

# Environmental product declaration

in accordance with ISO 14025 and EN 15804+A2

HÅG Capisco



**HÅG**

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**Flokk**

**Owner of the declaration:**

Flokk AS

**Product:**

HÅG Capisco

**Declared unit:**

1 pcs

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

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

PCR

NPCR 026:2022 Part B for Furniture

**Program operator:**

The Norwegian EPD Foundation

**Declaration number:**

NEPD-5475-4793-EN

**Registration number:**

NEPD-5475-4793-EN

**Issue date:** 01.12.2023

**Valid to:** 01.12.2028

**EPD Software:**

LCA.no EPD generator ID: 109609

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The Norwegian EPD Foundation

## General information

### Product

HÅG Capisco

### Program operator:

Post Box 5250 Majorstuen, 0303 Oslo, Norway  
The Norwegian EPD Foundation  
Phone: +47 23 08 80 00  
web: [post@epd-norge.no](mailto:post@epd-norge.no)

### Declaration number:

NEPD-5475-4793-EN

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

CEN Standard EN 15804:2012+A2:2019 serves as core PCR  
NPCR 026:2022 Part B for Furniture

### 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 pcs HÅG Capisco

### Declared unit (cradle to gate) with option:

A1-A3,A4,A5,B2,B3,B4,C1,C2,C3,C4,D

### Functional unit:

1 pcs HÅG Capisco 8106 (including packaging)

### 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 EPD Norway'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:

Flokk AS  
Contact person: Atle Thiis-Messel  
Phone: 0047 98 25 68 30  
e-mail: [atle.messel@flokk.com](mailto:atle.messel@flokk.com)

### Manufacturer:

Flokk AS  
Drammensveien 145,  
0277 Oslo, Norway

### Place of production:

Flokk - Røros  
Sundveien  
N-7374 Røros, Norway

### Management system:

ISO 14001, ISO 9001, ISO 50001(Norway, Sweden)

### Organisation no:

No 928 902 749

**Issue date:** 01.12.2023

**Valid to:** 01.12.2028

### 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.

Developer of EPD: Kenneth Dam Lindegaard Knudsen

Reviewer of company-specific input data and EPD: Fabio Fava

### Approved:



Håkon Hauan, CEO EPD-Norge

## Product

### Product description:

The HÅG Capisco series is a unique line of chairs designed by Peter Opsvik. The design is inspired by a horseback rider's posture, and it offers a pioneering saddle seat and an overall unique shape. This design allows for endless ways to sit or half stand, encouraging you to vary your position whether you're facing forwards, backwards, or sideways.

The HÅG Capisco 8106 is the classic bestseller model in the series. The saddle seat can be adjusted between low and high working positions, all the way up to a standing position. This enables you to be more dynamic in your movements while still sitting in a balanced position.

### Product specification

The model studied in this declaration is the HÅG Capico 8106, including packaging. The model declared does not include any options such as footring, etc.

The key environmental indicators for the other models of the family, and applicable options of the product collection are presented in a table on page 12 of this declaration.

| Materials                              | kg           | %     | Recycled share in material (kg) | Recycled share in material (%) |
|--|--------------|-------|---------------------------------|--------------------------------|
| Adhesive                               | 0,02         | 0,20  | 0,00                            | 0,00                           |
| Metal - Aluminium                      | 3,01         | 24,77 | 3,01                            | 99,98                          |
| Metal - Steel                          | 4,47         | 36,80 | 0,51                            | 11,41                          |
| Others                                 | 0,01         | 0,06  | 0,00                            | 1,24                           |
| Plastic - Nylon (PA)                   | 0,37         | 3,02  | 0,00                            | 0,00                           |
| Plastic - Polyethylene (HDPE)          | 0,00         | 0,02  | 0,00                            | 0,00                           |
| Plastic - Polyoxymethylene (POM)       | 0,11         | 0,88  | 0,00                            | 0,00                           |
| Plastic - Polypropylene (PP)           | 2,41         | 19,88 | 2,18                            | 90,17                          |
| Plastic - Polystyrene expandable (EPS) | 0,04         | 0,29  | 0,00                            | 0,00                           |
| Plastic - Polyurethane (PUR)           | 1,29         | 10,62 | 0,00                            | 0,00                           |
| Powder coating                         | 0,07         | 0,57  | 0,00                            | 0,00                           |
| Printed paper                          | 0,01         | 0,08  | 0,00                            | 34,31                          |
| Reinforcement                          | 0,01         | 0,08  | 0,00                            | 0,00                           |
| Rubber, synthetic                      | 0,04         | 0,37  | 0,00                            | 0,00                           |
| Textile - Felt                         | 0,00         | 0,01  | 0,00                            | 100,00                         |
| Textile - Polyester (PE)               | 0,29         | 2,35  | 0,29                            | 100,00                         |
| <b>Total</b>                           | <b>12,13</b> |       | <b>5,98</b>                     |                                |

