

# Environmental product declaration

in accordance with ISO 14025 and EN 15804+A2

StoCryl V 200



The Norwegian EPD Foundation

## Owner of the declaration:

Sto SE & Co. KGaA

## Product:

StoCryl V 200

## Declared unit:

1 kg

## This declaration is based on Product Category Rules:

CEN Standard EN 15804:2012+A2:2019 serves as core PCR

IBU PCR Part B for coatings with organic binders

## Program operator:

The Norwegian EPD Foundation

## Declaration number:

NEPD-12370-12401

## Registration number:

NEPD-12370-12401

## Issue date:

19.09.2025

## Valid to:

19.09.2030

## EPD software:

LCAno EPD generator ID: 1197257

## General information

### Product

StoCryl V 200

### Program operator:

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

### Declaration number:

NEPD-12370-12401

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

CEN Standard EN 15804:2012+A2:2019 serves as core PCR  
IBU PCR Part B for coatings with organic binders

### 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.

### Declared unit:

1 kg StoCryl V 200

### Declared unit with option:

A1, A2, A3, A4, A5, C1, C2, C3, C4, D

### Functional unit:

### 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

### 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.

Third party verifier:

Elisabet Amat, GREENIZE projects

(no signature required)

### Owner of the declaration:

Sto SE & Co. KGaA  
Contact person: Linus Kaltenbach  
Phone: +49 7744571010  
e-mail: [l.kaltenbach@sto.com](mailto:l.kaltenbach@sto.com)

### Manufacturer:

Sto SE & Co. KGaA  
Ehrenbachstraße 1  
79780 Stühlingen, Germany

### Place of production:

Weizen  
Ehrenbachstraße 1  
79780 Stühlingen, Germany

### Management system:

ISO 14001; ISO 50001; ISO 9001

### Organisation no:

DE142834082

### Issue date:

19.09.2025

### Valid to:

19.09.2030

### Year of study:

2023

### Comparability:

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

### 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. NEPDT143

Developer of EPD: Angelica Hultin

Reviewer of company-specific input data and EPD: Karin Bromoe

### Approved:



Håkon Hauan, CEO EPD-Norge

## Product

### Product description:

StoCryl V 200 is a rigid coating for the protection and coloured decoration of concrete structures (concrete and reinforced concrete). It has a matt (G3) appearance in accordance with EN 1062-1. The main components of the product are mineral fillers, an acrylic dispersion based binder, water, pigments, solvent and small amount of additives. StoCryl V 200 can be used for the coloured decoration of concrete areas as part of the StoCretec concrete repair system in building structures or as a part of the surface protection systems in accordance with EN 1504-2. StoCryl V 200 can be used in areas exposed to the weather or indoors. The product is ready to use after stirring and can be applied manually with a paint brush or roller or by machine.

For the placing on the market of the product in the European Union/European Free Trade Association (EU/EFTA) (with the exception of Switzerland) Regulation (EU) No. 305/2011 (CPR) applies. The product needs a declaration of performance taking into consideration EN 1504-2:2004 Surface protection products - coating and the CE-marking. For the application and use the respective national provisions apply.

### Product specification

The following data is required by the corresponding PCR B. Further information can be found in the Safety Data Sheet on [www.sto.de](http://www.sto.de).

- 1) This product contains substances listed in the candidate list (date: 01.09.2025) exceeding 0.1 percentage by mass: no.
- 2) This product contains other CMR substances in categories 1A or 1B which are not on the candidate list, exceeding 0.1 percentage by mass: yes

titanium dioxide; pigment; > = 10 - < 20%  
CAS-nr: 13463-67-7

- 3) Biocide products were added to this construction product or it has been treated with biocide products (this then concerns a treated product as defined by the (EU) Ordinance on Biocide Products No. 528/2012): yes

1,2-Benzisothiazol-3(2H)-on; in-can preservative;  
CAS-nr: 2634-33-5

2-methyl-2H-isothiazol-3-one; in-can preservative;  
CAS-nr: 2682-20-4

2-octyl-2H-isothiazole-3-one; dry film preservative;  
CAS-nr: 26530-20-1

4,5-dichloro-2-octyl-2H-isothiazol-3-one; dry film preservative;  
CAS-nr: 64359-81-5

5-chloro-2-methyl-2H-isothiazol-3-one; in-can preservative;  
CAS-nr: 26172-55-4

The composition of the product is as stated in the following table:

| Materials | Value | Unit |
|-----------|-------|------|
| Binder    | < 40  | %    |
| Filler    | < 30  | %    |
| Water     | < 20  | %    |
| Pigment   | < 20  | %    |
| Solvent   | < 3   | %    |
| Additive  | < 2   | %    |

