

Environmental product declaration

in accordance with ISO 14025 and EN 15804+A2

Day High armchair 6275: chromed swivel base



Gärnäs

Owner of the declaration:

Gärnäs AB

Product:

Day High armchair 6275: chromed swivel base

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:

Registration number:

Issue date:

Valid to:

EPD software:

LCAno EPD generator ID: 398397

The Norwegian EPD Foundation

General information

Product

Day High armchair 6275: chromed swivel base

Program operator:

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

Declaration number:

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 Day High armchair 6275: chromed swivel base

Declared unit (cradle to gate) with option:

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

Functional unit:

Production of one piece of Day High (6275) armchair maintained for a period of 15 years. At the product's end of life, it can be recycled or returned to Gärnsnäs for reuse or refurbishment.

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:

Gärnsnäs AB
Contact person:
Phone: +46 414 530 00
e-mail: info@garsnas.se

Manufacturer:

Gärnsnäs AB

Place of production:

Gärnsnäs AB
Malmövägen 16-18
272 61 Gärnsnäs, Sweden

Management system:

ISO 14001

Organisation no:

SE556044474601

Issue date:

Valid to:

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: Petra Mattsson

Reviewer of company-specific input data and EPD: Victor af Wetterstedt

Approved:

Product

Product description:

The Day-series, designed by Pierre Sindre, consists of fully upholstered chairs and armchairs with a metal base. The customer can modify the product to their preference and need. The Day series includes an upholstered seat shell with customer-chosen fabric or leather. Moreover, the customer can choose between a 4-legged fixed base, a 5-legged fixed swivel base, or a 5-legged height adjustable swivel base, with or without armrests in ash, oak, birch, or walnut, and with or without headrests.

The series' versatility makes it suitable for public and private indoor spaces.

Product specification

This declaration is based on the armchair Day 6275 with the fabric Remix from Kvadrat, an armrest in solid ash, a chrome plated 5-legged fixed swivel base and a headrest. The most important environmental indicators for the other variants and options of the Day series are presented on page 12.

| Materials | kg | % | Recycled share in material (kg) | Recycled share in material (%) |
|---|-------|--------|---------------------------------|--------------------------------|
| Metal - Stainless steel | 0,51 | 3,56 | 0,11 | 21,89 |
| Metal - Steel | 9,01 | 62,92 | 1,76 | 19,56 |
| Plastic - Acrylonitrile butadiene styrene (ABS) | 0,06 | 0,42 | 0,00 | 0,00 |
| Plastic - Nylon (PA) | 0,08 | 0,56 | 0,00 | 0,00 |
| Plastic - Polyurethane (PUR) | 0,70 | 4,89 | 0,00 | 0,00 |
| Powder coating | 0,11 | 0,77 | 0,00 | 0,00 |
| Textile | 0,31 | 2,16 | 0,03 | 11,20 |
| Wood - Plywood | 3,49 | 24,37 | 0,00 | 0,00 |
| Wood - Solid ash | 0,05 | 0,35 | 0,00 | 0,00 |
| Total | 14,32 | 100,00 | 1,91 | |

| Packaging | kg | % | Recycled share in material (kg) | Recycled share in material (%) |
|-----------------------|-------|--------|---------------------------------|--------------------------------|
| Packaging - Plastic | 0,11 | 100,00 | 0,00 | 0,00 |
| Total incl. packaging | 14,43 | 100,00 | 1,91 | |

Technical data:

Width 633 mm
 Depth 621 mm
 Seat height 460 mm
 Total height 1025 mm

Seat: birch veneer upholstered in the fabric Remix from Kvadrat
 Frame: chrome plated steel pipes Ø18 mm
 Armrests: solid ash

For further product information, visit www.garsnas.se

Market:

Sweden

Reference service life, product

15 years

Reference service life, building

LCA: Calculation rules

Declared unit:

1 pcs Day High armchair 6275: chromed swivel base

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. Allocation of energy consumption associated with the steel base is not allocated equally through mass allocation. Instead, the allocations have been based on the actual energy consumption of each manufacturing process and unit.

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.