| Packaging                    | kg           | %     | Recycled share in material (kg) | Recycled share in material (%) |
|------------------------------|--------------|-------|---------------------------------|--------------------------------|
| Packaging - Cardboard        | 0,56         | 38,02 | 0,00                            | 0,00                           |
| Packaging - Paper            | 0,02         | 1,09  | 0,01                            | 34,31                          |
| Packaging - Plastic          | 0,08         | 5,73  | 0,00                            | 0,00                           |
| Recycled cardboard           | 0,81         | 55,17 | 0,81                            | 100,00                         |
| <b>Total incl. packaging</b> | <b>13,61</b> |       | <b>6,80</b>                     |                                |

### Technical data:

Total weight: 12,13 kg (packaging excluded)

Total weight: 13.61 kg (packaging included)

### Market:

Worldwide

### Reference service life, product

15 years

### Reference service life, building

## LCA: Calculation rules

### Declared unit:

1 pcs HÅG Capisco

### 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:**

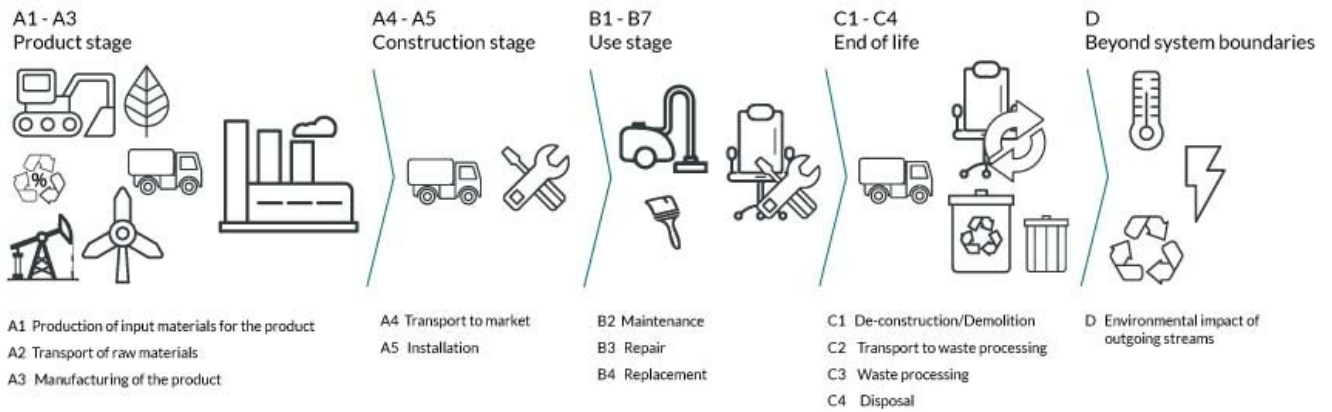
Specific data for the product composition are provided by the manufacturer. They represent the production of the declared product and were collected for EPD development in the year of study. Background data is based on registered EPDs according to EN 15804, Ostfold Research databases, ecoinvent and other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

