epd-global
Powered by EPD-Norway

ECO PLATFORM EPD VERIFIED

Environmental Product Declaration

In accordance with ISO14025:2006 and EN15804:2012+A2:2019

[AQUALARM 1 VENTIL 1/2" (TYPE-C)]

BRØDRENE DAHL

Owner of the declaration:
Brødrene Dahl AS Norway

Product name:
AQUALARM 1 VENTIL 1/2" (TYPE-C)

Declared unit:
1 piece

Product category /PCR:
PCR 2019:14 for Construction products
This EPD follows additional requirements for construction products considered as Electronic or Electric Equipment

Program holder and publisher:
EPD-Global

Declaration number:
NEPD-14761-15413

Registration number:
NEPD-14761-15413

Issue date:
29.01.2026
Valid to:
29.01.2031

General information

Product:
AQUALARM 1 VENTIL 1/2" (TYPE-C)

Program operator:
EPD-Global
Post Box 5250 Majorstuen, 0303 Oslo, Norway
Phone: +47 977 22 020
web: www.epd-global.com

Declaration number:
NEPD-14761-15413

This declaration is based on Product Category Rules:
EN 15084+A2:2019, PCR 2019:14 for Construction products.

NPCR Part A, Construction Products and Services Version2.0

Statement of liability:

The owner of the declaration shall be liable for the underlying information and evidence. EPD Global shall not be liable with respect to manufacturer, life cycle assessment data and evidences.

Declared unit:
1 piece of AQUALARM 1 VENTIL 1/2" (TYPE-C)

Verification:
Independent verification of the declaration and data, according to ISO14025:2010

internal ☐ external ☒

Jesper Jakobsen
Independent verifier approved by EPD Global

Owner of the declaration:
Brødrene Dahl AS Norway
Brynsengveien 5, 0667 Oslo
Phone: +47 22 72 55 00
e-mail: post@dahl.no

Manufacturer:
Brødrene Dahl AS Norway
Brynsengveien 5, 0667 Oslo
Phone: +47 22 72 55 00
e-mail: post@dahl.no

Place of production:
China

Management system:
ISO 9001 and ISO 14001

Organisation no:
945 757 280

Issue date:
29.01.2026

Valid to:
29.01.2031

Year of study:
2024

Comparability:
EPD of construction products may not be able to compare if they do not comply with EN 15804 and are seen in a building context.

The EPD has been worked out by:
Yufei Jiang, Ecovane Environmental Technology Co.,Ltd. All data collection was conducted under the commission of Brass & Beyond.

Approved

Manager of EPD Global

Company

Company description:

Brødrene Dahl AS works and distributes products within the segments HVAC, civil engineering, industry, marine, hydropower (Hywer), aquaculture and traffic.

Brødrene Dahl AS has built up a nationwide organization with closeness to customers as the most important principle. It has around 50 service centers and approx. 1000 employees spread across the country. Brødrene Dahl AS is part of Saint-Gobain Distribution Norway, which is owned by the international industrial group Saint-Gobain.

Product

Product description:

AQUALARM 1 VENTIL 1/2" (TYPE-C) is a digitally controllable water valve which are mainly made of CW-724R Brass and electronic part such as sensor. The table below shows the product specifications and technical data.

Advantages of using valve actuator: Soft-closing, no impact on pipe. Full throughput. No membrane to maintain / replace. Filter in front of valve not necessary. Automatic test of valve once every 5th day.

Product specification:

The product is mainly made of copper, zinc, stainless steel, ABS, electronic components, etc.

Electronic part VENTIL typec	Mass (g)	%
Cold Rolled Coil	79	28.86
Chrome Stainless Steel	85.7	31.31
304 Stainless Steel	11.06	4.04
ABS	53.08	19.39
PET	2.91	1.06
PCB	13.56	4.95
Capacitor	4.7	1.72
Diode	3	1.10
Limit switch	1.426	0.52
Type connector	3	1.10
Other electronic component	16.304	5.96
Total	273.74	100
Valve part 1/2"	Mass (g)	%
Copper	144	61.04

Zinc	36.4	15.43
Lead	0.19	0.08
PTFE	3.8	1.61
EPDM	0.1	0.04
Tin	0.57	0.24
Nickel	4.37	1.85
Steel	36.7	15.56
Silicon	6.31	2.67
Manganese	0.935	0.40
Phosphate	0.133	0.06
Other	2.392	1.01
Total	235.9	100
Materials (packaging)	**Mass (g)**	**%**
Core board	0.05	58
Corrugated board	0.03	35
EUR-flat pallet	0.006	7
Total	0.086	100

Technical data:

Valve size: DN15

Pressure rating: PN16

Protection class: IP65

Current: < 500mA

Maximum torque: 8.0 N・M

C line: 1M

The product is complied with RoHS.