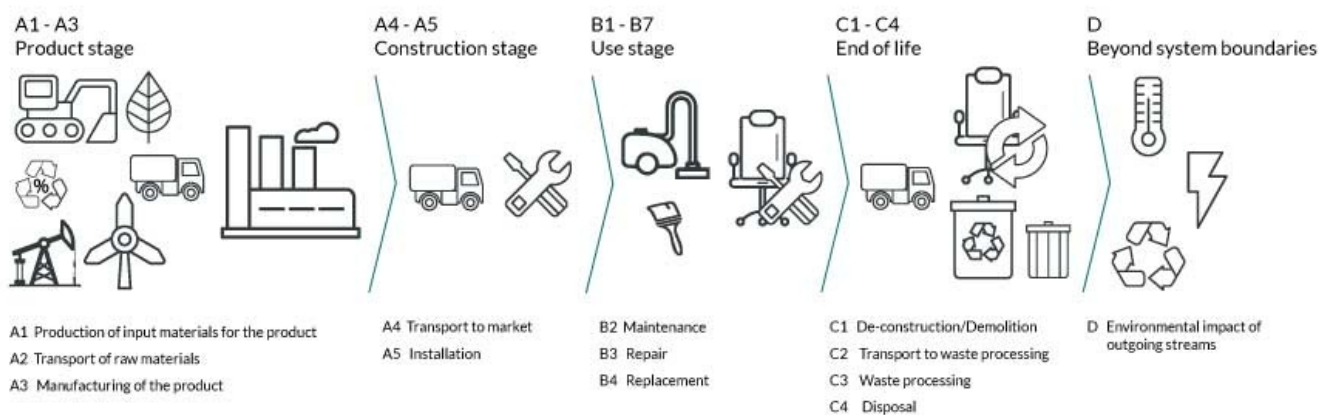
| Materials | Source | Data quality | Year |
|---|------------------------|--------------|------|
| Metal - Stainless steel | ecoinvent 3.6 | Database | 2019 |
| Metal - Steel | ecoinvent 3.6 | Database | 2019 |
| Packaging - Plastic | ecoinvent 3.6 | Database | 2019 |
| Plastic - Acrylonitrile butadiene styrene (ABS) | ecoinvent 3.6 | Database | 2019 |
| Plastic - Nylon (PA) | ecoinvent 3.6 | Database | 2019 |
| Plastic - Polyurethane (PUR) | ecoinvent 3.6 | Database | 2019 |
| Powder coating | Ecoinvent 3.6 | Database | 2019 |
| Textile | MD-23110-EN_rev1 | EPD | 2021 |
| Wood - Plywood | modified ecoinvent 3.6 | Database | 2019 |
| Wood - Solid ash | modified 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 | X | X | X | MNR | MND | MND | X | X | X | X | X |

System boundary:

A cradle-to-cradle, A1-D, analysis with a few excluded B-stages, see the chart above. Modules A1-A4 include extraction and production of raw materials, transportation to the factory in Gärnsås, the production process itself, and an estimated transport distance to the market. A5 includes the generated waste from transport packaging after the assembly at the customer. Module B2 include water and electricity usage from cleaning the furniture. Modules C2-D include the transport to waste management, the waste processes, disposal of materials unable to be processed, and the potential of reuse, recovery, and recycling.



Additional technical information:

Gärnsås AB is certified according to ISO 14001:2015. Visit our website for more information about our sustainability efforts: www.garsnas.se. On our website, you can also find our care instructions. Taking care of your product is essential to reduce the product's environmental footprint and prolong service life.

LCA: Scenarios and additional technical information














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














The transport distance in A4 is calculated on our most frequent delivery route, Gärnsås-Stockholm. We cooperate with a local transportation company on this route. Therefore, all packaging material except for a small amount of plastic is excluded.