| Materials                              | Source                 | Data quality                                  | Year |
|--|------------------------|---|------|
| Adhesive                               | ecoinvent 3.6          | Database                                      | 2019 |
| Metal - Aluminium                      | ecoinvent 3.6          | Database                                      | 2019 |
| Metal - Steel                          | ecoinvent 3.6          | Database                                      | 2019 |
| Others                                 | ecoinvent 3.6          | Database                                      | 2019 |
| Packaging - Paper                      | ecoinvent 3.6          | Database                                      | 2019 |
| Packaging - Plastic                    | ecoinvent 3.6          | Database                                      | 2019 |
| Plastic - Nylon (PA)                   | ecoinvent 3.6          | Database                                      | 2019 |
| Plastic - Polyethylene (HDPE)          | ecoinvent 3.6          | Database                                      | 2019 |
| Plastic - Polyoxymethylene (POM)       | ecoinvent 3.6          | Database                                      | 2019 |
| Plastic - Polypropylene (PP)           | ecoinvent 3.6          | Database                                      | 2019 |
| Plastic - Polystyrene expandable (EPS) | ecoinvent 3.6          | Database                                      | 2019 |
| Plastic - Polyurethane (PUR)           | ecoinvent 3.6          | Database                                      | 2019 |
| Powder coating                         | Ecoinvent 3.6          | Database                                      | 2019 |
| Printed paper                          | ecoinvent 3.6          | Database                                      | 2019 |
| Reinforcement                          | ecoinvent 3.6          | Database                                      | 2019 |
| Rubber, synthetic                      | ecoinvent 3.6          | Database                                      | 2019 |
| Metal - Steel                          | Modified ecoinvent 3.6 | Database                                      | 2019 |
| Packaging - Cardboard                  | Modified ecoinvent 3.6 | Database                                      | 2019 |
| Plastic - Polypropylene (PP)           | Modified ecoinvent 3.6 | Database                                      | 2019 |
| Recycled cardboard                     | Modified ecoinvent 3.6 | Database                                      | 2019 |
| Textile - Felt                         | Modified ecoinvent 3.6 | Database                                      | 2019 |
| Textile - Polyester (PE)               | Modified ecoinvent 3.6 | Database                                      | 2019 |
| Metal - Steel                          | SSAB                   | EPD (EN15804A1) + company dataset (EN15804A2) | 2020 |

### 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       | X           | X      | X           | MND           | MND                    | MND                   | X                          | X         | X                | X                            | X                                  |

### System boundary:



### Additional technical information:

## LCA: Scenarios and additional technical information

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

| Transport from production place to user (A4)   | Capacity utilisation (incl. return) % | Distance (km) | Fuel/Energy Consumption | Unit  | Value (Liter/tonne) |
|--|---------------------------------------|---------------|-------------------------|-------|---------------------|
| Truck, over 32 tonnes, EURO 6 (km)   | 53,3 %                                | 1000          | 0,023                   | l/tkm | 23,00               |
| Assembly (A5)  |                                       |               |                         |       |                     |
|  | Unit                                  | Value         |                         |       |                     |
| Waste, packaging, cardboard, 100 % recycled, to average treatment (kg)                             | kg                                    | 0,81          |                         |       |                     |
| Waste, packaging, corrugated board box, 0 % recycled, to average treatment (kg)                    | kg                                    | 0,56          |                         |       |                     |
| Waste, packaging, paper printed, to average treatment (kg)   | kg                                    | 0,02          |                         |       |                     |
| Waste, packaging, plastic film (LDPE), to average treatment - A5 (kg)                              | kg                                    | 0,08          |                         |       |                     |
| Maintenance (B2)   |                                       |               |                         |       |                     |
|  | Unit                                  | Value         |                         |       |                     |
| Electricity, Nordic (kWh)  | kWh/DU                                | 0,81          |                         |       |                     |
| Water, tap water (m3)  | m3/DU                                 | 11,70         |                         |       |                     |
| Repair (B3)  |                                       |               |                         |       |                     |
|  | Unit                                  | Value         |                         |       |                     |
| Electricity, Nordic (kWh)  | kWh/DU                                | 0,55          |                         |       |                     |
| Transport to waste processing (C2)   |                                       |               |                         |       |                     |
|  | Capacity utilisation (incl. return) % | Distance (km) | Fuel/Energy Consumption | Unit  | Value (Liter/tonne) |
| Truck, 16-32 tonnes, EURO 6 (km)   | 36,7 %                                | 100           | 0,043                   | l/tkm | 4,30                |
| Waste processing (C3)  |                                       |               |                         |       |                     |
|  | Unit                                  | Value         |                         |       |                     |
| Waste treatment per kg Expanded Polystyrene (EPS), incineration - C3 (kg)                          | kg                                    | 0,04          |                         |       |                     |
| Waste treatment per kg Graphical paper, incineration with fly ash extraction (kg)                  | kg                                    | 0,01          |                         |       |                     |
| Waste treatment per kg Non-hazardous waste, incineration with fly ash extraction - C3 (kg)         | kg                                    | 0,29          |                         |       |                     |
| Waste treatment per kg Plastics, Mixture, municipal incineration with fly ash extraction (kg)      | kg                                    | 0,18          |                         |       |                     |
| Waste treatment per kg Polyethylene, PE, incineration with fly ash extraction - C3 (kg)            | kg                                    | 0,00          |                         |       |                     |
| Waste treatment per kg Polyoxymethylene (POM), incineration with fly ash extraction (kg) - CH - C3 | kg                                    | 0,11          |                         |       |                     |
| Waste treatment per kg Polypropylene (PP), incineration with fly ash extraction - C3 (kg)          | kg                                    | 2,41          |                         |       |                     |
| Waste treatment per kg Polyurethane (PU), incineration (kg)  | kg                                    | 1,29          |                         |       |                     |
| Waste treatment per kg Rubber, municipal incineration with fly ash extraction (kg)                 | kg                                    | 0,04          |                         |       |                     |
| Waste treatment per kg Scrap aluminium, incineration with fly ash extraction (kg)                  | kg                                    | 3,01          |                         |       |                     |
| Waste treatment per kg Scrap steel, incineration with fly ash extraction (kg)                      | kg                                    | 4,47          |                         |       |                     |
| Waste treatment per kg Textile, incineration with fly ash extraction (kg)                          | kg                                    | 0,29          |                         |       |                     |
| Waste, materials to recycling (kg)   | kg                                    | 1,83          |                         |       |                     |

