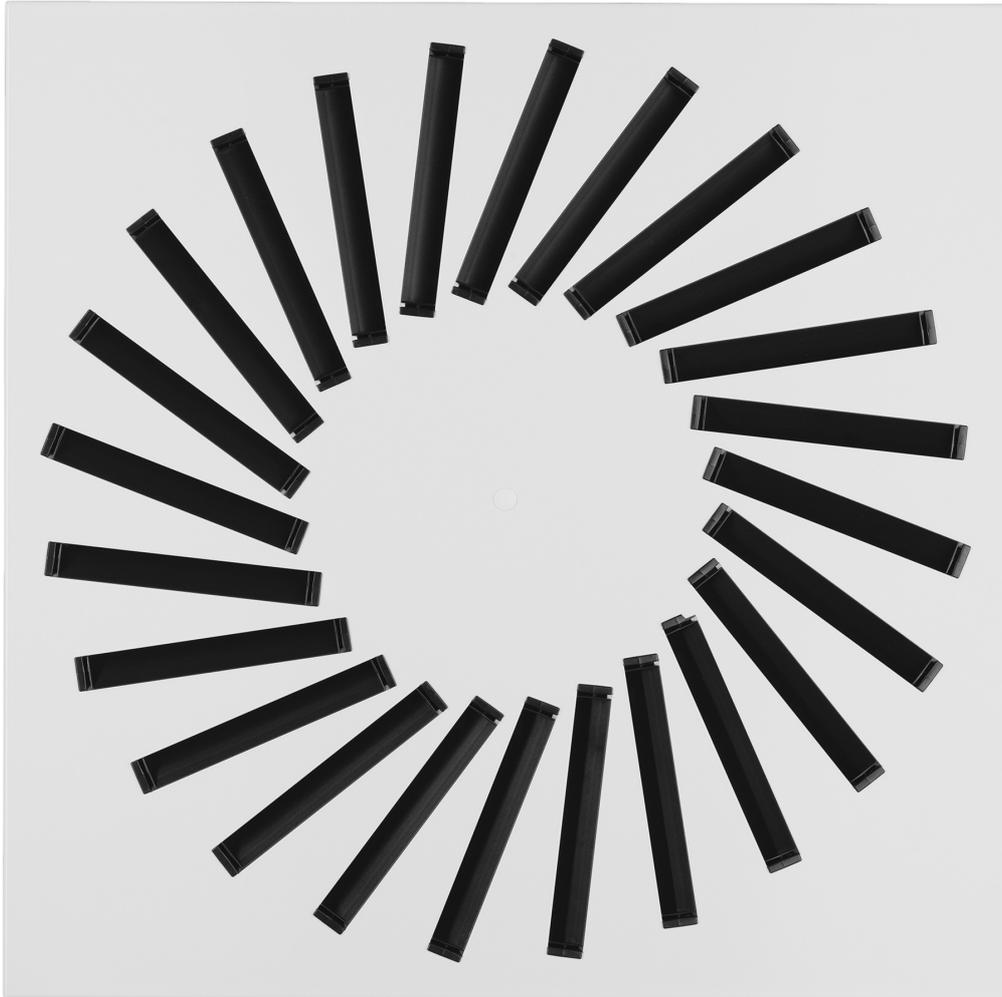


# Environmental product declaration

in accordance with ISO 14025 and EN 15804+A2

SDW-QL-Z/600x24/0/0/P3



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**TROX<sup>®</sup> TECHNIK**  
The art of handling air

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The Norwegian EPD Foundation

**Owner of the declaration:**

TROX Group - UK

**Product:**

SDW-QL-Z/600x24/0/0/P3

**Declared unit:**

1 pcs

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

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

PCR

NPCR 030:2021 Part B for ventilation components

**Program operator:**

The Norwegian EPD Foundation

**Declaration number:**

NEPD-12149-12121

**Registration number:**

NEPD-12149-12121

**Issue date:**

26.08.2025

**Valid to:**

26.08.2030

**EPD software:**

LCAno EPD generator ID: 771944

## General information

### Product

SDW-QL-Z/600x24/0/0/P3

### Program operator:

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

### Declaration number:

NEPD-12149-12121

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

CEN Standard EN 15804:2012+A2:2019 serves as core PCR  
NPCR 030:2021 Part B for ventilation components

### 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 SDW-QL-Z/600x24/0/0/P3

### Declared unit with option:

A1-A3, A4, C1, C2, C3, C4, D

### Functional unit:

Not declared.