| Transport from production place to user (A4) | Capacity utilisation (incl. return) % | Distance (km) | Fuel/Energy Consumption | Unit | Value (Liter/tonne) |
|--|---------------------------------------|---------------|-------------------------|-------|---------------------|
| Truck, 16-32 tonnes, EURO 6 (km) | 36,7 % | 655 | 0,043 | l/tkm | 28,17 |
| Assembly (A5) | | | | | |
| Unit | Value | | | | |
| Waste, packaging, plastic film (LDPE), to average treatment - A5 (kg) | kg | 0,11 | | | |
| Maintenance (B2) | | | | | |
| Unit | Value | | | | |
| Electricity, Sweden (kWh) | kWh/DU | 0,30 | | | |
| Water, tap water (m3) | m3/DU | 0,03 | | | |
| 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 % | 85 | 0,043 | l/tkm | 3,66 |
| Waste processing (C3) | | | | | |
| Unit | Value | | | | |
| Waste treatment per kg Non-hazardous waste, incineration with fly ash extraction - C3 (kg) | kg | 0,63 | | | |
| Waste treatment per kg Plastics, Mixture, municipal incineration with fly ash extraction (kg) | kg | 0,14 | | | |
| Waste treatment per kg Polyurethane (PU), incineration (kg) | kg | 0,70 | | | |
| Waste treatment per kg Scrap steel, incineration with fly ash extraction (kg) | kg | 9,52 | | | |
| Waste treatment per kg Wood, incineration with fly ash extraction (kg) | kg | 3,54 | | | |
| Waste, materials to recycling (kg) | kg | 3,23 | | | |
| Disposal (C4) | | | | | |
| Unit | Value | | | | |
| Landfilling of ashes and residues from incineration of Scrap steel (kg) | kg | 6,29 | | | |
| Landfilling of ashes from incineration of Non-hazardous waste, process per kg ashes and residues - C4 (kg) | kg | 0,15 | | | |
| Landfilling of ashes from incineration of Plastics, Mixture, municipal incineration with fly ash extraction, process per kg ashes and residues - C4 (kg) | kg | 0,00 | | | |
| Landfilling of ashes from incineration of Polyurethane (PU), process per kg ashes and residues - C4 (kg) | kg | 0,03 | | | |
| Landfilling of ashes from incineration of Wood, process per kg ashes and residues (kg) | kg | 0,04 | | | |
| Benefits and loads beyond the system boundaries (D) | | | | | |
| Unit | Value | | | | |
| Substitution of electricity (MJ) | MJ | 4,04 | | | |
| Substitution of primary steel with net scrap (kg) | kg | 2,59 | | | |
| Substitution of thermal energy, district heating (MJ) | MJ | 61,05 | | | |

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 ₂ -eq | 5,28E+01 | 1,57E+00 | 8,71E-03 | 2,68E-02 | 0 | |
|  GWP-fossil | kg CO ₂ -eq | 5,65E+01 | 1,57E+00 | 8,71E-03 | 2,55E-02 | 0 | |
|  GWP-biogenic | kg CO ₂ -eq | -3,94E+00 | 6,48E-04 | 1,20E-06 | 3,73E-04 | 0 | |
|  GWP-luluc | kg CO ₂ -eq | 2,32E-01 | 5,57E-04 | 6,68E-07 | 1,00E-03 | 0 | |
|  ODP | kg CFC11 -eq | 3,97E-06 | 3,55E-07 | 5,23E-10 | 8,36E-09 | 0 | |
|  AP | mol H+ -eq | 2,96E-01 | 4,50E-03 | 1,07E-05 | 1,59E-04 | 0 | |
|  EP-FreshWater | kg P -eq | 3,24E-03 | 1,25E-05 | 1,79E-08 | 1,85E-06 | 0 | |
|  EP-Marine | kg N -eq | 6,27E-02 | 8,91E-04 | 9,83E-06 | 2,64E-05 | 0 | |
|  EP-Terrestrial | mol N -eq | 7,02E-01 | 9,96E-03 | 3,85E-05 | 3,32E-04 | 0 | |
|  POCP | kg NMVOC -eq | 2,30E-01 | 3,82E-03 | 1,27E-05 | 8,53E-05 | 0 | |
|  ADP-minerals&metals ¹ | kg Sb-eq | 1,09E-03 | 4,33E-05 | 4,64E-08 | 8,95E-07 | 0 | |
|  ADP-fossil ¹ | MJ | 8,47E+02 | 2,37E+01 | 3,59E-02 | 1,96E+00 | 0 | |
|  WDP ¹ | m ³ | 3,75E+04 | 2,29E+01 | 1,27E-01 | 1,84E+02 | 0 | |