| Disposal (C4)  | Unit | Value |  |  |  |
|--|------|-------|--|--|--|
| Landfilling of ashes and residues from incineration of Scrap aluminium (kg)  | kg   | 2,69  |  |  |  |
| Landfilling of ashes and residues from incineration of Scrap steel (kg)  | kg   | 2,95  |  |  |  |
| Landfilling of ashes from incineration of expanded polystyrene (EPS), process per kg ashes and residues - C4 (kg)  | kg   | 0,00  |  |  |  |
| Landfilling of ashes from incineration of Graphical paper, process of ashes and residues (kg)  | kg   | 0,00  |  |  |  |
| Landfilling of ashes from incineration of Non-hazardous waste, process per kg ashes and residues - C4 (kg)   | kg   | 0,07  |  |  |  |
| Landfilling of ashes from incineration of Plastics, Mixture, municipal incineration with fly ash extraction, process per kg ashes and residues - C4 (kg) | kg   | 0,01  |  |  |  |
| Landfilling of ashes from incineration of Polyethylene, PE, process per kg ashes and residues - C4 (kg)  | kg   | 0,00  |  |  |  |
| Landfilling of ashes from incineration of Polyoxymethylene (POM), process per kg ashes and residues (kg) - CH - C4                                       | kg   | 0,00  |  |  |  |
| Landfilling of ashes from incineration of Polypropylene, PP, process per kg ashes and residues - C4 (kg)   | kg   | 0,07  |  |  |  |
| Landfilling of ashes from incineration of Polyurethane (PU), process per kg ashes and residues - C4 (kg)   | kg   | 0,05  |  |  |  |
| Landfilling of ashes from incineration of Rubber, process per kg ashes and residues - C4 (kg)  | kg   | 0,00  |  |  |  |
| Landfilling of ashes from incineration of Textile, soiled, process per kg ashes and residues (kg)  | kg   | 0,01  |  |  |  |

| Benefits and loads beyond the system boundaries (D)              | Unit | Value  |  |  |  |
|--|------|--------|--|--|--|
| Substitution of electricity, in Norway (MJ)                      | MJ   | 6,68   |  |  |  |
| Substitution of primary aluminium with net scrap (kg)            | kg   | 0,00   |  |  |  |
| Substitution of primary steel with net scrap (kg)                | kg   | 1,34   |  |  |  |
| Substitution of thermal energy, district heating, in Norway (MJ) | MJ   | 101,08 |  |  |  |

