

# Environmental Product Declaration

 **EPD**®  
THE INTERNATIONAL EPD® SYSTEM



In accordance with ISO 14025:2006 and EN 15804:2012+A2:2019/AC:2021 for:

## Vieser Gratings

from

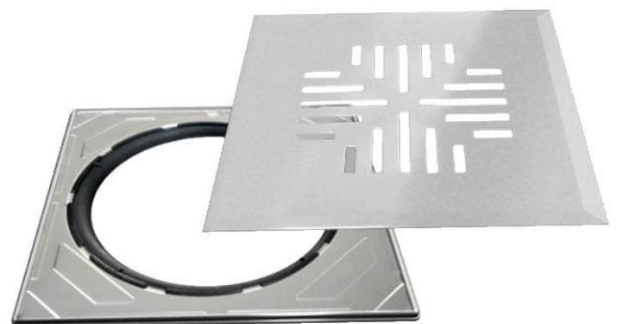
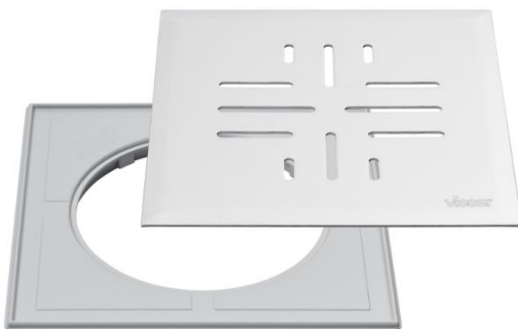
**Vieser Oy**



*EPD of multiple products based on worst case results.*

|                          |   |
|--------------------------|---|
| Programme:               | The International EPD® System, <a href="http://www.environdec.com">www.environdec.com</a> |
| Programme operator:      | EPD International AB  |
| EPD registration number: | S-P-11691   |
| Publication date:        | 2023-12-18  |
| Valid until:             | 2028-12-11  |


*An EPD should provide current information and may be updated if conditions change. The stated validity is therefore subject to the continued registration and publication at [www.environdec.com](http://www.environdec.com)*



## General information

### Programme information

|                   |   |
|-------------------|---|
| <b>Programme:</b> | The International EPD® System                                       |
| <b>Address:</b>   | EPD International AB<br>Box 210 60<br>SE-100 31 Stockholm<br>Sweden |
| <b>Website:</b>   | <a href="http://www.environdec.com">www.environdec.com</a>          |
| <b>E-mail:</b>    | <a href="mailto:info@environdec.com">info@environdec.com</a>        |

|   |
|---|
| <b>Accountabilities for PCR, LCA and independent, third-party verification</b>  |
| <b>Product Category Rules (PCR)</b>   |
| CEN standard EN 15804 serves as the Core Product Category Rules (PCR)   |
| Product Category Rules (PCR): 2019:14, Construction products, version 1.2.5., Group 429 – Class 4291: Sinks, wash-basins, baths and other sanitary ware and parts thereof, of iron, steel, copper or aluminium  |
| PCR review was conducted by: <i>The Technical Committee of the International EPD® System. A full list of members available on <a href="http://www.environdec.com">www.environdec.com</a>. The review panel may be contacted via <a href="mailto:info@environdec.com">info@environdec.com</a>. Chair of the PCR review: Claudia A. Peña.</i> |
| <b>Life Cycle Assessment (LCA)</b>  |
| LCA accountability: <i>Ecobio Oy</i>  |
| <b>Third-party verification</b>   |
| Independent third-party verification of the declaration and data, according to ISO 14025:2006, via:<br><br><input checked="" type="checkbox"/> EPD verification by individual verifier<br><br>Third-party verifier: Pär Lindman, Miljögraff AB<br><br>   |
| Approved by: The International EPD® System  |
| Procedure for follow-up of data during EPD validity involves third party verifier:<br><br><input type="checkbox"/> Yes <input type="checkbox"/> No  |

The EPD owner has the sole ownership, liability, and responsibility for the EPD.

EPDs within the same product category but registered in different EPD programmes, or not compliant with EN 15804, may not be comparable. For two EPDs to be comparable, they must be based on the same PCR (including the same version number) or be based on fully-aligned PCRs or versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical declared/functional units); have equivalent system boundaries and descriptions of data; apply equivalent data quality requirements, methods of data collection, and allocation methods; apply identical cut-off rules and impact assessment methods (including the same version of characterisation factors); have equivalent content declarations; and be valid at the time of comparison. For further information about comparability, see EN 15804 and ISO 14025.