| Indicator | Unit | B4 | C1 | C2 | C3 | C4 | D |
|--|------------------------|----|----|----------|----------|----------|-----------|
|  GWP-total | kg CO ₂ -eq | 0 | 0 | 2,03E-01 | 1,02E+01 | 7,19E-02 | -3,22E+00 |
|  GWP-fossil | kg CO ₂ -eq | 0 | 0 | 2,03E-01 | 3,78E+00 | 7,18E-02 | -3,21E+00 |
|  GWP-biogenic | kg CO ₂ -eq | 0 | 0 | 8,41E-05 | 6,41E+00 | 5,34E-05 | -2,31E-03 |
|  GWP-luluc | kg CO ₂ -eq | 0 | 0 | 7,23E-05 | 5,59E-05 | 2,16E-05 | -1,35E-02 |
|  ODP | kg CFC11 -eq | 0 | 0 | 4,60E-08 | 2,75E-08 | 2,21E-08 | -2,58E-02 |
|  AP | mol H+ -eq | 0 | 0 | 5,84E-04 | 2,77E-03 | 5,05E-04 | -1,71E-02 |
|  EP-FreshWater | kg P -eq | 0 | 0 | 1,62E-06 | 3,76E-06 | 7,19E-07 | -2,07E-04 |
|  EP-Marine | kg N -eq | 0 | 0 | 1,16E-04 | 1,41E-03 | 1,80E-04 | -3,89E-03 |
|  EP-Terrestrial | mol N -eq | 0 | 0 | 1,29E-03 | 1,39E-02 | 1,99E-03 | -4,03E-02 |
|  POCP | kg NMVOC -eq | 0 | 0 | 4,95E-04 | 3,42E-03 | 5,73E-04 | -1,71E-02 |
|  ADP-minerals&metals ¹ | kg Sb-eq | 0 | 0 | 5,61E-06 | 1,22E-06 | 1,23E-06 | -5,28E-05 |
|  ADP-fossil ¹ | MJ | 0 | 0 | 3,07E+00 | 1,84E+00 | 1,63E+00 | -2,91E+01 |
|  WDP ¹ | m ³ | 0 | 0 | 2,97E+00 | 8,19E-01 | 3,29E+00 | 8,50E+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*10⁻³ = 0,009"







*INA Indicator Not Assessed

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

Remarks to environmental impacts

Additional environmental impact indicators

| Indicator | Unit | A1-A3 | A4 | A5 | B2 | B3 |
|---|-------------------|----------|----------|----------|----------|----|
|  PM | Disease incidence | 5,87E-06 | 9,59E-08 | 1,93E-10 | 1,22E-09 | 0 |
|  IRP ² | kgBq U235 -eq | 5,70E+00 | 1,04E-01 | 1,62E-04 | 6,22E-02 | 0 |
|  ETP-fw ¹ | CTUe | 2,07E+03 | 1,76E+01 | 3,43E-02 | 1,13E+00 | 0 |
|  HTP-c ¹ | CTUh | 2,76E-07 | 0,00E+00 | 1,00E-12 | 5,50E-11 | 0 |
|  HTP-nc ¹ | CTUh | 2,33E-06 | 1,92E-08 | 3,20E-11 | 1,28E-09 | 0 |
|  SQP ¹ | dimensionless | 1,90E+03 | 1,66E+01 | 6,27E-02 | 8,37E-01 | 0 |











| Indicator | Unit | B4 | C1 | C2 | C3 | C4 | D |
|---|-------------------|----|----|----------|----------|----------|-----------|
|  PM | Disease incidence | 0 | 0 | 1,24E-08 | 2,86E-08 | 9,23E-09 | -4,14E-07 |
|  IRP ² | kgBq U235 -eq | 0 | 0 | 1,34E-02 | 4,20E-03 | 6,54E-03 | -2,21E-02 |
|  ETP-fw ¹ | CTUe | 0 | 0 | 2,28E+00 | 1,37E+01 | 9,77E-01 | -1,87E+02 |
|  HTP-c ¹ | CTUh | 0 | 0 | 0,00E+00 | 8,27E-10 | 3,50E-11 | -1,42E-08 |
|  HTP-nc ¹ | CTUh | 0 | 0 | 2,49E-09 | 1,68E-08 | 9,52E-10 | 2,72E-07 |
|  SQP ¹ | dimensionless | 0 | 0 | 2,15E+00 | 3,02E-01 | 3,56E+00 | -3,56E+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*10⁻³ = 0,009"

