, background data and test-EPD in accordance with EPDNorway's procedures and guidelines for verification and approval of EPD tools. NEPDT73

Third party verifier:

Linda Høibye, Life Cycle Assessment Consulting

(no signature required)

**Approved:**



Håkon Hauan, CEO EPD-Norge

## Product

### Product description:

Redirep 25 RSF is a dry mortar for repair of concrete substrates. It has very good bonding properties. The mortar has rapid setting times and low shrinkage. Redirep 25 RSF consists of special cement and well graded dry sand, together with additives to improve workability and adhesive bonding. Redirep 25 RSF contains no components, neither in the sand nor cement, which can cause alkali-aggregate reactions. Redirep 25 RSF is supplied in 25 kg bags.

For more information see the TDS (Technical Data Sheet) on Mapei AS website (www.mapei.com/no).

### Product specification

| Materials | kg | % |
|---|---|---|
| Additives | 0,0017 | 0,1702 |
| Binders | 0,013 | 1,30 |
| Fibre | 0,0003 | 0,03003 |
| Filler | 0,732 | 73,27 |
| Inorganic Binder | 0,252 | 25,23 |
| Total | 0,999 | 100,00 |

| Packaging | kg | % |
|---|---|---|
| Packaging | 0,02 | 100,00 |
| Total incl. packaging | 1,02 | 100,00 |

### Technical data:

For all types of repair work on concrete substrates. Redirep 25 RSF is particularly suitable where there is a need to minimize crack development and/or where surfaces need to be finished quickly.
Redirep 25 RSF meets the requirements defined by EN 1504-9 (“Products and systems for protection and repair of concrete structures - Definitions and requirements, quality control and evaluation of conformity. General principles for the use of products and systems”). And the minimum requirements claimed by 1504-3 (“Structural and non-structural repair”) for mortars of class R2.

### Market:

Nordic & Baltic countries

### Reference service life, product

The reference service life of the product is similar to the service life of the building.

### Reference service life, building

60 years

## LCA: Calculation rules

### Declared unit:

1 kg Redirep 25 RSF

### Cut-off criteria:

All major raw materials and all the essential energy is included. The production processes for raw materials and energy flows with very small amounts (less than 1%) are not included. These cut-off criteria do not apply for hazardous materials and substances.

### Allocation:

The allocation is made in accordance with the provisions of EN 15804. Incoming energy and water and waste production in-house is allocated equally among all products through mass allocation. Effects of primary production of recycled materials is allocated to the main product in which the material was used. The recycling process and transportation of the material is allocated to this analysis.

### Data quality:

Specific data for the product composition are provided by the manufacturer. The data represent the production of the declared product and were collected for EPD development in the year of study. Background data is based on EPDs according to EN 15804 and different LCA databases. The data quality of the raw materials in A1 is presented in the table below.