### Technical data:

The technical data stated here is relevant for the use of the declared product. Further information regarding the technical properties can be found in the Technical Data Sheet on [www.sto.de](http://www.sto.de).

| Criterion                                | Standard / test specification | Class                       |
|------------------------------------------|-------------------------------|-----------------------------|
| Density                                  | EN ISO 2811                   | 1.4 - 1.5 g/cm <sup>3</sup> |
| Diffusion-equivalent air layer thickness | EN ISO 7783                   | V2 medium                   |
| Gloss                                    | EN 1062-1                     | Matt (G3)                   |
| Dry layer thickness                      | EN 1062-1                     | E3 > 100; = 200             |
| Grain size                               | EN 1062-1                     | S1 fine                     |

### Market:

The main market is Europe.

### Reference service life, product

The service life for rigid coating is stated as a minimum of 25 years.

A reference service life (RSL) in accordance with ISO 15686-1,-2,-7, and -8 is not declared.

## Reference service life, building or construction works

### LCA: Calculation rules

#### Declared unit:

1 kg StoCryl V 200

#### 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.

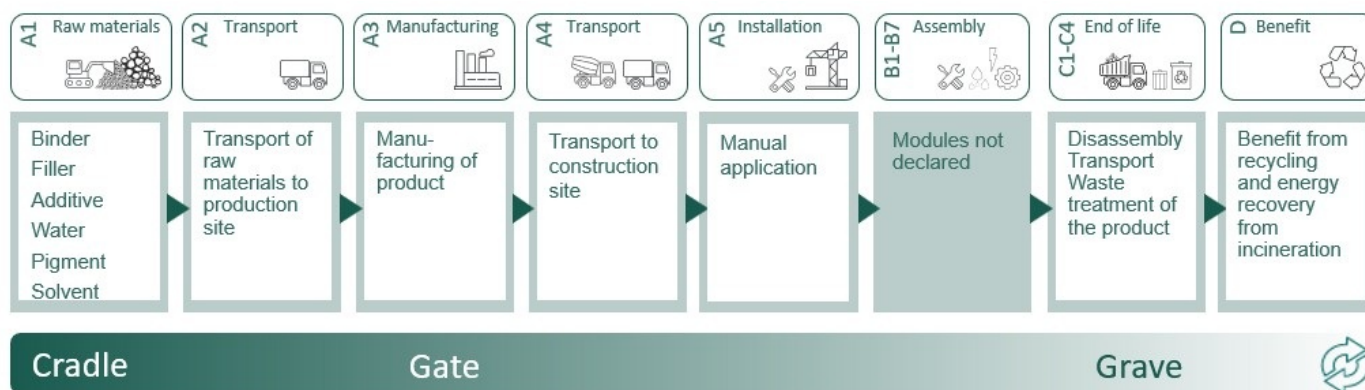
| Materials            | Source                               | Data quality | Year |
|----------------------|--------------------------------------|--------------|------|
| Additives            | CEPE RM Database v3.0                | Database     | 2016 |
| Additives            | CEPE RM Database v3.0, ecoinvent 3.6 | Database     | 2016 |
| Binders and Resins   | CEPE RM Database v3.0                | Database     | 2016 |
| Packaging - Plastic  | ecoinvent 3.6                        | Database     | 2019 |
| Packaging - Wood     | Modified ecoinvent 3.6               | Database     | 2019 |
| Pigments and Fillers | CEPE RM Database v3.0                | Database     | 2016 |
| Solvent              | CEPE RM Database v3.0                | Database     | 2016 |
| Water                | 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 scope of this EPD is cradle to gate with options, modules C1-C4 and module D. No actions are necessary during User stage.



### Additional technical information:

When used as recommended, the waste code can be selected according to the code of the European Waste Catalogue (EWC), category 17.09 "Other Construction and Demolition Waste".

The waste code for unused product is "08 01 12 Waste paint and varnish other than those covered by 08 01 11".

## LCA: Scenarios and additional technical information

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

A1-A3 (Raw materials and Production process): The raw materials are produced by and transported from suppliers mainly located in Europe to the production plant in Weizen. The raw materials are filled in weighting containers and thereafter mixed together. Quality control checks the consistency of the product and adjusts if necessary. The finished product is filled into pails and stored. The product is transported on pallets and delivered to customers in Europe.

