epd-norway
Global Program Operator

Environmental Product Declaration

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

ProScreen ZIP 95 - MOTORISED - TUBE63

HunterDouglas

Owner of the declaration:
Hunter Douglas

Product name:
ProScreen ZIP 95 - MOTORISED - TUBE63

Declared unit:
1 m2

Product category /PCR:
PCR Sun protection systems - Institute Construction and Environment e.V.

Program holder and publisher:
The Norwegian EPD foundation

Declaration number:
NEPD-7817-7494-EN

Registration number:
NEPD-7817-7494-EN

Issue date: 17.10.2024

Valid to: 17.10.2029

The Norwegian
EPD Foundation

General information

Product:
ProScreen ZIP 95 - MOTORISED - TUBE63

Program operator:
The Norwegian EPD Foundation
Post Box 5250 Majorstuen, 0303 Oslo, Norway
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Declaration number:
NEPD-7817-7494-EN

This declaration is based on Product Category Rules:
EN 15804:2012+A2:2019 and IBU PCR Part B for Sun Protection Systems

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, life cycle assessment data and evidences.

Declared unit:
The manufacturing, installation, use and end-of-life phases of a 1 m² product with a lifetime of 15 years

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

internal ☐ external ■

Martijn van Hövell (SGS)

Independent verifier approved by EPD Norway

Owner of the declaration:
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Manufacturer:
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Place of production:
Kadan, Czech Republic

Management system:
N/A

Organisation no:
24083218

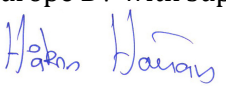
Issue date:
17.10.2024

Valid to:
17.10.2029

Year of study:
2023

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:
Hunter Douglas Europe BV with support from Ecochain BV



Approved Manager of EPD Norway

Product

Product description:

ProScreen Zip is a fully closed exterior motorised roller blind with a high wind load resistance, incorporating small sized headboxes.

Product specification:

The manufacturing of this product comprises injection moulding of the components, sawing of the metal input materials and cutting of the glass fibre fabrics. The product is assembled in Kadan, Czech Republic. This product contains the following materials:

Materials	Value	%
Non-ferro metals (aluminium and zinc)	1.91 kg	36%
Steel	2.48 kg	46%
Cardboard/paper	0.04 kg	1%
Plastics	0.31 kg	6%
Other	0.63 kg	12%

Technical data:

Internal heat gain reduction up to 90%, internal light level reduction up to 97%, wind load resistance up to 27 m/s (TÜV tested in accordance with NEN-EN 13561). Meets product standard NEN-EN 13561.

Market:

Europe

Reference service life, product:

15 years

Reference service life, building:

N/A

Additional technical information

The product complies with the REACH regulation and the RoHS directive 2011/65/EU, 2015/863 et 201/2102.

LCA: Calculation rules

Declared unit:

1 m² with lifetime of 15 years. Installation materials and wiring from motor to the power source are excluded from the scope of this EPD.

Cut-off criteria:

All relevant inputs and outputs - like emissions, energy and materials - have been accounted for. In accordance with EN15804, the total neglected input flows per module do not exceed 5% of energy use and mass.
Capital goods in the supply chain are not considered due the their limited impact. Capital goods within the Ecoinvent data sets are automatically included.

Allocation:

Allocation was carried out in accordance with the provisions of the EN15804. All manufacturing inputs (energy and auxiliary materials) at production site level are allocated to different production processes. This is followed by allocation the production processes to the products produced using these processes through mass allocation. No secondary materials have been used in the production process. This EPD includes all input and output flows as required by EPD Norge and the PCR Sun protection systems (IBU).

Data quality:

In module A1, specific data provided by the manufacturers for product compositions are used with motor data derived from the PEP EPD no. SOMF-00136-V01.02-EN (2023). For module A2, transportation data for raw materials to the production site was collected. Module A3 accounts for energy consumption during product assembly, based on data from the 2022 production year.

