epd-norge
Global program operatør

# Environmental product declaration

in accordance with ISO 14025 and EN 15804+A2

## Climate door / Innvendig klimadør B30/Rw43dB

nordicdoor

The Norwegian EPD Foundation

**Owner of the declaration:**
Nordic Door AS

**Product:**
Climate door / Innvendig klimadør B30/Rw43dB

**Declared unit:** 1pcs

**Product Category Rules:**
CEN Standard EN 5804:2012+A2:2019 serves as core PCR NPCR 014:2019 Part B for Windows and doors

**Program operator:**
The Norwegian EPD Foundation

**Declaration number**:
NEPD-5628-4922-EN

**Registration number:**
NEPD-5628-4922-EN

**Issue date:** 15.01.2024

**Valid to:** 15.01.2029

ver-220124

## General information

**Product**
Climate door / Innvendig klimadør B30/Rw43dB

**Program operator:**
The Norwegian EPD Foundation
Post Box 5250 Majorstuen, 0303 Oslo, Norway
Phone: +47 23 08 80 00
web: post@epd-norge.no

**Declaration number:**
NEPD-5628-4922-EN

**This declaration is based on Product Category Rules:**
CEN Standard EN 15804:2012+A2:2019 serves as core PCR
NPCR 014:2019 Part B for Windows and doors

**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.

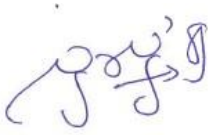
**Declared unit:**
1 pcs Climate door / Innvendig klimadør B30/Rw43dB

**Declared unit with option:**
A1-A3,A4,A5,B2,C2,C3,C4,D

**Functional unit:**
1 produced painted climate door measuring 1,23x2,18m (reference size), with fire class B30 and noise reduction 43dB. With an expected service life of 60 years.

**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:



Gaylord K. Booto, NILU

**Owner of the declaration:**
Nordic Door AS
Contact person: Tor Erick Sandvik
Phone: +47 920 40 866
e-mail: post@nordicdoor.no

**Manufacturer:**
Nordic Door AS
Travveien 3 , 4580 Lyngdal, Norway

**Place of production:**
Lyngdal, Norway

**Management system:**
ISO 9001, ISO 14001

**Organisation no:**
966 820 152

**Issue date:**
15.01.2024

**Valid to:**
15.01.2029

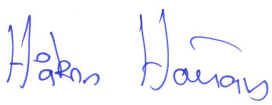
**Year of study:**
2022

**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:**
Developer of EPD: Ana Maria Santos Bouzada, Norsk Treteknisk Institutt

Reviewer of company-specific input data and EPD: Tor Erik Sandvik

**Approved:**



Håkon Hauan, CEO EPD-Norge

## Product

### Product description:

Doorset for use in interior walls of houses, public and commercial buildings.

### Product specification

The calculations are based on 1 painted interior door set measuring 1,23 x 2,18 m, with 42x92 mm frame, one lock and 3 hinges.

| Materials | kg | % |
|---|---|---|
| Particle board | 55 | 53,77 |
| HDF board | 26 | 25,42 |
| Pine | 8,00 | 7,82 |
| Spruce | 7,50 | 7,33 |
| Metals | 2,15 | 2,10 |
| Oak | 1,50 | 1,47 |
| Top coat | 0,80 | 0,78 |
| Gasket | 0,37 | 0,36 |
| Glue | 0,36 | 0,35 |
| Primer | 0,24 | 0,23 |
| Plastic | 0,17 | 0,17 |
| Melamine | 0,14 | 0,14 |
| Varnish | 0,05 | 0,05 |
| **Total weight of the product** | **102.3** | **100.0** |
| Wood packaging | 5,24 | |
| Plastic packaging | 0,97 | |
| **Total weight with packaging** | **108,5** | |

### Technical data:

The dimension of the declared unit is 1,23x2,18 m and a mass of 102,8 kg, excluding packaging materials of 6,2 kg. The door has fire class B30 in accordance with EN 1634-1 and a noise reduction of 43 dB according to EN ISO 10140. For climate door, the calculated U value is 1,5W/m2K.