## Company information

Owner of the EPD: Vieser Oy

Contact: vieser@vieser.fi, tel. +358 20 746 4400

Description of the organisation: Vieser Oy is a Finnish family-owned company that sells floor drain solutions and design covers to professionals in the industry. Vieser focuses on R&D and design and is committed to sustainability. Vieser is part of Paree Group.

Product-related or management system-related certifications: ISO 9001 and ISO 14001 certificates

Name and location of production site(s):

Vieser' subcontractor:  
AQ Mecanova Oy  
Pajatie 13  
85500 Nivala, Finland

## Product information

Product name: Vieser Gratings

List of products covered by EPD:

| Product ID | Name EN                                  | EAN code      | Additional information  |
|------------|--|---------------|---|
| 51224      | Vieser Classic+ grating Pframe 197x197   | 6418685512246 |   |
| 51229      | Vieser Classic+ grtng Pframe 197x197 Ø32 | 6418685512291 |   |
| 51241      | Vieser Modern grating Pframe 197x197     | 6418685512413 |   |
| 51254      | Vieser Classic SST grating 160x160       | 6418685512543 |   |
| 51256      | Vieser Classic SST grating 160x160 Ø32   | 6418685512567 |   |
| 51273      | Vieser round SST grating Ø150            | 6418685512734 | NO version. Sold with clamping ring (not included in the LCA study) |
| 51274      | Vieser round SST grating Ø150 lockable   | 6418685512741 | NO version. Sold with clamping ring (not included in the LCA study) |
| 51275      | Vieser round SST grating Ø150 Ø32        | 6418685512758 |   |
| 51280      | Vieser adjustable SST frame 197x197      | 6418685512802 |   |
| 51291      | Vieser Modern grating Sframe 197x197     | 6418685512918 |   |
| 51292      | Vieser Classic+ grating Sframe 197x197   | 6418685512925 |   |

*(Table continues the next page.)*

|         |  |               |   |
|---------|--|---------------|---|
| 51293   | Vieser Classic+ grtng Sframe 197x197 ø40 | 6418685512932 |   |
| 51294   | Vieser Classic+ grtng Sframe 197x197 ø32 | 6430066741328 | NO version. Sold with clamping ring (not included in the LCA study) |
| 52670   | Vieser round SST grating S               | 6418685526700 | NO version. Sold with clamping ring (not included in the LCA study) |
| 52672   | Vieser Modern grating Sframe 197x197 S   | 6418685526724 | NO version. Sold with clamping ring (not included in the LCA study) |
| 52673   | Vieser Classic+ grtng Sframe 197x197 S   | 6418685526731 | NO version. Sold with clamping ring (not included in the LCA study) |
| 52674   | Vieser Classic+ grtng Sframe 197x197ø40S | 6418685526748 | NO version. Sold with clamping ring (not included in the LCA study) |
| 6004547 | Vieser Flip tiled grating 146x146        | 6430066742424 | NO version. Sold with clamping ring (not included in the LCA study) |
| 6005478 | Vieser Link grating Pframe 197x197       | 6430066742820 |   |
| 6005479 | Vieser Grid grating Pframe 197x197       | 6430066742851 |   |
| 6005480 | Vieser Classic+ grtng Pframe 197x197 bla | 6430066742882 |   |
| 6005481 | Vieser Link grating Pframe 197x197 black | 6430066742912 |   |
| 6005482 | Vieser Link grating Sframe 197x197       | 6430066742943 |   |
| 6005483 | Vieser Grid grating Sframe 197x197       | 6430066742974 |   |
| 6006954 | Vieser Classic+ SST-grating 197x197 B    | 6430066743865 |   |
| 6006959 | Vieser adjustable SST frame 197x197 B    | 6430066743872 |   |
| 6006967 | Vieser Classic+ SST-grtng 197x197 ø32 B  | 6430066743889 |   |
| 6007679 | Vieser Design SST grating 197x197 B      | 6430066744244 |   |
| 6007687 | Vieser adjustable SST frame S 197x197 B  | 6430066744251 |   |
| 6007707 | VieserClassic+grtngPframe197x197ø32black | 6430066744268 |   |
| 6007765 | Vieser Classic+grtng Sframe197x197 S bla | 6430066744275 | NO version. Sold with clamping ring (not included in the LCA study) |

Product identification: EN 1253 – Gullies for buildings

Product description: Floor drains, floor drain covers, and extension rings are drainage furniture and intended for drainage.