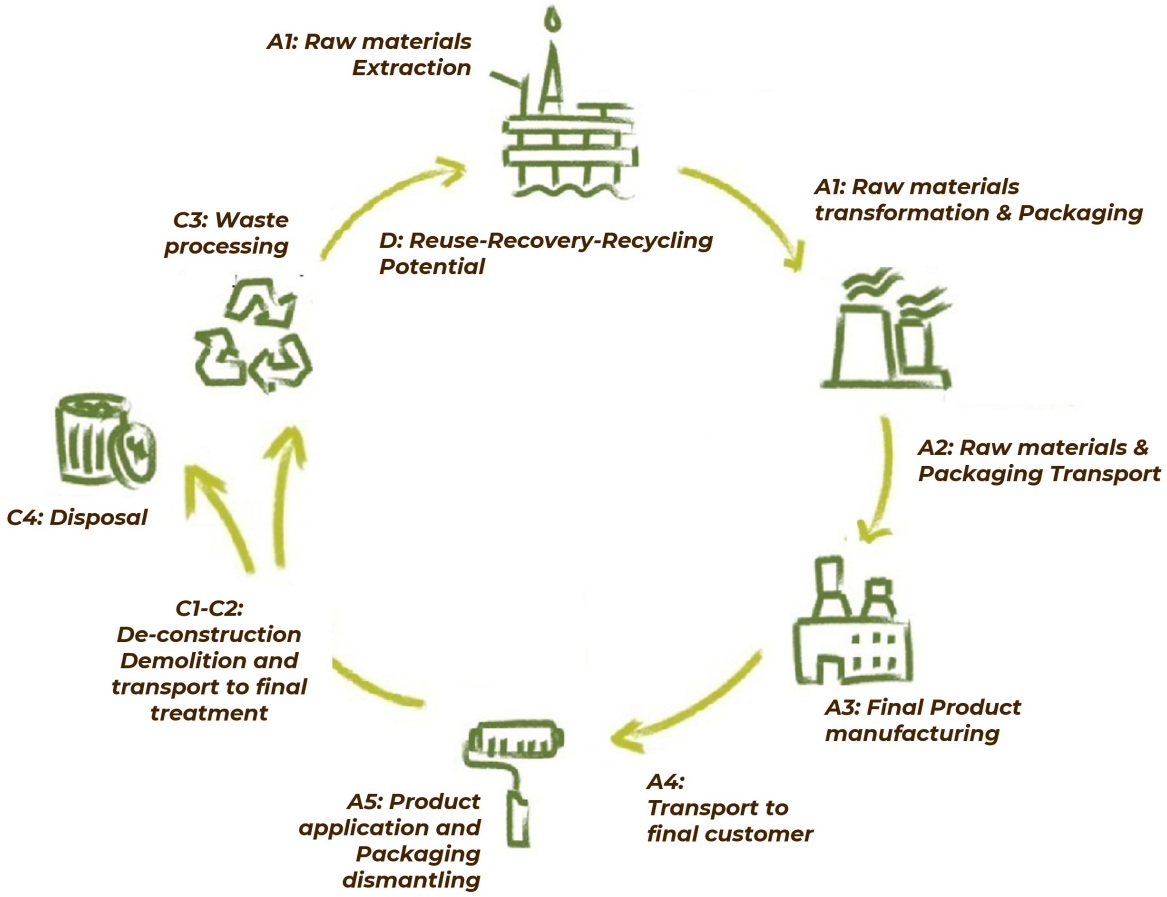
| Materials | Source | Data quality | Year |
|---|---|---|---|
| Additives | ecoinvent 3.6 | Database | 2019 |
| Binders | ecoinvent 3.6 | Database | 2019 |
| Fibre | Supplier | EPD | 2020 |
| Filler | ecoinvent 3.6 | Database | 2019 |
| Filler | Supplier | EPD | 2021 |
| Inorganic Binder | Ecoinvent 3.6 | Database | 2019 |
| Inorganic Binder | Supplier | EPD | 2022 |
| Packaging | ecoinvent 3.6 | Database | 2019 |

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

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

### System boundary:

The approach is "cradle to gate" (A1–A3) with modules A4–A5, C1–C4 and D.
The production process starts from raw materials, that are purchased from external and intercompany suppliers and stored in the plant. Bulk raw materials are stored in specific silos and added automatically in the production mixer, according to the formula of the product. Other raw materials, supplied in bags, big bags or tanks, are stored in the warehouse and added automatically or manually in the mixer. The production is a discontinuous process, in which all the components are mechanically mixed in batches. The semi-finished product is then packaged, put on wooden pallets and stored in the finished products warehouse. The quality of final products is controlled before the sale.




### Additional technical information:

## LCA: Scenarios and additional technical information

The following information describe the scenarios in the different modules of the EPD.