### Market:

Main market areas are Norway and other Nordic countries.

### Reference service life, product

60 years.

### Reference service life, building or construction works

60 years.

## LCA: Calculation rules

**Declared unit:**

1 pcs Climate door / Innvendig klimadør B30/Rw43dB

**Cut-off criteria:**

General cut-off criteria are given in standard EN 15804. In compliance with these criteria, all major raw materials and all the essential energy are included. The infrastructure of the manufacturing site, with very small amounts (<1%) are not included. This cut-off rule does not apply for hazardous materials and substances.

**Allocation:**

The allocation is made in accordance with the provisions of EN 15804. 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. The PCR specific background data follow the allocation rules in the Ecoinvent v3.7.1 Cut-off database version. The allocation of water, energy and waste flows within the production facilities for windows and doors follows unit-based allocation adjusted with a point system to different product groups or products. This score system is regulated by a factor which increases with the resource intensity of each product. The unit-based allocation is adjusted by the weight of the product, excluding the weight of glass. The allocation is made in accordance to EN 15804:2012+A2:2019. Energy, water and waste consumption in the factory is allocated to the DU by mass allocation.

**Data quality:**

Specific data for the product composition are provided by the manufacturer. The data represent the production of the declared product and were collected for EPD development in the year of study. Background data is based on EPDs according to EN 15804 and different LCA databases. The data quality requirements are according to NPCR 014 Windows and doors. Specific data collected from manufacturer is applied for the most important raw materials in A1-A2. Specific data from the 2022 production at the manufacturing site is applied in A3. The production data is from one production site, Lyngdal in Norway, so no average data has been used for different locations.

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

| 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 |
| MND | MND | MND | X | X | MND | X | MND | MND | MND | MND | MND | MND | X | X | X | X |

**System boundary:**

Includes modules from Product Stage (A1-A3), Construction and Installation (A4-A5), Use Stage (B2), End of Life Stage (C2-C4), and Reuse, Recovery, Recycling potential (D). Modules B1, B3- B7 are not relevant for this analysis, according to NPCR014 Windows and doors.

## LCA: Scenarios and additional technical information

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

**Scenario A4 transport**

Scenarios for transport from the production gate to the construction site (A4) is included for beyond the cradle to gate system boundary as described in NPCR014. The following information describes the transport scenario in A4.

The transportation from production to construction site is based on a scenario where the product is transported on a large lorry, with average distance of 500 km.

| Type | Capacity utilization (incl. return) % | Type of vehicle | Distance (km) | Fuel/ Energy consumption | Value (l/km) |
|---|---|---|---|---|---|
| Truck | 26 | Lorry 16-32 tons, EURO 5 | 500 | 0,044l/tkm | 0,38 |

**Installation(A5)**

According to the report from EPD-Norge 'Harmonising the documentation of scenarios beyond cradle to gate, EN 15804' there is no loss on site during construction activities. The door in this EPD are painted and surface treated in the production and not at the building site. Therefore, there is only 2 items left in this module. 1) Waste treatment of packaging which is considered in the EPD calculations. 1) Energy use during installation.
This can be varied depending on the floor, type of building and several other unknown parameters, and therefore ignored in the calculation.

| A5 Installation inputs | Unit | Value |
|---|---|---|
| Water consumption | M3 | 0 |
| Electricity consumption | MJ | 0 |
| Material loss | Kg | 0 |
| Output packaging to waste treatment | kg | 6,26 |

**Maintenance (B2)**

The maintenance scenario included cleaning. Cleaning is performed three times per year. It is calculated with 1,5 dl of detergent and 3 litres of water each year. It is assumed that 5 gr of lubricating oil is used every year for fittings and moving parts. No repair is assumed during the product lifetime.

| B2 Maintenance inputs | Unit | Value |
|---|---|---|
| Water consumption | M3 | 0,18 |
| Detergent | kg | 9 |
| Lubricating oil | Kg | 0,30 |
| Transport | tkm | 3,1 |

**Deconstruction (C1)**

As there are no data for de-construction, it is assumed no activities in C1 in this study.