## 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       | B2       | B3       |  |
| GWP-total                        | kg CO <sub>2</sub> -eq | 3,24E+01  | 1,19E+00 | 2,39E+00 | 4,16E+00 | 8,01E-02 |  |
| GWP-fossil                       | kg CO <sub>2</sub> -eq | 3,45E+01  | 1,18E+00 | 2,91E-02 | 4,12E+00 | 7,47E-02 |  |
| GWP-biogenic                     | kg CO <sub>2</sub> -eq | -2,11E+00 | 5,08E-04 | 2,36E+00 | 2,72E-02 | 1,36E-03 |  |
| GWP-luluc                        | kg CO <sub>2</sub> -eq | 2,74E-02  | 3,61E-04 | 7,94E-06 | 1,26E-02 | 4,09E-03 |  |
| ODP                              | kg CFC11 -eq           | 1,77E-06  | 2,86E-07 | 5,14E-09 | 3,67E-07 | 8,08E-09 |  |
| AP                               | mol H+ -eq             | 1,54E-01  | 3,82E-03 | 1,15E-04 | 2,39E-02 | 3,44E-04 |  |
| EP-FreshWater                    | kg P -eq               | 1,53E-03  | 9,43E-06 | 1,98E-07 | 3,28E-04 | 4,94E-06 |  |
| EP-Marine                        | kg N -eq               | 3,35E-02  | 8,36E-04 | 4,27E-05 | 3,79E-03 | 5,44E-05 |  |
| EP-Terrestrial                   | mol N -eq              | 3,21E-01  | 9,32E-03 | 4,10E-04 | 4,43E-02 | 7,31E-04 |  |
| POCP                             | kg NMVOC -eq           | 1,07E-01  | 3,66E-03 | 1,19E-04 | 1,38E-02 | 1,71E-04 |  |
| ADP-minerals&metals <sup>1</sup> | kg Sb -eq              | 1,27E-02  | 2,11E-05 | 5,82E-07 | 1,14E-04 | 1,16E-06 |  |
| ADP-fossil <sup>1</sup>          | MJ                     | 5,07E+02  | 1,92E+01 | 3,42E-01 | 7,15E+01 | 2,02E+00 |  |
| WDP <sup>1</sup>                 | m <sup>3</sup>         | 3,23E+03  | 1,48E+01 | 4,95E-01 | 1,46E+03 | 1,56E+02 |  |

| Indicator                        | Unit                   | B4 | C1 | C2       | C3       | C4       | D         |
|----------------------------------|------------------------|----|----|----------|----------|----------|-----------|
| GWP-total                        | kg CO <sub>2</sub> -eq | 0  | 0  | 2,22E-01 | 1,17E+01 | 6,94E-02 | -2,09E+00 |
| GWP-fossil                       | kg CO <sub>2</sub> -eq | 0  | 0  | 2,22E-01 | 1,12E+01 | 6,94E-02 | -2,06E+00 |
| GWP-biogenic                     | kg CO <sub>2</sub> -eq | 0  | 0  | 9,20E-05 | 4,37E-01 | 5,22E-05 | -2,03E-03 |
| GWP-luluc                        | kg CO <sub>2</sub> -eq | 0  | 0  | 7,91E-05 | 5,21E-05 | 2,00E-05 | -2,09E-02 |
| ODP                              | kg CFC11 -eq           | 0  | 0  | 5,03E-08 | 3,22E-08 | 2,02E-08 | -4,27E-02 |
| AP                               | mol H+ -eq             | 0  | 0  | 6,39E-04 | 4,52E-03 | 4,68E-04 | -1,22E-02 |
| EP-FreshWater                    | kg P -eq               | 0  | 0  | 1,78E-06 | 3,26E-06 | 7,14E-07 | -1,43E-04 |
| EP-Marine                        | kg N -eq               | 0  | 0  | 1,26E-04 | 2,38E-03 | 1,66E-04 | -3,10E-03 |
| EP-Terrestrial                   | mol N -eq              | 0  | 0  | 1,41E-03 | 2,35E-02 | 1,84E-03 | -3,26E-02 |
| POCP                             | kg NMVOC -eq           | 0  | 0  | 5,42E-04 | 5,67E-03 | 5,29E-04 | -1,21E-02 |
| ADP-minerals&metals <sup>1</sup> | kg Sb -eq              | 0  | 0  | 6,14E-06 | 1,35E-06 | 1,13E-06 | -3,13E-05 |
| ADP-fossil <sup>1</sup>          | MJ                     | 0  | 0  | 3,36E+00 | 2,47E+00 | 1,50E+00 | -2,08E+01 |
| WDP <sup>1</sup>                 | m <sup>3</sup>         | 0  | 0  | 3,25E+00 | 5,04E+00 | 3,44E+00 | -2,82E+01 |