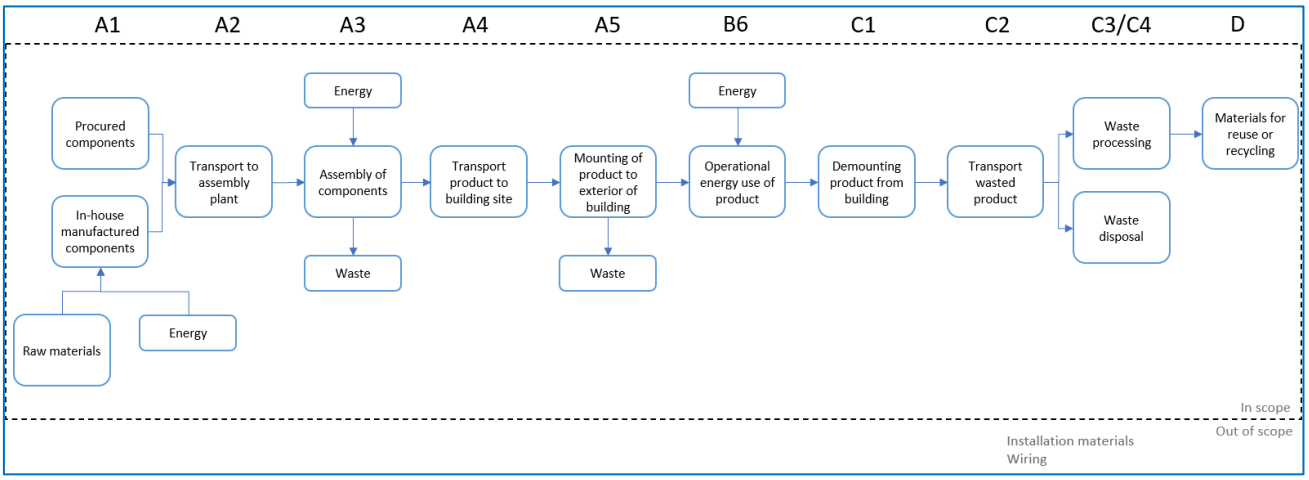
Background processes for the assessment are sourced from the Ecoinvent 3.6 database.

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	MND	MND	MND	MND	MND	X	MND	X	X	X	X	X

System boundary:

A simplified overview of the system boundaries is depicted in the following flowchart:



LCA: Scenarios and additional technical information

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

The product stage (A1-A3) comprises all procured raw materials and components as well as internal manufacturing processes including transport within these modules.

Transport from production place to user (A4)

Transport from production place to assembly/user (A4)	Capacity utilisation (incl. return) %	Distance (km)	Fuel/Energy consumption	Unit	Value
Truck	50	1350	0.033	l/tkm	44.6

This transport activity is classified under the following EcoInvent reference: Transport, freight, lorry, all sizes, EURO5 to generic market for transport, freight, lorry, unspecified, Europe. This reference adopts a load factor of 50% meaning that it considers both a fully loaded truck on the outbound journey and an empty truck returning.

Installation (A5)

	Unit	Value
Electricity consumption	kWh	0.11
Output materials from waste treatment	kg	0.35

To install the product on the exterior façade of a building, an electrical cordless drill is utilized, along with a scissor lift for working at heights.
The packaging materials released in this module entail paper, carboard and plastic foil and plastic binders.

Use (B1), maintenance (B2), repair (B3), replacement (B4), refurbishment (B5)

No impacts to report in these modules.

Operational energy (B6)

	Unit	Value
Electricity consumption	kWh	79.5

The exterior roller blind's motor consumes energy both during operation and in standby mode. Energy data were sourced from the Product Environmental Profile (PEP) of the most commonly used motor of one of our suppliers. The total energy consumption was determined during the use phase over the entire 15-year lifetime.
During the use phase the product contributes to energy savings by preventing sunlight from entering the building when lowered in warm periods (summer), reducing the need for air conditioning. Conversely it allows sunlight in during colder periods (winter), thereby reducing the need for additional heating. Resulting energy saving calculations haven't been included in this EPD.

End of Life (C1, C3, C4)

	Unit	Value
Electricity consumption	kWh	0.11
Recycling	kg	4.18

Incineration	kg	0.94
To landfill	kg	0.24

For the deinstallation process (C1), the same energy figures could be applied as those determined for the installation process as it involves the same steps but in reverse order.
For processing the waste streams of the product, the NMD (Dutch Nationale Milieudatabase) end-of-life scenarios specific for each material type were applied. Waste streams are recycled, incinerated (both C3) or put into a landfill (C4).