**Transport to waste processing (C2)**

The transport of door as waste is calculated based on a scenario with 50 km distance.

| Type | Capacity utilization (incl. return) % | Type of vehicle | Distance (km) | Fuel/ Energy consumption | Value (l/km) |
|---|---|---|---|---|---|
| Truck | 44 | Unspecified | 50 | 0,03 l/tkm | 0,28 l/km |

**End of Life (C3,C4)**

Doors are assumed to be sorted as mixed construction waste and treated with incineration with energy recovery.

| C3 and C4 End of Life inputs | Unit | Value |
|---|---|---|
| Hazardous waste disposal | Kg | 0 |
| Collected as mixed construction waste | Kg | 121,15 |
| Reuse | Kg | 0 |
| Recycling | Kg | 1,02 |
| Energy recovery | Kg | 120,13 |
| To landfill | Kg | 0 |

**Benefits and loads beyond system boundaries (D)**

The benefits beyond life cycle has been modelled based on the output flows from module C3. This includes energy from incineration and scrap metal recovered from the ashes. The exported energy is substituting Norwegian district heating mix and electricity mix.

| D Benefits and loads beyond systems boundary inputs | Unit | Value |
|---|---|---|
| Substitution of electricity | MJ | 193 |
| Substitution of thermal energy | MJ | 1340 |

## 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 | C2 | C3 | C4 | D |
|---|---|---|---|---|---|---|---|---|---|---|
| | GWP-total | kg $CO_2$ -eq | -7,89E+01 | 4,44E+00 | 9,30E+00 | 7,68E+00 | 6,48E-01 | 1,84E+02 | 7,55E-02 | -1,15E+01 |
| | GWP-fossil | kg $CO_2$ -eq | 9,26E+01 | 4,44E+00 | 5,66E-02 | 7,53E+00 | 6,48E-01 | 1,88E+01 | 7,55E-02 | -1,11E+01 |
| | GWP-biogenic | kg $CO_2$ -eq | -1,73E+02 | 1,84E-03 | 9,24E+00 | 2,85E-02 | 2,57E-04 | 1,65E+02 | 4,42E-05 | -3,35E-01 |
| | GWP-luluc | kg $CO_2$ -eq | 1,81E+00 | 1,67E-03 | 2,27E-05 | 1,30E-01 | 2,15E-04 | 5,72E-04 | 1,44E-05 | -2,72E-02 |
| | ODP | kg CFC11 -eq | 1,04E-05 | 1,11E-06 | 1,32E-08 | 5,68E-07 | 1,48E-07 | 1,21E-07 | 1,29E-08 | -1,14E-06 |
| | AP | mol H+ -eq | 6,23E-01 | 1,41E-02 | 2,32E-04 | 3,65E-02 | 2,62E-03 | 2,95E-02 | 3,42E-04 | -7,93E-02 |
| | EP-FreshWater | kg P -eq | 7,48E-03 | 3,17E-05 | 4,11E-07 | 4,09E-04 | 4,94E-06 | 2,92E-05 | 9,02E-07 | -3,95E-04 |
| | EP-Marine | kg N -eq | 1,27E-01 | 3,11E-03 | 6,88E-05 | 7,20E-03 | 7,89E-04 | 1,54E-02 | 1,16E-04 | -2,96E-02 |
| | EP-Terrestial | mol N -eq | 1,48E+00 | 3,46E-02 | 7,60E-04 | 8,02E-02 | 8,71E-03 | 1,56E-01 | 1,29E-03 | -3,35E-01 |
| | POCP | kg NMVOC -eq | 3,75E-01 | 8,82E-03 | 1,88E-04 | 3,39E-02 | 2,73E-03 | 3,74E-02 | 3,65E-04 | -9,15E-02 |
| | ADP-minerals&metals[1] | kg Sb -eq | 8,45E-04 | 1,06E-05 | 1,83E-07 | 1,17E-04 | 2,17E-06 | 4,97E-06 | 1,54E-07 | -1,11E-04 |
| | ADP-fossil[1] | MJ | 1,31E+03 | 7,23E+01 | 8,66E-01 | 2,10E+02 | 9,91E+00 | 1,97E+02 | 1,02E+00 | -1,47E+02 |
| | WDP[1] | m3 | 5,53E+01 | 2,48E-01 | 2,85E-03 | 1,29E+01 | 3,12E-02 | 1,54E+00 | 5,35E-03 | -2,74E+00 |