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-A3    | A4       | A5       | B2       | B3       |  |
| PM   | Disease incidence | 1,99E-06 | 1,09E-07 | 1,72E-09 | 1,99E-07 | 1,83E-09 |  |
| IRP <sup>2</sup>                           | kgBq U235 -eq     | 1,39E+00 | 8,41E-02 | 1,47E-03 | 5,42E-01 | 4,60E-02 |  |
| ETP-fw <sup>1</sup>                        | CTUe              | 9,36E+02 | 1,41E+01 | 4,45E-01 | 7,79E+01 | 2,53E+00 |  |
| HTP-c <sup>1</sup>                         | CTUh              | 5,60E-08 | 0,00E+00 | 1,30E-11 | 1,12E-08 | 5,90E-11 |  |
| HTP-nc <sup>1</sup>                        | CTUh              | 5,83E-07 | 1,36E-08 | 5,50E-10 | 2,49E-07 | 1,55E-09 |  |
| SQP <sup>1</sup>                           | dimensionless     | 2,81E+02 | 2,21E+01 | 2,59E-01 | 2,14E+01 | 1,52E+00 |  |

| Indicator           | Unit              | B4 | C1 | C2       | C3       | C4       | D         |
|---------------------|-------------------|----|----|----------|----------|----------|-----------|
| PM                  | Disease incidence | 0  | 0  | 1,36E-08 | 2,72E-08 | 8,44E-09 | -4,15E-07 |
| IRP <sup>2</sup>    | kgBq U235 -eq     | 0  | 0  | 1,47E-02 | 4,60E-03 | 6,07E-03 | -4,83E-02 |
| ETP-fw <sup>1</sup> | CTUe              | 0  | 0  | 2,49E+00 | 3,00E+01 | 9,59E-01 | -1,28E+02 |
| HTP-c <sup>1</sup>  | CTUh              | 0  | 0  | 0,00E+00 | 7,24E-10 | 3,30E-11 | -7,93E-09 |
| HTP-nc <sup>1</sup> | CTUh              | 0  | 0  | 2,72E-09 | 2,02E-08 | 1,01E-09 | 1,11E-07  |
| SQP <sup>1</sup>    | dimensionless     | 0  | 0  | 2,35E+00 | 3,36E-01 | 3,29E+00 | -5,70E+01 |

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 = Soil Quality (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-A3    | A4       | A5        | B2       | B3       |  |
|              | PERE  | MJ             | 1,28E+02 | 2,42E-01 | 5,87E-03  | 1,22E+01 | 1,98E+00 |  |
|              | PERM  | MJ             | 1,59E+01 | 0,00E+00 | -1,39E+01 | 0,00E+00 | 0,00E+00 |  |
|              | PERT  | MJ             | 1,48E+02 | 2,42E-01 | -1,39E+01 | 1,22E+01 | 1,98E+00 |  |
|              | PENRE | MJ             | 3,54E+02 | 1,93E+01 | 3,42E-01  | 7,16E+01 | 2,05E+00 |  |
|              | PENRM | MJ             | 1,45E+02 | 0,00E+00 | -3,58E+00 | 0,00E+00 | 0,00E+00 |  |
|              | PENRT | MJ             | 5,58E+02 | 1,93E+01 | -3,24E+00 | 7,16E+01 | 2,05E+00 |  |
|              | SM    | kg             | 6,80E+00 | 0,00E+00 | 0,00E+00  | 0,00E+00 | 0,00E+00 |  |
|              | RSF   | MJ             | 8,29E-01 | 8,47E-03 | 1,90E-04  | 7,76E-01 | 2,00E-02 |  |
|              | NRSF  | MJ             | 1,80E-01 | 2,84E-02 | 7,55E-04  | 7,36E-01 | 0,00E+00 |  |
|              | FW    | m <sup>3</sup> | 1,12E+00 | 2,19E-03 | 1,63E-04  | 1,18E+01 | 9,03E-03 |  |