### 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:

Alexander Borg, Asplan Viak AS

(no signature required)

### Owner of the declaration:

TROX Group - UK  
Contact person: Wiktoria Zak  
Phone: +44 184 275 4545  
e-mail: [productsustainability-uk@troxgroup.com](mailto:productsustainability-uk@troxgroup.com)

### Manufacturer:

TROX Group - UK

### Place of production:

TROX Group - UK  
Caxton Way  
IP24 3SQ Thetford, United Kingdom

### Management system:

ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

### Organisation no:

GB 163 8677 69

### Issue date:

26.08.2025

### Valid to:

26.08.2030

### Year of study:

2024

### Comparability:

EPDs of construction products may not be comparable if they do not comply with EN 15804 and are not 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: Wiktoria Zak

Reviewer of company-specific input data and EPD: Mike Gosling

### Approved:



Håkon Hauan, CEO EPD-Norge

## Product

### Product description:

Ceiling swirl diffusers in air conditioning systems create a swirl to supply air to rooms. The resulting airflow induces high levels of room air, thereby rapidly reducing the airflow velocity and the temperature difference between supply air and room air. Ceiling swirl diffusers allow for large volume flow rates. The result is a mixed flow ventilation in comfort zones, with good overall room ventilation, creating only very little turbulence in the occupied zone.

Type SDW ceiling swirl diffusers have adjustable air control blades. The air pattern can be manually adjusted to meet different local requirements. Horizontal air discharge is one-way, two-way or omni directional. Vertical air discharge is possible but only for heating. The supply air to room air temperature difference may range from -12K to +10 K.

To give rooms an aesthetic, uniform look, Type SDW diffusers may also be used for extract air. Air control blades are not required for extract air applications.

### Product specification

QL border: 595x595 diffuser face suitable for exposed grid suspended ceiling systems (lay-in).

Diffuser face made of galvanised sheet steel with polyester powder-coat finish from RAL Classic color range.

For installations with constant and variable air flows up to 35 air changes per hour with a row of several diffusers, minimum distance between diffusers of 0.9 m (between central points).

High induction, which leads to a rapid reduction in the temperature difference and air speed, ideal for comfort installations.

This EPD includes the environmental data of the product series SDW-QL.

The following represents a representative dataset of the most sold variant in the declared sales year (SDW-QL-Z/600x24/0/0/P3) with factors for alternative sizes.

Materials	kg	%
Metal - Galvanized Steel	2,91	83,76
Plastic - Acrylonitrile butadiene styrene (ABS)	0,2568	7,40
Plastic - Polyethylene (LDPE)	0,001	0,0288
Powder coating	0,306	8,81
Total	3,47	100,00

Packaging	kg	%
Packaging - Cardboard	0,25	59,26
Packaging - Pallet	0,15	36,64
Packaging - Plastic	0,02	4,10
Total incl. packaging	3,89	100,00

### Technical data:

Nominal diffuser sizes: 300x8, 400x16, 500x24, 600x24, 600x48

Minimum volume flow rate, with  $dT_z = -6K$ : 7 – 52 l/s or 26 – 186 m<sup>3</sup>/h.

Maximum volume flow rate, with LWA 50 dB(A): 80 – 300 l/s or 288 – 1080 m<sup>3</sup>/h.

Supply air to room air temperature difference: -12K to +10 K.