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

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

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

## Remarks to environmental impacts

**Additional environmental impact indicators**

| Indicator | | Unit | A1-A3 | A4 | A5 | B2 | C2 | C3 | C4 | D |
|---|---|---|---|---|---|---|---|---|---|---|
|  | PM | Disease incidence | 8,90E-06 | 3,88E-07 | 4,34E-09 | 3,30E-07 | 4,96E-08 | 2,74E-07 | 5,29E-09 | -5,38E-06 |
|  | IRP[2] | kgBq U235 -eq | 4,46E+00 | 3,13E-01 | 3,76E-03 | 3,31E-01 | 4,36E-02 | 3,13E-02 | 4,41E-03 | -7,86E-01 |
|  | ETP-fw[1] | CTUe | 2,21E+03 | 5,64E+01 | 6,85E-01 | 1,67E+02 | 7,69E+00 | 6,81E+01 | 1,38E+00 | -6,76E+02 |
|  | HTP-c[1] | CTUh | 2,50E-07 | 1,54E-09 | 2,20E-11 | 7,96E-09 | 2,67E-10 | 6,92E-09 | 7,20E-11 | -2,18E-08 |
|  | HTP-nc[1] | CTUh | 1,48E-06 | 5,91E-08 | 7,25E-10 | 7,80E-08 | 7,93E-09 | 2,43E-07 | 2,35E-09 | -4,35E-07 |
|  | SQP[1] | dimensionless | 9,36E+03 | 8,26E+01 | 7,60E-01 | 3,94E+01 | 8,72E+00 | 3,10E+01 | 1,80E+00 | -2,21E+03 |

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

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

1. The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with theindicator
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 dueto 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 | C2 | C3 | C4 | D |
| | PERE | MJ | 1,77E+03 | 9,07E-01 | 8,91E+01 | 8,98E+00 | 1,33E-01 | 1,71E+03 | 3,90E-02 | -8,30E+02 |
| | PERM | MJ | 1,72E+03 | 0,00E+00 | -8,91E+01 | 0,00E+00 | 0,00E+00 | -1,63E+03 | 0,00E+00 | 0,00E+00 |
| | PERT | MJ | 3,60E+03 | 9,07E-01 | 1,21E-02 | 8,98E+00 | 1,33E-01 | -2,85E+01 | 3,90E-02 | -8,30E+02 |
| | PENRE | MJ | 1,31E+03 | 7,23E+01 | 8,66E-01 | 2,11E+02 | 9,91E+00 | 1,97E+02 | 1,02E+00 | -1,47E+02 |
| | PENRM | MJ | -5,88E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | -1,85E+02 | 0,00E+00 | 0,00E+00 |
| | PENRT | MJ | 1,30E+03 | 7,23E+01 | 8,66E-01 | 2,11E+02 | 9,91E+00 | 1,16E+01 | 1,02E+00 | -1,47E+02 |
| | SM | kg | 5,06E-03 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| | RSF | MJ | 1,86E-01 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 6,99E+00 | 0,00E+00 | -5,55E+02 |
| | NRSF | MJ | 1,19E-01 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 4,45E+00 | 0,00E+00 | -3,53E+02 |
| | FW | m3 | 2,65E+00 | 8,59E-03 | 1,03E-04 | 3,21E-01 | 1,15E-03 | 6,20E-02 | 9,32E-04 | -2,92E+00 |

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 | C2 | C3 | C4 | D |
|---|---|---|---|---|---|---|---|---|---|---|
| | HWD | kg | 1,15E+00 | 3,98E-03 | 4,68E-05 | 2,26E-02 | 5,16E-04 | 1,44E-02 | 2,76E+00 | -6,95E-02 |
| | NHWD | kg | 3,44E+01 | 6,75E+00 | 5,97E-02 | 1,04E+00 | 6,36E-01 | 3,67E-01 | 6,32E-01 | -3,69E+00 |
| | RWD | kg | 5,26E-03 | 4,89E-04 | 5,84E-06 | 3,57E-04 | 6,77E-05 | 3,43E-05 | 6,18E-06 | -5,58E-04 |