A4 (Transport to market/building site): Since the distance to the construction site can vary strongly, a distance of 100 km is used to allow simple scaling for individual projects.

A5 (Installation): The product is applied according to the specification in the technical data sheet at the building site. Installation is most of the time done manually. Outputs are small amounts of waste from the product itself (assumed to be a maximum of 3%) and waste from packaging materials. The evaporation of water during the drying process is included.

C1 (De-construction, demolition): It is assumed that StoCryl V 200 is dismantled using machinery.

C2 (Transport end of life): This stage includes the transportation effects of demolished waste to a waste processing area. The distance between the demolishing area and a waste processing area is assumed to be quite short (less than 100 km). The distance varies depending on the type of waste processing.

C3, C4 (Waste processing): Facade paint is not classified as hazardous waste and treated as mixed construction waste. A typical End of life scenario for construction waste in Germany is a mix of recycling and landfill. Since a 100% End-of-life scenario has to be declared according to the PCR, it is declared as 100% landfill.

D (Environmental costs and benefits of recycling and reuse): Energy credit related to energy recovery from the incineration is included in module D.

Stages not included:

Once installation is complete, no actions or technical operations are required during the use stage until the end of life stage. Stages B1-B7 are therefore not declared.

| 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 (kgkm)                                            | 36,7 %                                | 100,00        | 0,043                   | l/tkm | 4,30                |
| Assembly (A5)                                                                 | Unit                                  | Value         |                         |       |                     |
| Material loss, including waste treatment (psc)                                | Units                                 | 0,03          |                         |       |                     |
| Waste, packaging, polyethylene, PE plastic parts, to average treatment (kg)   | kg                                    | 0,017         |                         |       |                     |
| Waste, packaging, pallet, EUR wooden pallet, reusable, average treatment (kg) | kg                                    | 0,033         |                         |       |                     |
| De-construction demolition (C1)                                               | Unit                                  | Value         |                         |       |                     |
| Diesel (L)                                                                    | L                                     | 0,000756      |                         |       |                     |
| Transport to waste processing (C2)                                            | Capacity utilisation (incl. return) % | Distance (km) | Fuel/Energy Consumption | Unit  | Value (Liter/tonne) |
| Truck, 16-32 tonnes, EURO 6 (kgkm)                                            | 36,7 %                                | 100,00        | 0,043                   | l/tkm | 4,30                |
| Disposal (C4)                                                                 | Unit                                  | Value         |                         |       |                     |
| Waste, inert waste, to landfill (kg)                                          | kg                                    | 1,00          |                         |       |                     |
| Benefits and loads beyond the system boundaries (D)                           | Unit                                  | Value         |                         |       |                     |
| Substitution of electricity, in Norway (MJ)                                   | MJ                                    | 0,0001071     |                         |       |                     |
| Substitution of thermal energy, district heating, in Norway (MJ)              | MJ                                    | 0,00162       |                         |       |                     |
| Substitution of electricity (MJ)                                              | MJ                                    | 0,001138      |                         |       |                     |
| Substitution of thermal energy, district heating (MJ)                         | MJ                                    | 0,01722       |                         |       |                     |