UN CPC code: Group 429 – Class 4291: Sinks, wash-basins, baths and other sanitary ware and parts thereof, of iron, steel, copper or aluminium

Geographical scope: Raw materials for production come from Europe. Assembly is based on Finnish production conditions. End-of-life activities are modelled based on Europe.

## LCA information

EPD of multiple products: In this EPD, the information and LCA results of two (2) similar products are presented. The products are presented in the front page of this EPD and in the LCA report related to this EPD. Since the declared environmental impact indicator results, aggregated over all included modules A-C, differ by more than 10% between any of the included products, for each indicator, the highest results are declared. I.e., the results of a “worst-case product” are presented.

Functional unit / declared unit: 1 kg of product.

Reference service life: The scenarios for modules B1-B5 are not given, thus the RSL is not specified in cradle to gate with options, modules C1–C4, and module D type of EPD.

Time representativeness: Data describing the acquisition of raw materials and manufacturing processes covers production year 2021. Database data used for modelling is from 2022 for ecoinvent data.

Database(s) and LCA software used: Database used for modelling is ecoinvent 3.8 and Industry Data 2.0. LCA software used for modelling is SimaPro version 9.4.0.2.

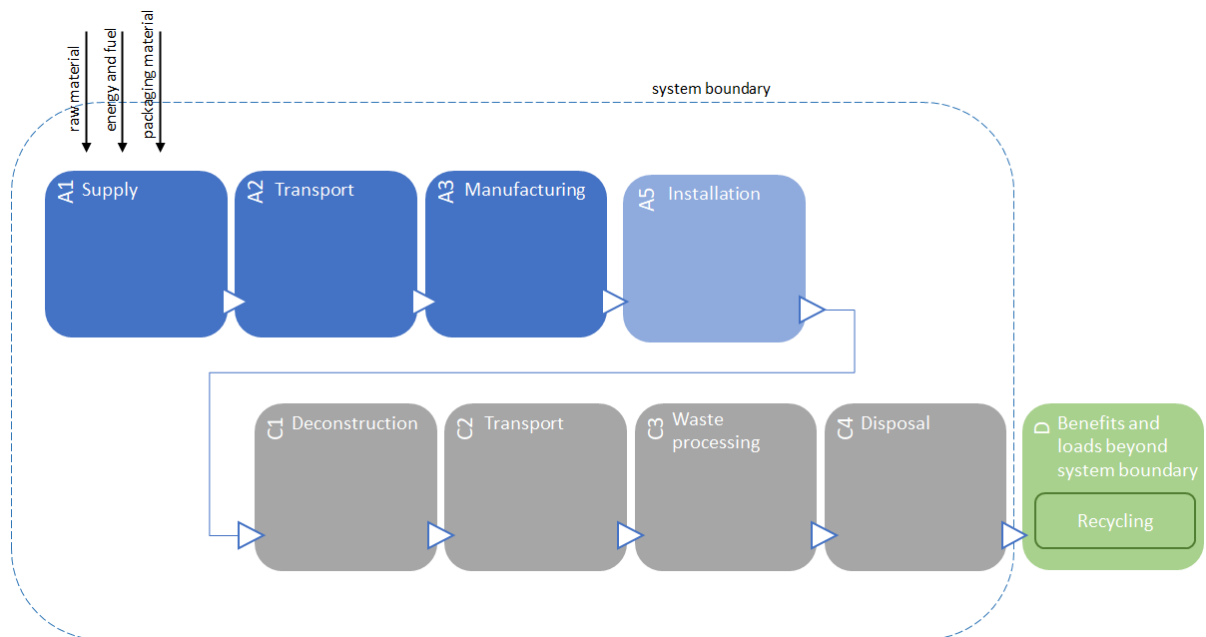
### Description of system boundaries:

The system boundary of the life cycle assessment was set to cradle to gate with options, modules C1–C4, and module D, based on the EN 15804 standard.

The gratings are produced at Mekanova Oy’s site in Nivala. Manufacturing process is simple. In the production, the raw material steel is cut and shaped by a machine into final products. Then the products are packaged. The process consumes only electricity.

