epd-norge
Global program operatør

Environmental product declaration

in accordance with ISO 14025 and EN 15804+A2

Milo Family

MILO
Böttcher & Kayser

JOHANSON

The Norwegian EPD Foundation

Owner of the declaration:
Johanson Design AB

Product:
Milo Family

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:

NEPD-8812-8472

Registration number:

NEPD-8812-8472

Issue date: 23.01.2025

Valid to: 23.01.2030

EPD software:
LCAno EPD generator ID: 769887

General information

Product

Milo Family

Owner of the declaration:

Johanson Design AB
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Program operator:

The Norwegian EPD Foundation
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Manufacturer:

Johanson Design AB

Declaration number:

NEPD-8812-8472

Place of production:

Johanson Design AB
Anders Anderssons väg 7
285 35 Markaryd, Sweden

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

Management system:

ISO 14001

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.

Organisation no:

SE556358520601

Declared unit:

1 pcs Milo Family

Issue date:

23.01.2025

Declared unit (cradle to gate) with option:

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

Valid to:

23.01.2030

Year of study:

2024

Functional unit:

MILO is a armchair and footstool with fluid lines and a distinctive identity. It adapts to various settings, ideal for relaxation or communication. Designed for longevity, its covers are easily replaceable, and the upholstery invites users to linger.

Comparability:

EPD of construction products may not be comparable if they not comply with EN 15804 and seen in a building context.

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

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: Lucas Carlsson

Reviewer of company-specific input data and EPD: Sandra Rube

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)

Approved:

Håkon Hauan
Managing Director of EPD-Norway

Product

Product description:

With its welcoming embrace and fluid lines MILO is a timeless armchair and footstool with a personality that's sure to make it a discreet focus of attention in any room. The armchair comes in three models with a matching footstool. The design is characterised by clear, flowing lines, soft yet well-defined contours, a seat shell with an iconic form and a well-coordinated backrest that all combine to give the chair a distinctive identity that is very much at home in today's design landscape. "MILO can adopt a range of different personalities and adapts easily to a wide variety of settings, purposes and conditions. It is ideal both as a solitaire for relaxation and reflection, and grouped to provide a setting for effective communication in open-plan offices, hotel lobbies or lounges," say Böttcher & Kayser.

During the manufacturing process considerable emphasis was placed on constructing an item of furniture with the potential to be simply re-used by easily replacing the covers if they become tired
and worn. The padding on the outside of the arms is held firmly in place, but the inside is more loosely upholstered to accentuate the soft, welcoming qualities that invite users to linger a little longer.

Product specification

This declaration focuses on an in-depth study of Milo Low 03

The table on page 12 of this declaration provides the key environmental indicators for the other models within the product family

Materials	kg	%	Recycled share in material (kg)	Recycled share in material (%)
Plastic - Nylon (PA)	0,00	0,03	0,00	0,00
Plastic - Polyethylene (LDPE)	0,01	0,07	0,00	0,00
Powder coating	0,06	0,44	0,00	0,00
Metal - Aluminium	3,46	25,36	3,36	97,00
Metal - Steel	4,81	35,26	0,96	20,00
Plastic - Polyurethane (PUR)	4,09	29,98	0,00	0,00
Textile - Recycled polyester	1,09	8,01	1,09	100,00
Wood - Plywood	0,12	0,84	0,00	0,00
Total	13,64	100,00	5,41	

Packaging	kg	%	Recycled share in material (kg)	Recycled share in material (%)
Packaging - Cardboard	0,45	12,00	0,00	0,00
Recycled cardboard	3,30	88,00	3,30	100,00
Total incl. packaging	17,39	100,00	8,71	

Technical data:

Volume 0.46 m^3 - (excluding packaging)

Volume 0.51 m^3 - (including packaging)

Total height 80 cm
Total width 80 cm
Total depth 80 cm

Seat height 42 cm
Seat width 52 cm
Seat depth 46 cm

Complied with technical standards:
EN 16139:2013 Furniture - Strength, durability and safety - Requirements for non-domestic seating
Möbelfakta certified

You can find all certifications and test results here:
https://johansondesign.com/downloads/certificate

Market:

World Wide

Reference service life, product

15 years (5 year warranty)

Reference service life, building

LCA: Calculation rules

Declared unit:

1 pcs Milo Family

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.

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.
Fabric used in the calculation is Camira Oceanic, a 100% post-consumer recycled polyester

A3 Data Collection (Production Phase)
Data for the A3 module, encompassing the production phase, was collected in 2020. This data includes all relevant inputs and outputs associated with manufacturing processes.

A4 Data Collection (Transport to Customer)
Transport data for the A4 module was sourced from Trafa.se and reflects operations during the years 2021-2022. According to statistics from Trafikanalys, the average distance covered by a Swedish heavy-duty truck transporting furniture in domestic traffic was approximately 143 kilometers in 2022, with an average of 153 kilometers for the period 2012–2022. These values are based on representative industry conditions and account for the most recent data on logistics efficiency and route optimization.