## 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        | A2       | A3       | A4       | A5       | C1       | C2       | C3 | C4       | D         |
|  | GWP-total                        | kg CO <sub>2</sub> -eq | 1.66E+00  | 2.08E-01 | 8.16E-03 | 1.72E-02 | 1.39E-01 | 2.67E-03 | 1.72E-02 | 0  | 8.22E-03 | -1.13E-04 |
|  | GWP-fossil                       | kg CO <sub>2</sub> -eq | 1.71E+00  | 2.08E-01 | 6.57E-03 | 1.72E-02 | 9.03E-02 | 2.67E-03 | 1.72E-02 | 0  | 8.20E-03 | -1.09E-04 |
|  | GWP-biogenic                     | kg CO <sub>2</sub> -eq | -4.79E-02 | 8.38E-05 | 7.17E-04 | 7.10E-06 | 4.85E-02 | 5.01E-07 | 7.10E-06 | 0  | 9.58E-06 | -2.26E-07 |
|  | GWP-luluc                        | kg CO <sub>2</sub> -eq | 4.37E-05  | 1.10E-04 | 8.76E-04 | 6.10E-06 | 5.13E-05 | 2.11E-07 | 6.10E-06 | 0  | 2.02E-06 | -3.76E-06 |
|  | ODP                              | kg CFC11-eq            | 1.82E-07  | 4.33E-08 | 5.58E-10 | 3.89E-09 | 5.91E-09 | 5.77E-10 | 3.89E-09 | 0  | 3.11E-09 | -7.96E-06 |
|  | AP                               | mol H <sup>+</sup> -eq | 1.25E-02  | 4.03E-03 | 8.12E-06 | 4.93E-05 | 5.24E-04 | 2.80E-05 | 4.93E-05 | 0  | 7.30E-05 | -9.00E-07 |
|  | EP-FreshWater                    | kg P -eq               | 3.84E-04  | 1.45E-06 | 3.65E-08 | 1.37E-07 | 1.57E-05 | 9.73E-09 | 1.37E-07 | 0  | 9.30E-08 | -9.71E-09 |
|  | EP-Marine                        | kg N -eq               | 1.80E-03  | 9.99E-04 | 2.77E-06 | 9.75E-06 | 1.02E-04 | 1.23E-05 | 9.75E-06 | 0  | 2.71E-05 | -2.94E-07 |
|  | EP-Terrestrial                   | mol N -eq              | 1.84E-02  | 1.11E-02 | 2.09E-05 | 1.09E-04 | 1.07E-03 | 1.35E-04 | 1.09E-04 | 0  | 2.99E-04 | -3.18E-06 |
|  | POCP                             | kg NMVOC-eq            | 6.28E-03  | 2.94E-03 | 6.47E-06 | 4.18E-05 | 4.45E-04 | 3.72E-05 | 4.18E-05 | 0  | 8.56E-05 | -8.78E-07 |
|  | ADP-minerals&metals <sup>1</sup> | kg Sb-eq               | 8.06E-06  | 3.22E-06 | 4.10E-08 | 4.74E-07 | 5.29E-07 | 4.10E-09 | 4.74E-07 | 0  | 7.39E-08 | -1.09E-09 |
|  | ADP-fossil <sup>1</sup>          | MJ                     | 2.64E+01  | 2.87E+00 | 6.18E-02 | 2.59E-01 | 1.43E+00 | 3.68E-02 | 2.59E-01 | 0  | 2.26E-01 | -1.56E-03 |
|  | WDP <sup>1</sup>                 | m <sup>3</sup>         | 1.26E+01  | 2.16E+00 | 7.59E+00 | 2.51E-01 | 7.44E-01 | 7.81E-03 | 2.51E-01 | 0  | 1.39E+00 | -1.95E-02 |

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<sup>-3</sup> = 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