Market:

Norway

Reference service life, product:

The Reference Service Life (RSL) is 30 years in this study.

LCA: Calculation rules

Declared unit:

1 piece of AQUALARM 1 VENTIL 1/2" (TYPE-C)

Cut-off criteria:

All input and output flows in each unit process were considered, and data gaps were filled using conservative assumptions with average or generic data, all of which were documented. Voltage Regulator Chip and Hall Sensor were excluded due to their negligible impact (<0.01%).

Allocation:

According to the PCR, copper scrap generated in Modules A1–A3 is treated as co-product and removed from the product system through co-product allocation. The remaining energy use is then allocated to products: energy for copper valve manufacturing is allocated by output mass, reflecting the physical relationship with heated metal, while energy use for electronic assembly is allocated by total labor hours, reflecting time-driven energy demand.

Data quality:

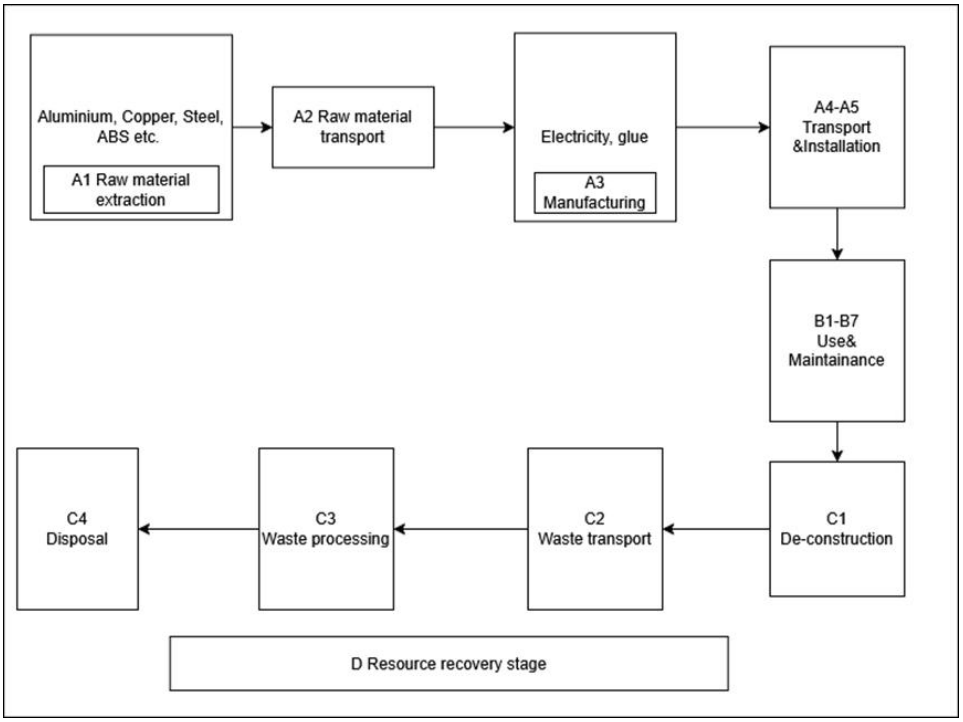
Specific data for the product composition are provided by the manufacturer. They represent the production of the declared product and were collected for EPD development in the year of study. Background data is based on ecoinvent 3.10 database. The data quality has been assessed according to EN15804+A2 Table E.2 — Data quality level and criteria from the Product Environmental Footprint Category Rules.

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

Product stage			Assembly stage		Use stage							End of life stage				Benefits & loads beyond system boundary
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	X	X	X	X	X	X	X	X	X	X	X	X

System boundary:

The system boundaries are set to cradle to gate with options. The manufacturer buys manufactured components (A1) which are transported (A2) to the factory and then assembled. The manufacturing factory uses electricity, natural gas, petrol and water during the assembly (A3). The products are then transported from China to Brødrene Dahl AS Norway's distribution center. The transportation out to the final customer is also accounted for (A4). The waste management of the packaging is included in (A5). The use phase is included in this study (B). The waste management of the product is assumed to be in accordance with the Norwegian standards as the waste management occurs in Norway (C + D).