The results of stage A4 in the table of this EPD refer to domestic transport set by the PCR. This product may also be delivered to the countries in the table "Additional A4 information". To calculate the GWP of transportation to these countries, the result GWPtot of module A4 from this EPD shall be multiplied by the multiplication factors below. The installation phase (A5) includes the water to be added and the electricity consumption for mixing. The packaging is collected and sent to treatment. The demolition phase (C1) includes the electricity for demolition. The transport of waste is carried out by truck over 100 km (C2). It is assumed that 30% of the product is disposed into landfill and 70% is collected and recycled. Module D contains credits from the recycling of the fraction of product in module C3, at the end of life, the product can be collected and recycled for use in substitution of virgin raw aggregates.

| Transport from production place to user (A4) | Capacity utilisation (incl. return) % | Distance (km) | Fuel/Energy Consumption | Unit | Value (Liter/tonne) |
|---|---|---|---|---|---|
| Truck, 16-32 tonnes, EURO 6 (km) - RER | 36,7 % | 300 | 0,043 | l/tkm | 12,90 |

| Transport from production place to user (A4) | Unit | Value | | | |
|---|---|---|---|---|---|
| Oslo, Norway (truck 90km) | multiplication factor * GWP (A4) | 0,3 | | | |
| Kristiansand, Norway (truck 400km) | multiplication factor * GWP (A4) | 1,33 | | | |
| Stavanger, Norway (truck 640km) | multiplication factor * GWP (A4) | 2,13 | | | |
| Bergen, Norway (truck 530km) | multiplication factor * GWP (A4) | 1,77 | | | |
| Trondheim, Norway (truck 420km) | multiplication factor * GWP (A4) | 1,40 | | | |
| Tromsø, Norway (truck 1700km) | multiplication factor * GWP (A4) | 5,67 | | | |
| Stockholm, Sweden (truck 500km) | multiplication factor * GWP (A4) | 1,67 | | | |
| Helsinki, Finland (truck 1200km, ferry 100km) | multiplication factor * GWP (A4) | 4,23 | | | |
| Copenhagen, Denmark (truck 680km) | multiplication factor * GWP (A4) | 2,27 | | | |

| Assembly (A5) | Unit | Value | | | |
|---|---|---|---|---|---|
| Waste, packaging, paper bag, to average treatment (kg) | kg | 0,0034 | | | |
| Water, tap water (kg) | kg | 0,136 | | | |
| Waste, packaging, pallet, EUR wooden pallet, single use, to average treatment (kg) | kg | 0,02 | | | |
| Electricity, European average (kWh) | kWh | 0,003 | | | |

| De-construction demolition (C1) | Unit | Value | | | |
|---|---|---|---|---|---|
| Demolition of building per kg of product (kg) | kg/DU | 1,00 | | | |
| Electricity, European average (kWh) | kWh/DU | 0,005 | | | |

| Transport to waste processing (C2) | Capacity utilisation (incl. return) % | Distance (km) | Fuel/Energy Consumption | Unit | Value (Liter/tonne) |
|---|---|---|---|---|---|
| Truck, 7.5-16 tonnes, EURO 6 (km) - RER | 35,4 % | 100 | 0,056 | l/tkm | 5,60 |

| Waste processing (C3) | Unit | Value | | | |
|---|---|---|---|---|---|
| Waste treatment of product after demolition (kg) | kg | 0,7 | | | |

| Disposal (C4) | Unit | Value | | | |
|---|---|---|---|---|---|
| Disposal of product in landfill (kg) | kg | 0,3 | | | |

| Benefits and loads beyond the system boundaries (D) | Unit | Value | | | |
|---|---|---|---|---|---|
| Substitution of primary aggregates with crushed recycled products (kg) | kg | 0,7 | | | |

## LCA: Results

The LCA results are presented below for the declared unit defined on page 2 of the EPD document.