### Additional environmental impact indicators

| Indicator                                                                                             | Unit              | A1       | A2       | A3        | A4       | A5       | C1       | C2       | C3 | C4       | D         |
|-------------------------------------------------------------------------------------------------------|-------------------|----------|----------|-----------|----------|----------|----------|----------|----|----------|-----------|
|  PM                  | Disease incidence | 1.82E-07 | 9.05E-09 | 5.40E-11  | 1.05E-09 | 5.56E-09 | 7.39E-10 | 1.05E-09 | 0  | 1.56E-09 | -5.40E-11 |
|  IRP <sup>2</sup>    | kgBq U235 -eq     | 2.42E+02 | 1.26E-02 | 4.29E-05  | 1.13E-03 | 4.86E+00 | 1.58E-04 | 1.13E-03 | 0  | 1.03E-03 | -9.98E-06 |
|  ETP-fw <sup>1</sup> | CTUe              | 1.17E+01 | 1.91E+00 | 4.43E-02  | 1.92E-01 | 2.74E+00 | 2.01E-02 | 1.92E-01 | 0  | 1.23E-01 | -8.50E-03 |
|  HTP-c <sup>1</sup>  | CTUh              | 7.32E-09 | 0.00E+00 | 2.00E-12  | 0.00E+00 | 2.68E-10 | 1.00E-12 | 0.00E+00 | 0  | 5.00E-12 | 0.00E+00  |
|  HTP-nc <sup>1</sup> | CTUh              | 4.24E-07 | 2.26E-09 | 6.20E-11  | 2.10E-10 | 2.51E-08 | 1.80E-11 | 2.10E-10 | 0  | 8.90E-11 | -9.00E-12 |
|  SQP <sup>1</sup>    | dimensionless     | 5.38E+00 | 1.18E+00 | -1.94E-02 | 1.81E-01 | 2.81E-01 | 4.67E-03 | 1.81E-01 | 0  | 8.69E-01 | -1.04E-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<sup>-3</sup> = 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       | A2       | A3       | A4       | A5        | C1       | C2       | C3 | C4       | D         |  |
|  PERE  | MJ             | 1.18E+00 | 3.75E-02 | 8.56E-02 | 3.71E-03 | 5.04E-02  | 1.99E-04 | 3.71E-03 | 0  | 8.08E-03 | -9.65E-03 |  |
|  PERM  | MJ             | 4.58E-01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | -4.44E-01 | 0.00E+00 | 0.00E+00 | 0  | 0.00E+00 | 0.00E+00  |  |
|  PERT  | MJ             | 1.64E+00 | 3.75E-02 | 8.56E-02 | 3.71E-03 | -3.94E-01 | 1.99E-04 | 3.71E-03 | 0  | 8.08E-03 | -9.65E-03 |  |
|  PENRE | MJ             | 2.83E+01 | 2.87E+00 | 6.18E-02 | 2.59E-01 | 1.17E+00  | 3.68E-02 | 2.59E-01 | 0  | 2.26E-01 | -1.56E-03 |  |
|  PENRM | MJ             | 7.22E-01 | 0.00E+00 | 0.00E+00 | 0.00E+00 | -4.27E-01 | 0.00E+00 | 0.00E+00 | 0  | 0.00E+00 | 0.00E+00  |  |
|  PENRT | MJ             | 2.90E+01 | 2.87E+00 | 6.18E-02 | 2.59E-01 | 7.48E-01  | 3.68E-02 | 2.59E-01 | 0  | 2.26E-01 | -1.56E-03 |  |
|  SM    | kg             | 1.78E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 5.33E-06  | 0.00E+00 | 0.00E+00 | 0  | 0.00E+00 | 0.00E+00  |  |
|  RSF   | MJ             | 4.53E-03 | 1.52E-03 | 1.80E-05 | 1.33E-04 | 1.99E-04  | 4.89E-06 | 1.33E-04 | 0  | 1.68E-04 | -1.69E-06 |  |
|  NRSF  | MJ             | 8.78E-04 | 2.91E-03 | 2.38E-05 | 4.75E-04 | 1.74E-04  | 7.20E-05 | 4.75E-04 | 0  | 3.62E-04 | -5.72E-04 |  |
|  FW    | m <sup>3</sup> | 2.05E-01 | 2.62E-04 | 6.66E-04 | 2.77E-05 | 6.09E-03  | 1.89E-06 | 2.77E-05 | 0  | 2.78E-04 | -1.16E-05 |  |

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<sup>-3</sup> = 0,009"

\*INA Indicator Not Assessed

| End of life - Waste                                                               |      |    |          |          |          |          |          |          |          |    |          |           |
|-----------------------------------------------------------------------------------|------|----|----------|----------|----------|----------|----------|----------|----------|----|----------|-----------|
| Indicator                                                                         | Unit | A1 | A2       | A3       | A4       | A5       | C1       | C2       | C3       | C4 | D        |           |
|  | HWD  | kg | 8.16E-03 | 1.41E-04 | 1.04E-03 | 1.34E-05 | 3.15E-03 | 1.08E-06 | 1.34E-05 | 0  | 0.00E+00 | -7.34E-08 |
|  | NHWD | kg | 1.29E+00 | 6.83E-02 | 1.55E-03 | 1.26E-02 | 1.43E-01 | 4.35E-05 | 1.26E-02 | 0  | 1.00E+00 | -3.69E-05 |
|  | RWD  | kg | 5.54E-05 | 1.97E-05 | 5.93E-08 | 1.77E-06 | 1.86E-06 | 2.55E-07 | 1.77E-06 | 0  | 0.00E+00 | -8.18E-09 |

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

"Reading example: 9,0 E-03 =  $9,0 \cdot 10^{-3}$  = 0,009"