| Indicator |       | Unit           | B4 | C1 | C2       | C3        | C4       | D         |
|-----------|-------|----------------|----|----|----------|-----------|----------|-----------|
|           | PERE  | MJ             | 0  | 0  | 4,81E-02 | 8,50E-02  | 3,01E-02 | -5,28E+01 |
|           | PERM  | MJ             | 0  | 0  | 0,00E+00 | -1,41E-01 | 0,00E+00 | 0,00E+00  |
|           | PERT  | MJ             | 0  | 0  | 4,81E-02 | -5,62E-02 | 3,01E-02 | -5,28E+01 |
|           | PENRE | MJ             | 0  | 0  | 3,36E+00 | 2,50E+00  | 1,50E+00 | -2,08E+01 |
|           | PENRM | MJ             | 0  | 0  | 0,00E+00 | -1,42E+02 | 0,00E+00 | 0,00E+00  |
|           | PENRT | MJ             | 0  | 0  | 3,36E+00 | -1,39E+02 | 1,50E+00 | -2,08E+01 |
|           | SM    | kg             | 0  | 0  | 0,00E+00 | 0,00E+00  | 0,00E+00 | 0,00E+00  |
|           | RSF   | MJ             | 0  | 0  | 1,72E-03 | 2,02E-03  | 7,93E-04 | 4,42E-02  |
|           | NRSF  | MJ             | 0  | 0  | 6,15E-03 | 0,00E+00  | 4,28E-02 | -1,52E+00 |
|           | FW    | m <sup>3</sup> | 0  | 0  | 3,59E-04 | 7,64E-03  | 1,35E-03 | -6,55E-02 |

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-A3    | A4       | A5       | B2       | B3       |
|                     | HWD  | kg   | 5,47E-01 | 1,05E-03 | 0,00E+00 | 1,32E-02 | 1,89E-04 |
|                     | NHWD | kg   | 8,47E+00 | 1,67E+00 | 1,47E+00 | 8,51E-01 | 1,25E-02 |
|                     | RWD  | kg   | 2,19E-03 | 1,31E-04 | 0,00E+00 | 4,33E-04 | 2,11E-05 |

| Indicator |      | Unit | B4 | C1 | C2       | C3       | C4       | D         |
|-----------|------|------|----|----|----------|----------|----------|-----------|
|           | HWD  | kg   | 0  | 0  | 1,73E-04 | 0,00E+00 | 5,79E+00 | -8,06E-03 |
|           | NHWD | kg   | 0  | 0  | 1,63E-01 | 2,93E-01 | 1,17E-01 | -8,01E-01 |
|           | RWD  | kg   | 0  | 0  | 2,29E-05 | 0,00E+00 | 9,32E-06 | -3,98E-05 |

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-A3    | A4       | A5       | B2       | B3       |
|                           | CRU | kg   | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
|                           | MFR | kg   | 3,00E+00 | 0,00E+00 | 1,33E+00 | 0,00E+00 | 0,00E+00 |
|                           | MER | kg   | 1,19E-05 | 0,00E+00 | 1,12E-03 | 0,00E+00 | 0,00E+00 |
|                           | EEE | MJ   | 1,79E-01 | 0,00E+00 | 7,94E-02 | 0,00E+00 | 0,00E+00 |
|                           | EET | MJ   | 2,71E+00 | 0,00E+00 | 1,20E+00 | 0,00E+00 | 0,00E+00 |

| Indicator |     | Unit | B4 | C1 | C2       | C3       | C4       | D        |
|-----------|-----|------|----|----|----------|----------|----------|----------|
|           | CRU | kg   | 0  | 0  | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
|           | MFR | kg   | 0  | 0  | 0,00E+00 | 1,83E+00 | 0,00E+00 | 0,00E+00 |
|           | MER | kg   | 0  | 0  | 0,00E+00 | 1,21E+01 | 0,00E+00 | 0,00E+00 |
|           | EEE | MJ   | 0  | 0  | 0,00E+00 | 6,67E+00 | 0,00E+00 | 0,00E+00 |
|           | EET | MJ   | 0  | 0  | 0,00E+00 | 1,01E+02 | 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 | 4,72E-03            |
| Biogenic carbon content in accompanying packaging | kg C | 6,43E-01            |