*INA Indicator Not Assessed

1. The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator
2. This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.




| Resource use | | | | | | | | |
|---|-------|----------------|----------|----------|-----------|----------|----|--|
| Indicator | | Unit | A1-A3 | A4 | A5 | B2 | B3 | |
|  | PERE | MJ | 6,06E+02 | 3,39E-01 | 9,07E-04 | 8,79E-01 | 0 | |
|  | PERM | MJ | 5,14E+01 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0 | |
|  | PERT | MJ | 6,57E+02 | 3,39E-01 | 9,07E-04 | 8,79E-01 | 0 | |
|  | PENRE | MJ | 8,15E+02 | 2,37E+01 | 3,59E-02 | 1,96E+00 | 0 | |
|  | PENRM | MJ | 3,28E+01 | 0,00E+00 | -4,67E+00 | 0,00E+00 | 0 | |
|  | PENRT | MJ | 8,47E+02 | 2,37E+01 | -4,64E+00 | 1,96E+00 | 0 | |
|  | SM | kg | 1,91E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0 | |
|  | RSF | MJ | 1,17E+00 | 1,21E-02 | 2,38E-05 | 5,23E-03 | 0 | |
|  | NRSF | MJ | 1,20E+00 | 4,34E-02 | 6,23E-05 | 1,24E-02 | 0 | |
|  | FW | m ³ | 8,14E-01 | 2,53E-03 | 1,90E-05 | 3,21E-02 | 0 | |




| Indicator | | Unit | B4 | C1 | C2 | C3 | C4 | D |
|---|-------|----------------|----|----|----------|-----------|----------|-----------|
|  | PERE | MJ | 0 | 0 | 4,40E-02 | 8,10E-02 | 3,06E-02 | -3,32E+01 |
|  | PERM | MJ | 0 | 0 | 0,00E+00 | -5,14E+01 | 0,00E+00 | 0,00E+00 |
|  | PERT | MJ | 0 | 0 | 4,40E-02 | -5,13E+01 | 3,06E-02 | -3,32E+01 |
|  | PENRE | MJ | 0 | 0 | 3,07E+00 | 1,90E+00 | 1,63E+00 | -2,91E+01 |
|  | PENRM | MJ | 0 | 0 | 0,00E+00 | -2,81E+01 | 0,00E+00 | 0,00E+00 |
|  | PENRT | MJ | 0 | 0 | 3,07E+00 | -2,62E+01 | 1,63E+00 | -2,91E+01 |
|  | SM | kg | 0 | 0 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
|  | RSF | MJ | 0 | 0 | 1,57E-03 | 1,85E-03 | 8,10E-04 | 9,76E-02 |
|  | NRSF | MJ | 0 | 0 | 5,63E-03 | 0,00E+00 | 5,11E-02 | 1,15E+00 |
|  | FW | m ³ | 0 | 0 | 3,29E-04 | 4,79E-03 | 1,47E-03 | -4,37E-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*10⁻³ = 0,009"