For more technical data see: [https://www.troxuk.co.uk/downloads/d50520965324a783/SDW\\_PD\\_2023\\_02\\_GB\\_en.pdf?type=product\\_info](https://www.troxuk.co.uk/downloads/d50520965324a783/SDW_PD_2023_02_GB_en.pdf?type=product_info)

Diffuser Size	Weight (kg)	GWP tot. (A1-A3) [kg CO2 eq]	Factor [-]
300x8	3.6915	26.6033	0.942
400x16	3.7507	27.2215	0.963
500x24	3.8099	27.6959	0.980
600x24	3.8891	28.2552	1.000
600x48	3.9875	29.2760	1.036

### Market:

UK

### Reference service life, product

20 - 25 Years

### Reference service life, building or construction works

Not declared.

## LCA: Calculation rules

### Declared unit:

1 pcs SDW-QL-Z/600x24/0/0/P3

**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. Energy, 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:**

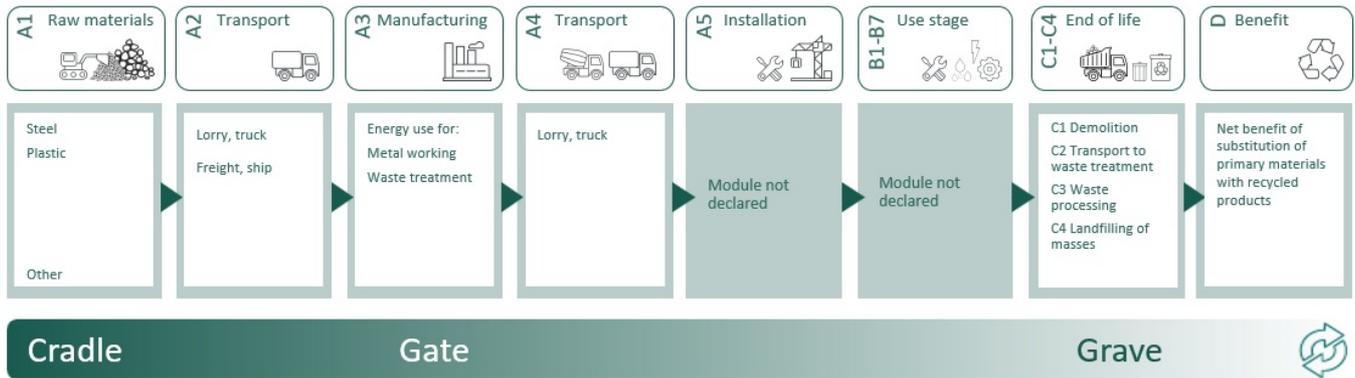
Specific data for the product composition are provided by the manufacturer. The data represent the production of the declared product and were collected for EPD development in the year of study. Background data is based on EPDs according to EN 15804 and different LCA databases. The data quality of the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

Materials	Source	Data quality	Year
Metal - Galvanized Steel	ecoinvent 3.6	Database	2020
Metal - Galvanized Steel	Supplier	EPD	2023
Packaging - Cardboard	ecoinvent 3.6	Database	2019
Packaging - Pallet	ecoinvent 3.6	Database	2019
Packaging - Plastic	ecoinvent 3.6	Database	2019
Plastic - Acrylonitrile butadiene styrene (ABS)	ecoinvent 3.6	Database	2019
Plastic - Polyethylene (LDPE)	ecoinvent 3.6	Database	2019
Powder coating	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	MND	MND	MND	MND	MND	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 %	500,00	0,023	l/tkm	11,50
De-construction demolition (C1)					
	Unit	Value			
Demolition of building per kg of ventilation product (kg)	kg	3,47			
Transport to waste processing (C2)					
	Capacity utilisation (incl. return) %	Distance (km)	Fuel/Energy Consumption	Unit	Value (Liter/tonne)
Truck, over 32 tonnes, EURO 6 (km)	53,3 %	50,00	0,023	l/tkm	1,15
Waste processing (C3)					
	Unit	Value			
Materials to recycling (kg)	kg	0,0135			
Waste treatment per kg Polyethylene (PE), incineration (kg)	kg	0,0005			
Waste treatment per kg Hazardous waste, incineration (kg)	kg	0,153			
Materials to recycling (kg)	kg	2,60			
Waste treatment per kg plastic, industrial electronics, municipal incineration with fly ash extraction (kg)	kg	0,1284			
Disposal (C4)					
	Unit	Value			
Waste, scrap steel, to landfill (kg)	kg	0,2908			
Landfilling of ashes from incineration of Polyethylene (PE), process per kg ashes and residues (kg)	kg	0,00001762			
Waste, plastic, mixture, to landfill (kg)	kg	0,1289			
Landfilling of ashes from incineration per kg Hazardous waste, from incineration (kg)	kg	0,02892			
Waste, hazardous waste, to landfill (kg)	kg	0,153			
Landfilling of ashes from incineration per kg plastic, industrial electronics, From municipal incineration with fly ash extraction (kg)	kg	0,008708			
Benefits and loads beyond the system boundaries (D)					
	Unit	Value			
Substitution of primary steel with net scrap (kg)	kg	0,01097			
Substitution of electricity (MJ)	MJ	0,2132			
Substitution of thermal energy, district heating (MJ)	MJ	3,23			
Substitution of primary steel with net scrap (kg)	kg	0,5931			