LCA: Scenarios and additional technical information

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

Transport from production place to assembly/user (A4)

Transport from production place to assembly/user (A4)	Capacity utilisation (incl. return) [%]	Distance [km]	Fuel/Energy consumption	Unit	Value
Truck	61	57	diesel	l/tkm	0,0247
Sea transport	70	19988	HFO	kg/tkm	0,00277

Assembly (A5)

There is no energy need in assembly stage. After the installation, the packaging waste are transported to disposal center by truck, the distance is assumed to be 50km. The recycling/landfill/incineration ratio is shown in the following Table.

	Paperboard	Wood pallet
Recycling ratio	75%	30%
Landfill ratio	2%	6%
Incineration ratio	23%	64%

Operational energy (B6) and water consumption (B7)

	Unit	Value
Electricity consumption	kWh/piece/30 years	262.8

In this study, the batteries needed for operating the products, are not included in the scenario.

End of Life (C1, C3, C4)

	Unit	Value
Recycling	kg	4.19E-01
Energy recovery	kg	7.96E-02
To landfill	kg	2.73E-03

Transport to waste processing (C2)

Transport from production place to assembly/user (C2)	Capacity utilisation (incl. return) [%]	Distance [km]	Fuel/Energy consumption	Unit	Value
Truck	61	50	diesel	l/tkm	0,0247

Benefits and loads beyond the system boundaries (D)

Benefits and loads beyond the system boundaries (D)	Unit	Value
Substitution of electricity, in Norway	MJ	0.056
Substitution of thermal energy, district heating, in Norway	MJ	0.197
Substitution of primary steel with net scrap	kg	0.167
Substitution of primary copper with net scrap	kg	0.236
Substitution of primary plastic with recycled plastic	kg	0.016

LCA: Results

The result tables are given using a *location based approach* for foreground system (A3). More information about transparent reporting of electricity in the additional requirements section.

Core environmental impact indicators

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP - fossil	kg CO2 eq	5.17E+00	1.29E-01	1.99E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.30E+00	0.00E+00	0.00E+00	4.99E-03	1.41E-02	2.47E-01	-2.01E+00
GWP - biogenic	kg CO2 eq	-1.32E-01	0.00E+00	1.32E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
GWP - luluc	kg CO2 eq	7.35E-03	6.68E-05	6.63E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.89E-02	0.00E+00	0.00E+00	1.98E-06	1.89E-05	1.48E-06	-2.57E-03
GWP - total	kg CO2 eq	5.05E+00	1.29E-01	1.34E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.33E+00	0.00E+00	0.00E+00	4.99E-03	1.41E-02	2.47E-01	-2.01E+00
ODP	kg CFC11 eq	1.31E-07	1.85E-09	3.01E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.70E-07	0.00E+00	0.00E+00	6.96E-11	9.38E-11	7.32E-11	-1.74E-08
AP	molc H+ eq	9.26E-02	3.62E-03	1.10E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.72E-02	0.00E+00	0.00E+00	1.66E-05	7.72E-05	6.26E-05	-1.33E-01
EP- freshwater	kg P eq	7.99E-03	4.39E-06	2.63E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.64E-03	0.00E+00	0.00E+00	3.91E-07	6.46E-06	2.86E-06	-1.05E-02
EP -marine	kg N eq	8.62E-03	9.01E-04	8.19E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.59E-03	0.00E+00	0.00E+00	5.38E-06	1.43E-05	4.12E-05	-6.69E-03
EP - terrestrial	molc N eq	9.78E-02	1.00E-02	4.62E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.24E-02	0.00E+00	0.00E+00	5.86E-05	1.54E-04	3.26E-04	-9.30E-02
POCP	kg NMVOC eq	2.91E-02	2.72E-03	1.65E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.81E-02	0.00E+00	0.00E+00	2.31E-05	4.34E-05	8.08E-05	-2.65E-02
ADP-M&M2	kg Sb-Eq	1.67E-03	1.39E-07	5.39E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.97E-04	0.00E+00	0.00E+00	1.60E-08	1.28E-07	9.59E-09	-1.71E-03
ADP-fossil2	MJ	3.74E+01	7.70E-02	2.93E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.11E+01	0.00E+00	0.00E+00	6.82E-03	1.20E-01	8.50E-03	-1.36E+01
WDP2	m3	-3.99E+01	3.86E-03	7.36E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.82E+00	0.00E+00	0.00E+00	3.15E-04	2.34E-03	4.04E-03	-1.98E+00