| Environmental impact | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Indicator** | **Unit** | A1-A3 | A4 | A5 | C1 | C2 | C3 | C4 | D |
| | GWP-total | kg $CO_2$ -eq | 2,26E-01 | 5,02E-02 | 3,81E-02 | 6,14E-03 | 2,19E-02 | 5,04E-04 | 1,29E-03 | -1,64E-03 |
| | GWP-fossil | kg $CO_2$ -eq | 2,61E-01 | 5,01E-02 | 1,88E-03 | 6,12E-03 | 2,19E-02 | 4,97E-04 | 1,28E-03 | -1,60E-03 |
| | GWP-biogenic | kg $CO_2$ -eq | -3,56E-02 | 2,07E-05 | 3,63E-02 | 1,57E-05 | 1,01E-05 | 4,29E-06 | 1,09E-06 | -3,20E-05 |
| | GWP-luluc | kg $CO_2$ -eq | 1,63E-04 | 1,78E-05 | 3,14E-06 | 5,25E-06 | 9,47E-06 | 6,88E-07 | 2,52E-07 | -1,08E-06 |
| | ODP | kg CFC11 -eq | 1,55E-08 | 1,14E-08 | 2,08E-10 | 1,04E-09 | 4,81E-09 | 9,80E-11 | 6,26E-10 | -2,92E-10 |
| | AP | mol H+ -eq | 9,21E-04 | 1,44E-04 | 1,21E-05 | 5,42E-05 | 6,29E-05 | 4,02E-06 | 1,25E-05 | -1,44E-05 |
| | EP-FreshWater | kg P -eq | 4,45E-06 | 4,01E-07 | 1,44E-07 | 2,41E-07 | 2,01E-07 | 3,14E-08 | 9,59E-09 | -4,26E-08 |
| | EP-Marine | kg N -eq | 2,25E-04 | 2,85E-05 | 2,90E-06 | 2,00E-05 | 1,19E-05 | 1,18E-06 | 4,70E-06 | -5,00E-06 |
| | EP-Terrestial | mol N -eq | 2,57E-03 | 3,19E-04 | 3,26E-05 | 2,19E-04 | 1,34E-04 | 1,36E-05 | 5,18E-05 | -5,88E-05 |
| | POCP | kg NMVOC -eq | 7,18E-04 | 1,22E-04 | 8,39E-06 | 6,07E-05 | 5,11E-05 | 3,64E-06 | 1,48E-05 | -1,55E-05 |
| | ADP-minerals&metals[1] | kg Sb-eq | 1,69E-06 | 1,38E-06 | 2,05E-08 | 2,17E-08 | 7,90E-07 | 6,31E-09 | 1,14E-08 | -1,42E-07 |
| | ADP-fossil[1] | MJ | 2,29E+00 | 7,58E-01 | 3,37E-02 | 9,88E-02 | 3,27E-01 | 1,54E-02 | 4,15E-02 | -2,71E-02 |
| | WDP[1] | $m^3$ | 5,36E+00 | 7,33E-01 | 4,51E-01 | 6,69E-01 | 3,91E-01 | 1,70E+00 | 8,73E-02 | -1,27E+00 |

GWP-total = Global Warming Potential total; GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment: EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption

"Reading example: 9,0 E-03 = 9,0*10-3 = 0,009"
*INA Indicator Not Assessed

1. The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator

### Remarks to environmental impacts

This EPD might use cement EPDs as input in which the Net approach* has been applied. See the Data Quality table on page 3.

*The Net approach excludes the emissions from waste incineration used to produce heat required in the cement manufacturing process.

## Additional environmental impact indicators

| Indicator | | Unit | A1-A3 | A4 | A5 | C1 | C2 | C3 | C4 | D |
|---|---|---|---|---|---|---|---|---|---|---|
| | PM | Disease incidence | 8,40E-09 | 3,07E-09 | 7,70E-11 | 5,10E-09 | 1,23E-09 | 6,40E-11 | 2,67E-10 | -3,07E-10 |
| | IRP[2] | kgBq U235 -eq | 6,09E-03 | 3,31E-03 | 2,62E-04 | 6,23E-04 | 1,43E-03 | 2,59E-04 | 1,80E-04 | -2,49E-04 |
| | ETP-fw[1] | CTUe | 5,03E+00 | 5,62E-01 | 2,70E-02 | 6,07E-02 | 2,55E-01 | 1,09E-02 | 2,05E-02 | -2,79E-02 |
| | HTP-c[1] | CTUh | 8,10E-11 | 0,00E+00 | 2,00E-12 | 2,00E-12 | 0,00E+00 | 1,00E-12 | 1,00E-12 | -1,00E-12 |
| | HTP-nc[1] | CTUh | 1,80E-09 | 6,14E-10 | 5,80E-11 | 5,80E-11 | 3,07E-10 | 1,00E-11 | 1,20E-11 | -3,40E-11 |
| | SQP[1] | dimensionless | 5,58E+00 | 5,30E-01 | 1,05E-02 | 1,73E-02 | 1,94E-01 | 8,73E-03 | 1,51E-01 | 6,15E-02 |