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                                      | Data source   | Amount | Unit                      |
|--|---------------|--------|---------------------------|
| Electricity, Norway, high voltage, hydro power (kWh) | ecoinvent 3.6 | 6,29   | g CO <sub>2</sub> -eq/kWh |

### Dangerous substances

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

### Indoor environment

## Additional Environmental Information

### Key Environmental Indicators

| Key environmental indicators | Unit                   | A1-A3  | A4    | A1-C4  | A1-D   |
|------------------------------|------------------------|--------|-------|--------|--------|
| GWPtotal                     | kg CO <sub>2</sub> -eq | 32,39  | 1,19  | 52,17  | 50,09  |
| Total energy consumption     | MJ                     | 483,87 | 19,53 | 600,74 | 525,69 |
| Amount of recycled materials | %                      | 49,96  |       |        |        |

### Additional environmental impact indicators required in NPCR Part A for construction products

| Indicator | Unit                   | A1-A3    | A4       | A5       | B2       | B3       |
|-----------|------------------------|----------|----------|----------|----------|----------|
| GWPIOBC   | kg CO <sub>2</sub> -eq | 2,88E+01 | 1,19E+00 | 1,57E-02 | 4,20E+00 | 1,09E-01 |

| Indicator | Unit                   | B4 | C1 | C2       | C3       | C4       | D         |
|-----------|------------------------|----|----|----------|----------|----------|-----------|
| GWPIOBC   | kg CO <sub>2</sub> -eq | 0  | 0  | 2,22E-01 | 1,14E+01 | 7,17E-02 | -2,81E+00 |

GWPIOBC: 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.

### Variants and Options

#### Key environmental indicators (A1-A3) for variants of this EPD

| Variants  | Weight (kg) | GWPTotal (kg CO <sub>2</sub> -eq) | Total energy consumption (MJ) | Amount of recycled materials (%) |
|---|-------------|-----------------------------------|-------------------------------|----------------------------------|
| HÅG Capisco 8105 - Upholstered seat (Cura/Gabriel) - No packaging                       | 7,38        | 22,94                             | 361,74                        | 47,65                            |
| HÅG Capisco 8106 - Upholstered seat/back (Cura/Gabriel) - No packaging                  | 12,07       | 32,87                             | 440,64                        | 49,52                            |
| HÅG Capisco 8107 - Upholstered seat/back/headrest (Cura/Gabriel) - No packaging         | 14,43       | 39,81                             | 532,34                        | 45,27                            |
| HÅG Capisco 8126 - Upholstered rounded seat/back (Cura/Gabriel) - No packaging          | 12,95       | 33,16                             | 530,89                        | 37,35                            |
| HÅG Capisco 8127 - Upholstered rounded seat/back/headrest (Cura/Gabriel) - No packaging | 15,25       | 39,35                             | 589,35                        | 34,97                            |

#### Key environmental indicators (A1-A3) for options for this EPD

| Options  | Weight (kg) | GWPTotal (kg CO <sub>2</sub> -eq) | Total energy consumption (MJ) | Amount of recycled materials (%) |
|--|-------------|-----------------------------------|-------------------------------|----------------------------------|
| HÅG Footring   | 1,69        | 2,63                              | 30,57                         | 91,97                            |
| HÅG StepUp   | 2,21        | 5,54                              | 74,36                         | 23,99                            |
| HÅG Quickstep  | 1,96        | 5,48                              | 126,25                        | 7,48                             |
| Packaging 1 (Small box, not assembled - used in declared unit) | 1,53        | -0,48                             | 43,23                         | 53,40                            |
| Packaging 2 (large box, fully assembled)                       | 4,54        | -2,53                             | 116,82                        | 66,47                            |

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|--------------------------------|---|--|
| <p>Global Program Operator</p> | <p><b>Program operator and publisher</b><br/>         The Norwegian EPD Foundation<br/>         Post Box 5250 Majorstuen, 0303 Oslo, Norway</p> | <p>Phone: +47 23 08 80 00<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></p>                 |
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