GWP-total: *Global Warming Potential;* ***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; See "additional Norwegian requirements" for indicator given as PO4 eq.* ***EP-marine:*** *Eutrophication potential, fraction of nutrients reaching freshwater end compartment;* ***EP-terrestrial:*** *Eutrophication potential, Accumulated Exceedance;* ***POCP****: Formation potential of tropospheric ozone;* ***ADP-M&M****: Abiotic depletion potential for non-fossil resources (minerals and metals);* ***ADP-fossil:*** *Abiotic depletion potential for fossil resources;* ***WDP:*** *Water deprivation potential, deprivation weighted water consumption*

Reading example: 9.0 E-03 = $9.0*10^{-3} = 9.0*\frac{1}{10}*\frac{1}{10}*\frac{1}{10}=0.009$ 9.0 E+03 = $9.0*10^{3} = 9.0*10*10*10=9000$

Additional environmental impact indicators

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PM	Disease incidence	4.01E-07	4.14E-09	1.64E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.76E-07	0.00E+00	0.00E+00	3.95E-10	7.05E-10	2.91E-10	-3.28E-07
IRP1	kBq U235 eq.	5.13E-01	7.57E-04	2.75E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E+00	0.00E+00	0.00E+00	5.74E-05	1.82E-03	5.48E-05	-1.70E-01
ETP-fw2	CTUe	1.61E+02	2.81E-01	5.24E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.52E+02	0.00E+00	0.00E+00	1.86E-02	5.57E-02	2.90E+00	-1.63E+02
HTP-c2	CTUh	5.60E-08	5.48E-10	1.65E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.23E-08	0.00E+00	0.00E+00	2.58E-11	3.39E-11	6.75E-11	-5.34E-08
HTP-nc2	CTUh	6.87E-07	4.20E-10	2.35E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.12E-07	0.00E+00	0.00E+00	4.35E-11	4.22E-10	6.52E-09	-1.38E-06
SQP2	Dimensionless	3.99E+01	1.71E-01	1.45E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.06E+01	0.00E+00	0.00E+00	4.17E-02	5.55E-02	1.53E-02	-4.27E+01

PM: *Particulate matter emissions;* ***IRP:*** *Ionising radiation, human health;* ***ETP-fw:*** *Ecotoxicity (freshwater);* ***ETP-c:*** *Human toxicity, cancer effects;* ***HTP-nc:*** *Human toxicity, non-cancer effects;* ***SQP:*** *Land use related impacts / soil quality*

[1] 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.

[2] 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

Resource use

Parameter	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PERE	MJ	9.87E+00	1.24E-02	4.61E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E+03	0.00E+00	0.00E+00	9.21E-04	2.38E-02	1.18E-03	-5.70E+00
PERM	MJ	1.10E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	1.10E+01	1.24E-02	4.61E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E+03	0.00E+00	0.00E+00	9.21E-04	2.38E-02	1.18E-03	-5.70E+00
PENRE	MJ	3.72E+01	7.70E-02	2.93E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.11E+01	0.00E+00	0.00E+00	6.82E-03	1.20E-01	8.50E-03	-1.36E+01
PENRM	MJ	1.51E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRT	MJ	3.74E+01	7.70E-02	2.93E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.11E+01	0.00E+00	0.00E+00	6.82E-03	1.20E-01	8.50E-03	-1.36E+01
SM	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	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m^3	-9.29E-01	1.22E-04	2.50E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.71E+00	0.00E+00	0.00E+00	9.30E-06	8.86E-05	1.36E-04	-4.86E-02

PERE *Renewable primary energy resources used as energy carrier;* ***PERM*** *Renewable primary energy resources used as raw materials;* ***PERT*** *Total use of renewable primary energy resources;* ***PENRE*** *Nonrenewable primary energy resources used as energy carrier;* ***PENRM*** *Nonrenewable primary energy resources used as 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*** *Use of net fresh water.*

End of life – Waste

Parameter	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
HW	kg	6.64E-04	8.32E-06	1.79E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.39E-04	0.00E+00	0.00E+00	4.81E-07	3.93E-07	4.17E-07	-1.40E-04
NHW	kg	3.06E-01	6.67E-03	1.25E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.01E+00	0.00E+00	0.00E+00	3.29E-03	1.10E-03	5.32E-03	-2.46E-01
RW	kg	1.34E-04	1.84E-07	6.85E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.25E-04	0.00E+00	0.00E+00	1.41E-08	4.45E-07	1.37E-08	-4.45E-05

HWD *Hazardous waste disposed;* ***NHWD*** *Non-hazardous waste disposed;* ***RWD*** *Radioactive waste disposed.*