The transportation in the construction site (A4) is not declared since the default scenario is difficult to define. The transport distances to the customers vary very much since the manufacturing facilities and potential customers are in a wide area in Nordic countries. Use stage (B1–B7) is not declared since is not relevant in contributing the environmental impacts during the life cycle of the product. Once the floor drain product is installed in a building, it stays in its place until the end-of-life stage. Floor drain products do not have operational energy or water usage (water only flows through them), they do not need maintaining, and repair or replacement phases basically lead to the end-of-life-stage.

### System diagram:



### More information:

LCA practitioner: Ecobio Oy, info@ecobio.fi. Explanatory material can be obtained from the EPD owner and/or LCA practitioner.

Data quality: The quality requirements for the life cycle assessment were set according to the EN ISO 14044 and the EN 15804 standards.

Cut-off rule: Cut-off criteria was no applied for the LCA.

Allocation: Economic allocation was used to allocate environmental impacts between the products and steel scrap which is sold further. Details explained in the LCA report.

Modules declared, geographical scope, share of specific data (in GWP-GHG results) and data variation (in GWP-GHG results):

|                      | Product stage       |           |               | Construction process stage |                           | Use stage |             |        |             |               |                        |                       | End of life stage          |           |                  |          | Resource recovery stage            |
|----------------------|---------------------|-----------|---------------|----------------------------|---------------------------|-----------|-------------|--------|-------------|---------------|------------------------|-----------------------|----------------------------|-----------|------------------|----------|------------------------------------|
|                      | Raw material supply | Transport | Manufacturing | Transport                  | Construction installation | Use       | Maintenance | Repair | Replacement | Refurbishment | Operational energy use | Operational water use | De-construction demolition | Transport | Waste processing | Disposal | Reuse-Recovery-Recycling-potential |
| Module               | A1                  | A2        | A3            | A4                         | A5                        | B1        | B2          | B3     | B4          | B5            | B6                     | B7                    | C1                         | C2        | C3               | C4       | D                                  |
| Modules declared     | X                   | X         | X             | ND                         | ND                        | ND        | ND          | ND     | ND          | ND            | ND                     | ND                    | X                          | X         | X                | X        | X                                  |
| Geography            | EU 27               | EU 27     | FI            |                            |                           |           |             |        |             |               |                        |                       | EU 27                      | EU 27     | EU 27            | EU 27    | EU 27                              |
| Specific data used   | < 10 %              |           |               |                            |                           | -         | -           | -      | -           | -             | -                      | -                     | -                          | -         | -                | -        | -                                  |
| Variation – products | 20 %                |           |               |                            |                           | -         | -           | -      | -           | -             | -                      | -                     | -                          | -         | -                | -        | -                                  |
| Variation – sites    | 0 %                 |           |               |                            |                           | -         | -           | -      | -           | -             | -                      | -                     | -                          | -         | -                | -        | -                                  |

## Content information

Representing "a worst-case" product:

| Product components  | Weight, kg   | Post-consumer material, weight-% | Biogenic material, weight-% and kg C/kg |
|---------------------|--------------|----------------------------------|---|
| Stainless steel     | 0,6          | 0 %                              | 0 %                                     |
| <b>TOTAL</b>        | <b>0,6</b>   | <b>0 %</b>                       | <b>0 %</b>                              |
| Packaging materials | Weight, kg   | Weight-% (versus the product)    | Weight biogenic carbon, kg C/kg         |
| Wood pallet         | 0,038        | 6,4 %                            | 0,454                                   |
| Cardboard           | 0,041        | 6,8 %                            | 0,418                                   |
| Packaging film      | 0,001        | 0,1 %                            | 0                                       |
| <b>TOTAL</b>        | <b>0,564</b> | <b>8,6 %</b>                     | <b>0,872</b>                            |

No dangerous substances used in the product.