## 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	C1	C2	C3	C4	D	
 GWP-total	kg CO <sub>2</sub> -eq	2.83E+01	1.69E-01	4.58E-03	1.69E-02	7.31E-01	6.20E-02	-6.85E-01	
 GWP-fossil	kg CO <sub>2</sub> -eq	2.79E+01	1.69E-01	4.58E-03	1.69E-02	7.30E-01	6.17E-02	-6.83E-01	
 GWP-biogenic	kg CO <sub>2</sub> -eq	3.06E-01	7.25E-05	8.58E-07	7.25E-06	8.58E-04	3.63E-05	-4.05E-04	
 GWP-luluc	kg CO <sub>2</sub> -eq	2.48E-02	5.16E-05	3.61E-07	5.16E-06	8.65E-05	2.90E-04	-9.42E-04	
 ODP	kg CFC11 -eq	3.25E-06	4.08E-08	9.90E-10	4.08E-09	3.95E-08	3.33E-09	-1.36E-03	
 AP	mol H+ -eq	1.95E-01	5.45E-04	4.79E-05	5.45E-05	5.95E-04	2.01E-04	-3.46E-03	
 EP-FreshWater	kg P -eq	1.26E-03	1.35E-06	1.67E-08	1.35E-07	8.21E-06	1.61E-06	-4.26E-05	
 EP-Marine	kg N -eq	2.47E-02	1.19E-04	2.11E-05	1.19E-05	1.54E-04	6.12E-05	-7.34E-04	
 EP-Terrestrial	mol N -eq	5.55E-01	1.33E-03	2.32E-04	1.33E-04	1.67E-03	5.01E-04	-7.53E-03	
 POCP	kg NMVOC -eq	8.84E-02	5.23E-04	6.38E-05	5.23E-05	4.46E-04	2.13E-04	-3.48E-03	
 ADP-minerals&metals <sup>1</sup>	kg Sb-eq	1.16E-02	3.02E-06	7.02E-09	3.02E-07	1.21E-06	2.33E-07	-1.17E-05	
 ADP-fossil <sup>1</sup>	MJ	4.33E+02	2.75E+00	6.30E-02	2.75E-01	1.47E+00	4.91E-01	-5.86E+00	
 WDP <sup>1</sup>	m <sup>3</sup>	2.07E+03	2.11E+00	1.34E-02	2.11E-01	5.43E+00	2.15E+00	3.11E+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	C1	C2	C3	C4	D
 PM	Disease incidence	1.68E-06	1.56E-08	1.27E-09	1.56E-09	8.00E-09	3.43E-09	-6.45E-08
 IRP <sup>2</sup>	kgBq U235 -eq	1.79E+00	1.20E-02	2.70E-04	1.20E-03	6.56E-03	1.20E-03	6.79E-04
 ETP-fw <sup>1</sup>	CTUe	6.53E+02	2.01E+00	3.44E-02	2.01E-01	7.17E+00	1.16E+00	-3.85E+01
 HTP-c <sup>1</sup>	CTUh	8.34E-08	0.00E+00	0.00E+00	0.00E+00	3.56E-10	1.58E-10	-3.22E-09
 HTP-nc <sup>1</sup>	CTUh	1.05E-06	1.95E-09	3.10E-11	1.94E-10	5.15E-09	1.41E-09	6.81E-08
 SQP <sup>1</sup>	dimensionless	1.52E+02	3.15E+00	8.00E-03	3.15E-01	5.67E-01	1.34E+00	-2.21E+00