\*INA Indicator Not Assessed

| End of life - Output flow                                                         |      |    |          |          |          |          |          |          |          |    |          |          |
|-----------------------------------------------------------------------------------|------|----|----------|----------|----------|----------|----------|----------|----------|----|----------|----------|
| Indicator                                                                         | Unit | A1 | A2       | A3       | A4       | A5       | C1       | C2       | C3       | C4 | D        |          |
|  | CRU  | kg | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.14E-02 | 0.00E+00 | 0.00E+00 | 0  | 0.00E+00 | 0.00E+00 |
|  | MFR  | kg | 0.00E+00 | 0.00E+00 | 6.19E-04 | 0.00E+00 | 8.70E-03 | 0.00E+00 | 0.00E+00 | 0  | 0.00E+00 | 0.00E+00 |
|  | MER  | kg | 0.00E+00 | 0.00E+00 | 4.81E-03 | 0.00E+00 | 1.78E-03 | 0.00E+00 | 0.00E+00 | 0  | 0.00E+00 | 0.00E+00 |
|  | EEE  | MJ | 0.00E+00 | 0.00E+00 | 2.93E-03 | 0.00E+00 | 1.33E-03 | 0.00E+00 | 0.00E+00 | 0  | 0.00E+00 | 0.00E+00 |
|  | EET  | MJ | 0.00E+00 | 0.00E+00 | 4.43E-02 | 0.00E+00 | 2.02E-02 | 0.00E+00 | 0.00E+00 | 0  | 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 =  $9,0 \cdot 10^{-3}$  = 0,009"

\*INA Indicator Not Assessed

| Biogenic Carbon Content                           |      |                     |
|---------------------------------------------------|------|---------------------|
| Indicator                                         | Unit | At the factory gate |
| Biogenic carbon content in product                | kg C | 0.00E+00            |
| Biogenic carbon content in accompanying packaging | kg C | 1.36E-02            |

Note: 1 kg biogenic carbon is equivalent to 44/12 kg CO<sub>2</sub>

## 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, low voltage, 100% hydro, certificate, 01.01.2023-31.12.2023, Germany (kWh) | Modified ecoinvent 3.6 | 60,95  | g CO <sub>2</sub> -eq/kWh |

### Dangerous substances

The product contains no substances given by the REACH Candidate list.

### Indoor environment

N/A

## Additional Environmental Information

| Additional environmental impact indicators required in NPCR Part A for construction products |                        |          |          |          |          |          |          |          |    |          |           |
|----------------------------------------------------------------------------------------------|------------------------|----------|----------|----------|----------|----------|----------|----------|----|----------|-----------|
| Indicator                                                                                    | Unit                   | A1       | A2       | A3       | A4       | A5       | C1       | C2       | C3 | C4       | D         |
| GWPIOBC                                                                                      | kg CO <sub>2</sub> -eq | 1.71E+00 | 2.08E-01 | 8.00E-03 | 1.72E-02 | 9.04E-02 | 2.67E-03 | 1.72E-02 | 0  | 8.21E-03 | -1.12E-04 |

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, 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

Ruud and Iversen (2023) EPD generator for PCR IBU Part B: Requirements on the EPD for Coatings with organic binders, LCA.no report number: 13.23

NPCR Part A: Construction products and services. Ver. 2.0. April 2021, EPD-Norge.

IBU PCR Part B: Requirements on the EPD for Coatings with organic binders, version 4, 2023, IBU - Institut Bauen und Umwelt e.V.

|                                                                                                                |                                                                                                                      |                                                                                                                                                                 |
|----------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <br>Global program operator   | <b>Program operator and publisher</b><br>The Norwegian EPD Foundation<br>Post Box 5250 Majorstuen, 0303 Oslo, Norway | Phone: +47 977 22 020<br>e-mail: <a href="mailto:post@epd-norge.no">post@epd-norge.no</a><br>web: <a href="http://www.epd-norge.no">www.epd-norge.no</a>        |
| <br>Building with conscience. | <b>Owner of the declaration:</b><br>Sto SE & Co. KGaA<br>Ehrenbachstraße 1, 79780 Stühlingen, Germany                | Phone: +49 7744571010<br>e-mail: <a href="mailto:l.kaltenbach@sto.com">l.kaltenbach@sto.com</a><br>web: <a href="https://www.sto.com/">https://www.sto.com/</a> |
|                               | <b>Author of the Life Cycle Assessment</b><br>LCA.no AS<br>Dokka 6A, 1671 Kråkerøy, Norway                           | Phone: +47 916 50 916<br>e-mail: <a href="mailto:post@lca.no">post@lca.no</a><br>web: <a href="http://www.lca.no">www.lca.no</a>                                |
|                               | <b>Developer of EPD generator</b><br>LCA.no AS<br>Dokka 6A, 1671 Kråkerøy, Norway                                    | Phone: +47 916 50 916<br>e-mail: <a href="mailto:post@lca.no">post@lca.no</a><br>web: <a href="http://www.lca.no">www.lca.no</a>                                |
|                               | ECO Platform<br>ECO Portal                                                                                           | web: <a href="http://www.eco-platform.org">www.eco-platform.org</a><br>web: ECO Portal                                                                          |