End of life – output flow

Parameter	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
CR	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	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MR	kg	2.08E-01	0.00E+00	6.28E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.19E-01	0.00E+00	0.00E+00
MER	kg	0.00E+00	0.00E+00	2.27E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.96E-02	0.00E+00	0.00E+00
EEE	MJ	0.00E+00	0.00E+00	7.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.65E-02	0.00E+00	0.00E+00
ETE	MJ	0.00E+00	0.00E+00	2.53E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.97E-01	0.00E+00	0.00E+00

CRU *Components for reuse;* ***MFR*** *Materials for recycling;* ***MER*** *Materials for energy recovery;* ***EEE*** *Exported electric energy;* ***EET*** *Exported thermal energ*

Information describing the biogenic carbon content at the factory gate

Biogenic carbon content	Unit	Value
Biogenic carbon content in product	kg C	0
Biogenic carbon content in the accompanying packaging	kg C	0.036

Note: 1 kg biogenic carbon is equivalent to 44/12 (approx. 3.67)

Additional requirements

Transparent reporting of energy

The EPD provides in the main result tables environmental impact categories based on a location-based approach. The information below is provided so EPD users are able to understand the effect of these methodological choices.

The table below shows calculation of GWP-total for energy resources used in the manufacturing process (A3).

Energy source	Data source	Amount*	Unit	GWP_{total} [kg CO_2 -eq/unit]	SUM [kg CO_2 -eq]
Location based approach					
Electricity, medium voltage {CN-ECGC}| market for electricity, medium voltage | Cut-off, U	Ecoinvent 3.10	0.2509	kWh	0.852	0.21
Natural gas, low pressure {CN}| market for natural gas, low pressure | Cut-off, U	Ecoinvent 3.10	0.0045	m^3	0.687	0.0031

Only the location-based approach is reported, as the market-based approach is not applicable for the Chinese electricity and natural gas markets.

Additional environmental impact indicators required for construction products

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.

Parameter	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-IOBC	kg CO_2-eq.	5.18E+00	1.29E-01	1.99E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.33E+00	0.00E+00	0.00E+00	4.99E-03	1.41E-02	2.47E-01	-2.01E+00

GWP-IOBC *Global warming potential calculated according to the principle of instantaneous oxidation.*

Hazardous substances

The product contains substances given by the REACH Candidate list that are less than 0,1 % by weight (the product contains Lead, which is listed in REACH candidate list (SVHC-substances of very high concern).

Carbon footprint

While a carbon footprint analysis has not been conducted for the product separately, the results section does include an evaluation of Global Warming Potential (GWP) with such an analysis. The GWP total results presented in this EPD document represents the carbon footprint of the product studied.

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	Sustainability of construction works - Environmental product declaration - Core rules for the product category of construction products
ISO 21930:2017	Sustainability in building construction - Environmental declaration of building products

NPCR Part A Construction Products and Services Version 2.0

Ecoinvent, 2024 Swiss Centre for Life Cycle Assessment, version 3.10(www.ecoinvent.ch).

PRé Consultants, 2024 Software SimaPro version 9.6.0.1 (www.pre.nl).

General Programme Instructions for EPD-Global/EPD-Global(www.epd-global.no) version 4:2024

CFF default parameter from Product Environmental Footprint Category Rules

epd-global Powered by EPD-Norway	**Program Operator** EPD-Global Post Box 5250 Majorstuen, 0303 Oslo Norway	Phone: e-mail: Website:	+47 977 22 020 post@epd-norge.no www.epd-global.com
epd-global Powered by EPD-Norway	**Publisher** EPD-Global Post Box 5250 Majorstuen, 0303 Oslo Norway	Phone: e-post: Website:	+47 977 22 020 post@epd-norge.no www.epd-global.com
BRØDRENE DAHL	**Owner of the declaration** Brødrene Dahl AS Norway Brynsengveien 5, 0667 Oslo Norway	Phone: Fax e-mail: Website:	+47 22 72 55 00 post@dahl.no www.dahl.no
EcoVane Knowledge for sustainable value	**Author of the life cycle assesment** Ecovane Environmental Technology Co.,Ltd 4nd Floor, Oasis Center, Lane 320 Tianping Road, Xuhui District, Shanghai Ecovane Environmental Technology Co.,Ltd	Phone: Fax e-mail: Website:	+86 13427564543 support@1mi1.cn www.1mi1.cn
ECO PLATFORM EPD VERIFIED	ECO Platform ECO Portal	Website: Website:	www.eco-platform.org ECO Portal