PM = Particulate Matter emissions; IRP = Ionizing radiation – human health; ETP-fw = Eco toxicity – freshwater; HTP-c = Human toxicity – cancer effects; HTP-nc = Human toxicity – non cancer effects; SQP = Potential Soil Quality Index (dimensionless)

"Reading example: 9,0 E-03 = 9,0*10-3 = 0,009"
*INA Indicator Not Assessed

1. The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator
2. 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.

| Resource use | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Indicator | | Unit | A1-A3 | A4 | A5 | C1 | C2 | C3 | C4 | D |
| | PERE | MJ | 7,98E-01 | 1,09E-02 | 5,42E-03 | 8,78E-03 | 5,57E-03 | 7,95E-03 | 6,38E-04 | -6,35E-03 |
| | PERM | MJ | 3,28E-01 | 0,00E+00 | -3,26E-01 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| | PERT | MJ | 1,13E+00 | 1,09E-02 | -3,20E-01 | 8,78E-03 | 5,57E-03 | 7,95E-03 | 6,38E-04 | -6,35E-03 |
| | PENRE | MJ | 1,72E+00 | 7,58E-01 | 3,38E-02 | 9,89E-02 | 3,27E-01 | 1,54E-02 | 4,15E-02 | -2,86E-02 |
| | PENRM | MJ | 6,05E-01 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| | PENRT | MJ | 2,33E+00 | 7,58E-01 | 3,38E-02 | 9,89E-02 | 3,27E-01 | 1,54E-02 | 4,15E-02 | -2,86E-02 |
| | SM | kg | 1,33E-02 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| | RSF | MJ | 1,95E-01 | 3,88E-04 | 3,79E-04 | 6,18E-04 | 2,01E-04 | 0,00E+00 | 1,32E-05 | -1,30E-04 |
| | NRSF | MJ | 2,26E-01 | 1,39E-03 | 1,35E-04 | 1,47E-04 | 7,30E-04 | 0,00E+00 | 3,79E-05 | -1,33E-04 |
| | FW | $m^3$ | 4,88E-03 | 8,11E-05 | 1,64E-04 | 4,00E-05 | 3,90E-05 | 2,64E-05 | 4,94E-05 | -9,96E-04 |

PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non renewable primary energy resources used as raw materials; PENRT = Total use of non renewable primary energy resources; SM = Use of secondary materials; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Net use of fresh water

"Reading example: 9,0 E-03 = 9,0*10-3 = 0,009"
*INA Indicator Not Assessed

## End of life - Waste

| Indicator | | Unit | A1-A3 | A4 | A5 | C1 | C2 | C3 | C4 | D |
|---|---|---|---|---|---|---|---|---|---|---|
| | HWD | kg | 1,53E-02 | 3,91E-05 | 4,07E-06 | 8,21E-06 | 1,81E-05 | 1,54E-06 | 0,00E+00 | -6,54E-06 |
| | NHWD | kg | 5,03E-02 | 3,69E-02 | 2,35E-02 | 2,13E-04 | 1,29E-02 | 4,87E-05 | 3,00E-01 | -1,98E-04 |
| | RWD | kg | 7,77E-06 | 5,16E-06 | 1,91E-07 | 6,95E-07 | 2,21E-06 | 1,63E-07 | 0,00E+00 | -2,15E-07 |