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

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

## End of life - Output flow

| Indicator | | Unit | A1-A3 | A4 | A5 | B2 | C2 | C3 | C4 | D |
|---|---|---|---|---|---|---|---|---|---|---|
| | CRU | kg | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| | MFR | kg | 6,67E-01 | 0,00E+00 | 2,20E-01 | 0,00E+00 | 0,00E+00 | 1,02E+00 | 0,00E+00 | -1,02E+00 |
| | MER | kg | 0,00E+00 | 0,00E+00 | 6,04E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| | EEE | MJ | 6,78E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 1,79E+01 | 0,00E+00 | -1,93E+02 |
| | EET | MJ | 4,71E+01 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 1,25E+02 | 0,00E+00 | -1,34E+03 |

CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported energy electrical; EET = Exported energy thermal

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

## Biogenic Carbon Content

| Indicator | Unit | At the factory gate |
|---|---|---|
| Biogenic carbon content in product | kg C | -1,57E+02 |
| Biogenic carbon content in accompanying packaging | kg C | -9,24E+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).

| National electricity grid | A3 (kWh) | Unit | Value |
|---|---|---|---|
| Electricity, Norway | 36,53 | kg CO2 -eq/kWh | 0.0264 |

### Dangerous substances

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

### Indoor environment

Emission tests have been performed on the door after 28 days according to SS-EN ISO 16000-9:2006. The results from the tested product was 130µg/m2h TVOC, < 2 µg/m2h formaldehyde and no carcenogenic substance.

## Additional Environmental Information

| Additional environmental indicator required in NPCR Part A for construction products | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Indicator** | **Unit** | **A1-A3** | **A4** | **A5** | **B2** | **C2** | **C3** | **C4** | **D** |
| GWPIOBC | Kg CO2 eq. | 9,51E+01 | 4,44E+00 | 5,66E-02 | 7,68E+00 | 6,48E-01 | 1,88E+01 | 7,55E-02 | -1,15E+01 |

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

## Bibliography

ISO 14025:2010 Environmental labels and declarations - Type III environmental declarations - Principles and procedures.
ISO 14044:2006 Environmental management - Life cycle assessment - Requirements and guidelines.
EN 15804:2012+A2:2019 Environmental product declaration - Core rules for the product category of construction products.
ISO 21930:2017 Sustainability in buildings and civil engineering works - Core rules for environmental product declarations of construction products. ecoinvent v3, Allocation, cut-off by classification, Swiss Centre of Life Cycle Inventories.
Iversen et al., (2021) eEPD v2021.09 Background information for EPD generator tool system verification, LCA.no Report number: 07.21 Iversen et al., (2022) EPD generator for EPD generator for NPCR 014
Part B for Windows and doors, Background information for EPD generator application and LCA data, LCA.no report number: 17.22
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ISO 14025:2010 Environmental labels and declarations - Type III environmental declarations - Principles and procedures
ISO 14044:2006 Environmental management - Life cycle assessment - Requirements and guidelines
EN 15804:2012+A2:2019 Sustainability of construction works - Environmental product declaration - Core rules for the product category of construction products
ISO 21930:2007 Sustainability in building construction - Environmental declaration of building products NPCR 014
Product category rules for Windows and doors. V03. EPD-Norge.
NPCR 015 Wood and wood-based products for use in construction Rev 1. EPD-Norge
NS- EN 16485:2014 Round and sawn timber – Environmental Product Declarations – Product category rules for wood and wood-based products for use in construction
Ecoinvent v3.5-v3.8. 2018-2021. Ecoinvent version 3.5-3.8. Swiss, Centre for Life Cycle Inventories, Dübendorf, Switzerland.
Tellnes, Lars et al. (2014) EPD-Norge, Harmonising the documentation of scenarios beyond cradle to gate, EN 158041

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