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<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	C1	C2	C3	C4	D	
 PERE	MJ	3.75E+01	3.46E-02	3.41E-04	3.46E-03	2.58E-01	1.36E-01	-2.11E+00	
 PERM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
 PERT	MJ	3.75E+01	3.46E-02	3.41E-04	3.46E-03	2.58E-01	1.36E-01	-2.11E+00	
 PENRE	MJ	4.19E+02	2.75E+00	6.30E-02	2.75E-01	1.47E+00	4.92E-01	-5.86E+00	
 PENRM	MJ	1.25E+01	0.00E+00	0.00E+00	0.00E+00	-1.19E+01	0.00E+00	0.00E+00	
 PENRT	MJ	4.32E+02	2.75E+00	6.30E-02	2.75E-01	-1.04E+01	4.92E-01	-5.86E+00	
 SM	kg	2.40E+00	0.00E+00	3.09E-05	0.00E+00	0.00E+00	3.30E-03	0.00E+00	
 RSF	MJ	1.73E+00	1.21E-03	8.38E-06	1.21E-04	5.71E-03	4.46E-04	2.37E-02	
 NRSF	MJ	6.09E+00	4.06E-03	1.23E-04	4.06E-04	0.00E+00	3.00E-02	6.01E-01	
 FW	m <sup>3</sup>	3.17E-01	3.13E-04	3.24E-06	3.13E-05	1.52E-03	3.86E-04	-3.39E-03	

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	C1	C2	C3	C4	D
 HWD	kg	2.22E-01	1.51E-04	1.85E-06	1.51E-05	0.00E+00	1.60E-01	-3.47E-03
 NHWD	kg	6.41E+00	2.39E-01	7.46E-05	2.39E-02	1.53E-01	4.53E-01	-2.78E-01
 RWD	kg	1.49E-03	1.88E-05	4.38E-07	1.88E-06	0.00E+00	2.23E-07	4.33E-07

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

\*Reading example: 9,0 E-03 = 9,0\*10<sup>-3</sup> = 0,009"

\*INA Indicator Not Assessed

### End of life - Output flow

Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
 CRU	kg	0.00E+00						
 MFR	kg	7.09E-01	0.00E+00	3.04E-05	0.00E+00	2.62E+00	1.16E-05	0.00E+00
 MER	kg	1.56E-01	0.00E+00	9.42E-08	0.00E+00	2.82E-01	2.83E-07	0.00E+00
 EEE	MJ	8.59E-02	0.00E+00	3.23E-07	0.00E+00	2.13E-01	1.83E-05	0.00E+00
 EET	MJ	1.30E+00	0.00E+00	4.89E-06	0.00E+00	3.23E+00	2.78E-04	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\*10<sup>-3</sup> = 0,009"

\*INA Indicator Not Assessed

### Biogenic Carbon Content

Indicator	Unit	At the factory gate
Biogenic carbon content in product	kg C	0.00E+00
Biogenic carbon content in accompanying packaging	kg C	0.00E+00

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	Source	Amount	Unit
Electricity, United Kingdom (kWh)	ecoinvent 3.6	386,67	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

Additional environmental impact indicators required in NPCR Part A for construction products								
Indicator	Unit	A1-A3	A4	C1	C2	C3	C4	D
GWPIOBC	kg CO <sub>2</sub> -eq	2.84E+01	1.69E-01	4.58E-03	1.69E-02	7.31E-01	6.20E-02	-1.01E+00

GWPI-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

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 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.  
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 NPCR 030 Part B for Ventilation components, Ver. 1.0, 18.05.2021, EPD Norway.

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	ECO Platform ECO Portal	web: <a href="http://www.eco-platform.org">www.eco-platform.org</a> web: ECO Portal