## Results of the environmental performance indicators

### Mandatory impact category indicators according to EN 15804

| Results per functional or declared unit |   |          |          |          |          |          |          |           |
|---|---|----------|----------|----------|----------|----------|----------|-----------|
| Indicator                               | Unit  | A1-A3    | A5       | C1       | C2       | C3       | C4       | D         |
| GWP-fossil                              | kg CO <sub>2</sub> eq.  | 8,36E+00 | 9,29E-03 | 0,00E+00 | 1,07E-02 | 0,00E+00 | 1,57E-03 | -3,71E+00 |
| GWP-biogenic                            | kg CO <sub>2</sub> eq.  | 5,03E-02 | 6,78E-02 | 0,00E+00 | 1,03E-05 | 0,00E+00 | 4,28E-03 | 5,12E-03  |
| GWP-luluc                               | kg CO <sub>2</sub> eq.  | 8,46E-03 | 2,13E-06 | 0,00E+00 | 5,04E-06 | 0,00E+00 | 5,20E-07 | -3,77E-03 |
| GWP-total                               | kg CO <sub>2</sub> eq.  | 8,41E+00 | 7,21E-02 | 0,00E+00 | 1,07E-02 | 0,00E+00 | 5,86E-03 | -3,55E+00 |
| ODP                                     | kg CFC 11 eq.   | 4,00E-07 | 5,19E-10 | 0,00E+00 | 2,41E-09 | 0,00E+00 | 2,90E-10 | -1,68E-07 |
| AP                                      | mol H <sup>+</sup> eq.  | 4,63E-02 | 5,26E-05 | 0,00E+00 | 4,26E-05 | 0,00E+00 | 4,65E-05 | -2,14E-02 |
| EP-freshwater                           | kg P eq.  | 2,75E-03 | 7,45E-07 | 0,00E+00 | 8,05E-07 | 0,00E+00 | 2,08E-06 | -1,30E-03 |
| EP-marine                               | kg N eq.  | 8,26E-03 | 2,69E-05 | 0,00E+00 | 1,24E-05 | 0,00E+00 | 2,14E-05 | -3,69E-03 |
| EP-terrestrial                          | mol N eq.   | 8,85E-02 | 2,35E-04 | 0,00E+00 | 1,35E-04 | 0,00E+00 | 2,46E-04 | -3,95E-02 |
| POCP                                    | kg NMVOC eq.  | 2,69E-02 | 5,79E-05 | 0,00E+00 | 4,16E-05 | 0,00E+00 | 6,61E-05 | -1,23E-02 |
| ADP-minerals&metals*                    | kg Sb eq.   | 2,02E-04 | 1,68E-08 | 0,00E+00 | 4,88E-08 | 0,00E+00 | 5,16E-09 | -1,03E-04 |
| ADP-fossil*                             | MJ  | 1,09E+02 | 4,29E-02 | 0,00E+00 | 1,60E-01 | 0,00E+00 | 2,63E-02 | -4,15E+01 |
| WDP*                                    | m <sup>3</sup>  | 2,69E+00 | 7,01E-03 | 0,00E+00 | 5,30E-04 | 0,00E+00 | 4,55E-04 | -1,24E+00 |
| Acronyms                                | 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 |          |          |          |          |          |          |           |

\* Disclaimer: The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator.

## Additional mandatory and voluntary impact category indicators

| Results per functional or declared unit       |                        |          |          |          |          |          |          |           |
|---|------------------------|----------|----------|----------|----------|----------|----------|-----------|
| Indicator                                     | Unit                   | A1-A3    | A5       | C1       | C2       | C3       | C4       | D         |
| GWP-GHG <sup>1</sup>                          | kg CO <sub>2</sub> eq. | 8,38E+00 | 9,29E-03 | 0,00E+00 | 1,07E-02 | 0,00E+00 | 1,63E-03 | -3,71E+00 |
| Particulate matter emissions <sup>2</sup>     | disease inc.           | 6,09E-07 | 4,22E-10 | 0,00E+00 | 7,98E-10 | 0,00E+00 | 4,45E-10 | -2,95E-07 |
| Ionising radiation, human health <sup>2</sup> | kBq U235 eq            | 1,63E+00 | 1,40E-04 | 0,00E+00 | 8,50E-04 | 0,00E+00 | 1,03E-04 | -2,79E-01 |
| Ecotoxicity (freshwater) <sup>2</sup>         | CTUe                   | 2,47E+02 | 3,75E-01 | 0,00E+00 | 1,31E-01 | 0,00E+00 | 7,15E-02 | -1,15E+02 |
| Human toxicity, cancer <sup>2</sup>           | CTUh                   | 1,65E-07 | 1,72E-11 | 0,00E+00 | 4,77E-12 | 0,00E+00 | 4,53E-11 | -8,46E-08 |
| Human toxicity, non-cancer <sup>2</sup>       | CTUh                   | 1,90E-07 | 7,11E-10 | 0,00E+00 | 1,32E-10 | 0,00E+00 | 6,79E-11 | -9,25E-08 |
| Land use <sup>2</sup>                         | Pt                     | 5,49E+01 | 1,51E-02 | 0,00E+00 | 9,45E-02 | 0,00E+00 | 3,08E-02 | -2,00E+01 |

<sup>1</sup> This indicator accounts for all greenhouse gases except biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. As such, the indicator is identical to GWP-total except that the CF for biogenic CO<sub>2</sub> is set to zero.