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	50	150	0.034	l/tkm	5.1

After deinstallation the waste streams are transported to the waste processing location situated at a proxy distance of 150km using the following Ecoinvent v3.6 reference: “Market for transport, freight, lorry, unspecified | transport, freight, lorry, unspecified | Cutoff, U. Europe.

Benefits and loads beyond the system boundaries (D)

Benefits and loads beyond the system boundaries (D)	Unit	Value
Heat recovery benefits	MJ	10.8
Electricity recovery benefits	MJ	4.4
Net output of secondary materials - aluminium	kg	1.80
Net output of secondary materials - steel	kg	1.72
Net output of secondary materials - plastic foil	kg	0.001
Net output of secondary materials - wood	kg	0.012
Net output of secondary materials - cardboard/paper	kg	0.012

The benefits and net output of secondary materials reflect the positive effects of diverting waste from landfill and utilizing it in subsequent product life cycles, such as recovering energy from incineration or recycling materials like metals and plastics, which can be used as secondary raw materials in other processes.

LCA: Results

The table contains the results of the LCA calculations for the ProScreen ZIP 95 - MOTORISED - TUBE63 following the EN15804+A2 standard.

Core environmental impact indicators

Indicator	Unit	A1-A3	A4	A5	B6	C1	C2	C3	C4	D
GWP - total	kg CO2 eq	3.27E+01	9.41E-01	5.31E+00	1.18E-01	7.40E-04	2.41E-02	3.79E-01	2.49E-02	-6.50E+00
GWP - fossil	kg CO2 eq	3.77E+01	9.41E-01	9.47E-03	1.18E-01	7.37E-04	2.41E-02	3.79E-01	2.49E-02	-6.42E+00
GWP - biogenic	kg CO2 eq	-5.28E+00	0.00E+00	5.30E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
GWP - luluc	kg CO2 eq	3.24E-01	3.26E-04	4.74E-05	4.88E-04	3.04E-06	8.53E-06	7.88E-05	1.83E-07	-7.60E-02
ODP	kg CFC11 eq	3.48E-06	2.16E-07	-1.30E-09	8.11E-09	5.05E-11	5.55E-09	1.10E-08	1.19E-10	-4.30E-07
AP	molc H+ eq	2.66E-01	3.88E-03	1.36E-04	9.24E-04	5.76E-06	1.37E-04	7.52E-04	6.07E-06	-3.66E-02
EP-freshwater	kg P eq	1.71E-03	7.65E-06	1.32E-06	8.51E-06	5.30E-08	1.98E-07	4.46E-06	7.46E-09	-1.89E-04
EP -marine	kg N eq	3.66E-02	1.15E-03	5.46E-05	1.02E-04	6.33E-07	4.91E-05	1.54E-04	2.68E-06	-5.07E-03
EP - terrestrial	molc N eq	4.94E-01	1.27E-02	4.47E-04	1.32E-03	8.24E-06	5.41E-04	1.76E-03	2.80E-05	-5.70E-02
POCP	kg NMVOC eq	1.30E-01	3.98E-03	1.39E-04	3.56E-04	2.22E-06	1.55E-04	4.82E-04	8.27E-06	-2.03E-02
ADP-M&M[2]	kg Sb-Eq	1.58E-02	2.35E-05	5.60E-07	8.82E-06	5.49E-08	6.23E-07	2.91E-06	8.81E-09	-3.99E-05
ADP-fossil[2]	MJ	5.49E+02	1.44E+01	-9.88E-01	1.62E+00	1.01E-02	3.70E-01	1.15E+00	9.58E-03	-7.34E+01
WDP[2]	m[3]	1.50E+01	4.43E-02	3.61E-03	1.23E-01	7.67E-04	1.14E-03	1.57E-02	1.11E-04	-1.27E+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 = 0,009