*INA Indicator Not Assessed






| End of life - Waste | | | | | | | | |
|---|------|------|----------|----------|----------|----------|----|--|
| Indicator | | Unit | A1-A3 | A4 | A5 | B2 | B3 | |
|  | HWD | kg | 3,92E-01 | 1,22E-03 | 0,00E+00 | 1,26E-04 | 0 | |
|  | NHWD | kg | 1,68E+01 | 1,15E+00 | 1,10E-01 | 8,01E-03 | 0 | |
|  | RWD | kg | 5,10E-03 | 1,61E-04 | 0,00E+00 | 2,79E-05 | 0 | |






| Indicator | | Unit | B4 | C1 | C2 | C3 | C4 | D |
|---|------|------|----|----|----------|----------|----------|-----------|
|  | HWD | kg | 0 | 0 | 1,59E-04 | 0,00E+00 | 6,43E+00 | -1,51E-02 |
|  | NHWD | kg | 0 | 0 | 1,49E-01 | 6,30E-01 | 8,75E-02 | -1,29E+00 |
|  | RWD | kg | 0 | 0 | 2,09E-05 | 0,00E+00 | 1,02E-05 | -1,86E-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 | |
|  | MFR | kg | 2,30E-01 | 0,00E+00 | 5,61E-02 | 0,00E+00 | 0 | |
|  | MER | kg | 3,70E-02 | 0,00E+00 | 5,50E-06 | 0,00E+00 | 0 | |
|  | EEE | MJ | 3,29E-02 | 0,00E+00 | 8,45E-06 | 0,00E+00 | 0 | |
|  | EET | MJ | 4,97E-01 | 0,00E+00 | 1,28E-04 | 0,00E+00 | 0 | |

| 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 | 3,23E+00 | 0,00E+00 | 0,00E+00 |
|  | MER | kg | 0 | 0 | 0,00E+00 | 1,45E+01 | 0,00E+00 | 0,00E+00 |
|  | EEE | MJ | 0 | 0 | 0,00E+00 | 3,92E+00 | 0,00E+00 | 0,00E+00 |
|  | EET | MJ | 0 | 0 | 0,00E+00 | 5,94E+01 | 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 | 1,75E+00 |
| Biogenic carbon content in accompanying packaging | kg C | 0,00E+00 |

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

Additional requirements

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

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

| Electricity mix | Source | Amount | Unit |
|--|---------------|--------|---------------------------|
| Electricity, European average (kWh) | ecoinvent 3.6 | 428,03 | g CO ₂ -eq/kWh |
| Electricity, Sweden (kWh) | ecoinvent 3.6 | 54,94 | g CO ₂ -eq/kWh |
| Electricity, medium voltage mix, guarantee of origin (01.2023-12.2023), Garnaps AB, Sweden (kWh) | Ecoinvent 3.6 | 18,86 | g CO ₂ -eq/kWh |

Dangerous substances

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

Indoor environment

The product has no emissions to indoor environment.

Additional Environmental Information

Key Environmental Indicators

| Key environmental indicators | Unit | A1-A3 | A4 | A1-C4 | A1-D |
|------------------------------|------------------------|---------|-------|---------|---------|
| GWPtotal | kg CO ₂ -eq | 52,77 | 1,57 | 64,83 | 61,61 |
| Total energy consumption | MJ | 1422,71 | 24,08 | 1456,51 | 1395,46 |
| Amount of recycled materials | % | 13,22 | | | |

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





| Indicator | Unit | A1-A3 | A4 | A5 | B2 | B3 |
|-----------|------------------------|----------|----------|----------|----------|----|
| GWPIOBC | kg CO ₂ -eq | 7,61E+01 | 1,57E+00 | 8,71E-03 | 2,68E-02 | 0 |

| Indicator | Unit | B4 | C1 | C2 | C3 | C4 | D |
|-----------|------------------------|----|----|----------|----------|----------|-----------|
| GWPIOBC | kg CO ₂ -eq | 0 | 0 | 2,03E-01 | 3,10E+00 | 7,37E-02 | -4,64E+00 |

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.

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|  | Owner of the declaration: Gärnsäs AB Malmövägen 16-18, 272 61 Gärnsäs | Phone: +46 414 530 00 e-mail: info@garsnas.se web: www.garsnas.se |
|  | Author of the Life Cycle Assessment LCA.no AS Dokka 6A, 1671 | Phone: +47 916 50 916 e-mail: post@lca.no web: www.lca.no |
|  | Developer of EPD generator LCA.no AS Dokka 6B,1671 Kråkerøy | Phone: +47 916 50 916 e-mail: post@lca.no web: www.lca.no |
|  | ECO Platform ECO Portal | web: www.eco-platform.org web: ECO Portal |