<sup>2</sup>The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator.

## Resource use indicators

| Results per functional or declared unit |  |          |          |          |          |          |          |           |
|---|--|----------|----------|----------|----------|----------|----------|-----------|
| Indicator                               | Unit   | A1-A3    | A5       | C1       | C2       | C3       | C4       | D         |
| PERE                                    | MJ   | 2,21E+01 | 1,71E-03 | 0,00E+00 | 2,70E-03 | 0,00E+00 | 8,00E-04 | -9,68E+00 |
| PERM                                    | MJ   | 2,36E+00 | 0        | 0        | 0        | 0        | 0        | 0         |
| PERT                                    | MJ   | 2,39E+01 | 1,71E-03 | 0,00E+00 | 2,70E-03 | 0,00E+00 | 8,00E-04 | -9,68E+00 |
| PENRE                                   | MJ   | 1,08E+02 | 4,30E-02 | 0,00E+00 | 1,60E-01 | 0,00E+00 | 2,63E-02 | -4,15E+01 |
| PENRM                                   | MJ   | 0        | 0        | 0        | 0        | 0        | 0        | 0         |
| PENRT                                   | MJ   | 1,08E+02 | 4,30E-02 | 0,00E+00 | 1,60E-01 | 0,00E+00 | 2,63E-02 | -4,15E+01 |
| SM                                      | kg   | 0        | 0        | 0        | 0        | 0        | 0        | 0         |
| RSF                                     | MJ   | 0        | 0        | 0        | 0        | 0        | 0        | 0         |
| NRSF                                    | MJ   | 0        | 0        | 0        | 0        | 0        | 0        | 0         |
| FW                                      | m <sup>3</sup>   | 7,11E-02 | 2,35E-04 | 0,00E+00 | 2,02E-05 | 0,00E+00 | 8,96E-05 | -3,37E-02 |
| Acronyms                                | 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 re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water |          |          |          |          |          |          |           |

## Waste indicators

| Results per functional or declared unit |      |          |          |          |          |          |          |           |
|---|------|----------|----------|----------|----------|----------|----------|-----------|
| Indicator                               | Unit | A1-A3    | A5       | C1       | C2       | C3       | C4       | D         |
| Hazardous waste disposed                | kg   | 9,70E-03 | 9,39E-08 | 0,00E+00 | 4,29E-07 | 0,00E+00 | 5,22E-08 | -2,76E-05 |
| Non-hazardous waste disposed            | kg   | 7,56E+00 | 4,37E-03 | 0,00E+00 | 6,78E-03 | 0,00E+00 | 6,40E-04 | -3,80E+00 |
| Radioactive waste disposed              | kg   | 4,50E-04 | 1,02E-07 | 0,00E+00 | 1,07E-06 | 0,00E+00 | 1,07E-07 | -1,04E-04 |

## Output flow indicators

| Results per functional or declared unit |      |          |          |    |    |          |          |   |
|---|------|----------|----------|----|----|----------|----------|---|
| Indicator                               | Unit | A1-A3    | A5       | C1 | C2 | C3       | C4       | D |
| Components for re-use                   | kg   | 0        | 0        | 0  | 0  | 0        | 0        | 0 |
| Material for recycling                  | kg   | 0        | 0        | 0  | 0  | 8,50E-01 | 0        | 0 |
| Materials for energy recovery           | kg   | 1,07E-02 | 1,60E-01 | 0  | 0  | 0        | 1,50E-01 | 0 |
| Exported energy, electricity            | MJ   | 0        | 0        | 0  | 0  | 0        | 0        | 0 |
| Exported energy, thermal                | MJ   | 0        | 0        | 0  | 0  | 0        | 0        | 0 |

## Additional environmental information

Vieser Oy delivers instructions of proper use, maintenance, and service of the product for the customer to minimize its environmental impacts.

## Information related to Sector EPD

Does not apply in this case.

## Differences versus previous versions

Does not apply in this case as there are no previous versions.

## References

General Programme Instructions of the International EPD® System. Version 4.0.  
 PCR 2019:14. Construction products. Version 1.2.5  
 Ecobio LCA report - Vieser Oy's floor drain products. 2023.