HWD = Hazardous waste disposed; NHWD = Non-hazardous waste disposed; RWD = Radioactive waste disposed

"Reading example: 9,0 E-03 = 9,0*10-3 = 0,009"
*INA Indicator Not Assessed

## End of life - Output flow

| Indicator | | Unit | A1-A3 | A4 | A5 | C1 | C2 | C3 | C4 | D |
|---|---|---|---|---|---|---|---|---|---|---|
| | CRU | 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 |
| | MFR | kg | 5,11E-03 | 0,00E+00 | 3,16E-03 | 0,00E+00 | 0,00E+00 | 7,00E-01 | 0,00E+00 | 0,00E+00 |
| | MER | kg | 1,15E-02 | 0,00E+00 | 2,01E-02 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| | EEE | MJ | 3,31E-03 | 0,00E+00 | 1,40E-02 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| | EET | MJ | 5,01E-02 | 0,00E+00 | 2,12E-01 | 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 energy electrical; EET = Exported energy thermal

"Reading example: 9,0 E-03 = 9,0*10-3 = 0,009"
*INA Indicator Not Assessed

## Biogenic Carbon Content

| Indicator | Unit | At the factory gate |
|---|---|---|
| Biogenic carbon content in product | kg C | 7,36E-05 |
| Biogenic carbon content in accompanying packaging | kg C | 9,88E-03 |

Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO2

## Additional requirements

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

National production mix from import, low voltage (production of transmission lines, in addition to direct emissions and losses in grid) of applied electricity for the manufacturing process (A3).

| Electricity mix | Source | Amount | Unit |
|---|---|---|---|
| Electricity, Norway (kWh) | ecoinvent 3.6 | 24,33 | g CO2-eq/kWh |

### Dangerous substances

The product contains substances given by the REACH Candidate list that are less than 0,1 % by weight.

### Indoor environment

The product is certified with an EC1plus class according to GEV-EMICODE.

## Additional Environmental Information

| Additional environmental impact indicators required in NPCR Part A for construction products | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Indicator** | **Unit** | A1-A3 | A4 | A5 | C1 | C2 | C3 | C4 | D |
| GWPIOBC | kg $CO_2$ -eq | 2,53E-01 | 5,02E-02 | 1,99E-03 | 6,30E-03 | 2,19E-02 | 4,98E-04 | 1,29E-03 | -1,71E-03 |

GWP-IOBC: Global warming potential calculated according to the principle of instantaneous oxidation. In order to increase the transparency of biogenic carbon contribution to climate impact, the indicator GWP-IOBC is required as it declares climate impacts calculated according to the principle of instantaneous oxidation. GWP-IOBC is also referred to as GWP-GHG in context to Swedish public procurement legislation.

## Bibliography

ISO 14025:2010 Environmental labels and declarations - Type III environmental declarations - Principles and procedures.
ISO 14044:2006 Environmental management - Life cycle assessment - Requirements and guidelines.
EN 15804:2012+A2:2019 Environmental product declaration - Core rules for the product category of construction products.
ISO 21930:2017 Sustainability in buildings and civil engineering works - Core rules for environmental product declarations of construction products.
ecoinvent v3, (2019) Allocation, cut-off by classification, Swiss Centre of Life Cycle Inventories.
Iversen et al., (2021) eEPD v2021.09 Background information for EPD generator tool system verification, LCA.no Report number: 07.21
Ruttenborg, M. and Iversen, O.M.K., (2023) EPD generator for NPCR009:2021, Part B for Technical - Chemical products, Background information for EPD generator application and LCA data, LCA.no report number: 05.23.
NPCR Part A: Construction products and services. Ver. 2.0, 24.03.2021 EPD Norway.
NPCR 009 Part B for Technical - Chemical products for building and construction industry, Ver. 3.0, 06.10.2021, EPD Norway.
European directive 2008/98/EC.
EN 1504-9 "Products and systems for the protection and repair of concrete structures. Definitions, requirements, quality control and evaluation of conformity. General principles for use of products and systems".
1504-3 "Structural and non-structural repair".


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