Additional environmental impact indicators

Indicator	Unit	A1-A3	A4	A5	B6	C1	C2	C3	C4	D
PM	Disease incidence	2.47E-06	7.25E-08	2.21E-09	6.63E-09	4.13E-11	2.17E-09	8.96E-09	1.09E-10	-4.68E-07
IRP1	kBq U235 eq.	3.02E+01	6.28E-02	2.14E-03	2.93E-02	1.83E-04	1.62E-03	4.91E-03	4.55E-05	-2.22E-01
ETP-fw2	CTUe	1.64E+03	1.16E+01	5.86E-02	7.31E+00	4.55E-02	3.00E-01	4.24E+00	8.09E+00	-1.75E+02
HTP-c2	CTUh	1.26E-06	3.19E-10	2.70E-11	3.51E-10	2.19E-12	1.07E-11	1.16E-10	4.13E-12	-2.12E-08
HTP-nc2	CTUh	1.68E-06	1.29E-08	9.37E-10	8.23E-09	5.13E-11	3.58E-10	4.95E-09	5.47E-11	-2.02E-07
SQP2	Dimensionless	1.75E+02	1.26E+01	1.24E+00	9.45E-01	5.88E-03	3.16E-01	1.27E+00	1.37E-02	-1.28E+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	B6	C1	C2	C3	C4	D
RPEE	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
RPEM	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
TPE	MJ	4.62E+02	8.98E-01	-1.26E+02	9.21E+01	5.73E-01	2.33E-02	5.71E-01	3.05E-03	-1.24E+02
NRPE	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

NRPM	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
TRPE	MJ	2.13E+03	6.71E+01	-2.18E+01	7.37E+00	4.59E-02	1.73E+00	5.40E+00	4.49E-02	-3.47E+02
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
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
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
W	m^3	3.01E+00	7.16E-03	1.33E-02	6.88E-01	4.28E-03	1.84E-04	3.26E-03	3.96E-05	-3.30E-01

RPEE *Renewable primary energy resources used as energy carrier;* ***RPEM*** *Renewable primary energy resources used as raw materials;* ***TPE*** *Total use of renewable primary energy resources;* ***NRPE*** *Non-renewable primary energy resources used as energy carrier;* ***NRPM*** *Non-renewable primary energy resources used as materials;* ***TRPE*** *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;* ***W*** *Use of net fresh water.*

End of life – Waste

Parameter	Unit	A1-A3	A4	A5	B6	C1	C2	C3	C4	D
HW	kg	3.09E-02	1.61E-04	-2.77E-05	8.91E-06	5.55E-08	4.16E-06	1.19E-02	1.54E-07	-5.86E-04
NHW	kg	3.84E+01	4.05E+00	9.46E-01	5.48E-01	3.41E-03	1.01E-01	2.09E-01	7.71E-02	-8.25E+00
RW	kg	7.45E-03	4.30E-04	-2.29E-05	6.37E-05	3.96E-07	1.11E-05	2.44E-05	2.43E-07	-8.20E-04

HW *Hazardous waste disposed;* ***NHW*** *Non-hazardous waste disposed;* ***RW*** *Radioactive waste disposed.*

End of life – output flow

Parameter	Unit	A1-A3	A4	A5	B6	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
MR	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
MER	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
EEE	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
ETE	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

CR *Components for reuse;* ***MR*** *Materials for recycling;* ***MER*** *Materials for energy recovery;* ***EEE*** *Exported electric energy;* ***ETE*** *Exported thermal energy.*

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	0.15

Additional requirements

Location based electricity mix from the use of electricity in manufacturing

A location-based approach is used, applying the national production mix from imports, low voltage electricity (production of transmission lines, in addition to direct emissions and losses in grid) for the manufacturing process (foreground/core) per declared unit.

National electricity grid	Data source	Foreground / core [kWh]	GWP_{total} [kg CO2 - eq/kWh]	SUM [kg CO2 - eq]
The Netherlands	Plant	0.10	0.18	0.02
Czech Republic	Plant	0.64	0.26	0.2

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	B6	C1	C2	C3	C4	D
GWP-IOBC	kg	3.52E+01	9.42E-01	4.58E-02	1.22E-01	7.59E-04	2.41E-02	3.80E-01	2.49E-02	-6.51E+00

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

Hazardous substances

The declaration is based upon reference to threshold values and/or test results and/or material safety data sheets provided to EPD verifiers. Documentation available upon request to EPD owner. The product contains no substances given by the REACH Candidate list.

Indoor environment

The product meets the requirements for low emissions.

Carbon footprint

Carbon footprint has not been worked out for the product.

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 21930:2007	Sustainability in building construction - Environmental declaration of building products

[Text]

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