A5 Data (Packaging Disposal)
For the A5 module, it is assumed that packaging materials are automatically handled and disposed of in alignment with standard waste management practices at this stage. This assumption aligns with typical end-of-life scenarios for packaging in regulated waste systems.

Maintenance Data (B2 Module)
Maintenance requirements are calculated based on typical cleaning scenarios over the product's lifespan, assumed to be 15 years:

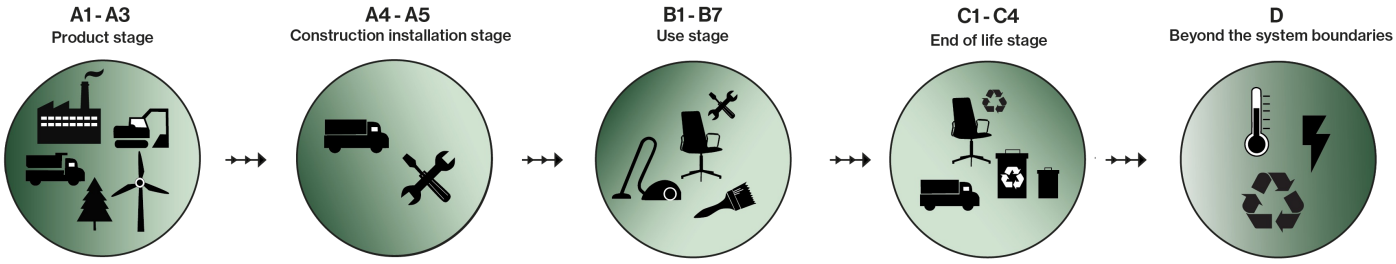
Vacuum cleaning: Energy consumption is calculated assuming a 900 W vacuum cleaner operating for 30 seconds per week over 15 years.
Wet cleaning: Water consumption is estimated at 0.0005 m^3 (equivalent to 0.5 liters) per cleaning session, with cleaning occurring once per week for 15 years.

Materials	Source	Data quality	Year
Metal - Aluminium	ecoinvent 3.6	Database	2019
Metal - Steel	ecoinvent 3.6	Database	2019
Packaging - Cardboard	Modified ecoinvent 3.6	Database	2019
Plastic - Nylon (PA)	ecoinvent 3.6	Database	2019
Plastic - Polyethylene (LDPE)	ecoinvent 3.6	Database	2019
Plastic - Polyurethane (PUR)	ecoinvent 3.6	Database	2019
Powder coating	ecoinvent 3.6	Database	2019
Recycled cardboard	Modified ecoinvent 3.6	Database	2019
Textile - Recycled polyester	SCS-EPD-08784	EPD	2020
Wood - Plywood	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	MND	MND	MND	X	X	X	X	X

System boundary:



Additional technical information:

To achieve the best possible climate footprint, it's essential to take care of your furniture. The longer you maintain and care for your products, the better it is for the environment. Use our care instructions for optimal results.

You find it here:
https://johansondesign.com/downloads

Johanson Design is a company committed to sustainability and holds various certifications that underscore its dedication to environmental responsibility and quality.

Environmental Management System (ISO 14001):
Johanson has implemented an Environmental Management System (EMS) in accordance with ISO 14001 standards. This certification demonstrates the company's commitment to minimizing its environmental impact by systematically identifying, managing, and reducing its environmental footprint across all aspects of its operations.

FSC Certification:
Johanson sources its wood materials from responsibly managed forests certified by the Forest Stewardship Council (FSC). This certification ensures that the wood used in its products is harvested in an environmentally and socially responsible manner, promoting the conservation of forests and the well-being of forest-dependent communities.

Möbelfakta Certification:
Johanson products meet the standards set by Möbelfakta, a certification system for furniture. Möbelfakta evaluates products based on criteria such as quality, environment, and social responsibility, ensuring that certified products meet rigorous sustainability and performance standards.

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, 16-32 tonnes, EURO 6 (km)	36,7 %	143	0,043	l/tkm	6,15

Assembly (A5)	Unit	Value			
Waste, packaging, corrugated board box, 0 % recycled, to average treatment (kg)	kg	0,45			
Waste, packaging, cardboard, 100 % recycled, to average treatment (kg)	kg	3,30			

Maintenance (B2)	Unit	Value			
Water, tap water (m3)	m3	0,39			
Electricity, Sweden (kWh)	kWh	5,85			
Waste, hazardous waste, to average treatment (kg)	kg	0,075			

Repair (B3)	Unit	Value			
Varnish (kg)	kg	0,075			

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 Wood, incineration with fly ash extraction (kg)	kg	0,11			
Waste treatment per kg Polyurethane (PU), incineration (kg)	kg	4,090			
Waste, materials to recycling (kg)	kg	1,99			
Waste treatment per kg Scrap steel, incineration with fly ash extraction (kg)	kg	4,81			
Waste treatment per kg Polyethylene, PE, incineration with fly ash extraction - C3 (kg)	kg	0,010			
Waste treatment per kg Plastics, Mixture, municipal incineration with fly ash extraction (kg)	kg	0,0040			
Waste treatment per kg Scrap aluminium, incineration with fly ash extraction (kg)	kg	3,46			
Waste treatment per kg Non-hazardous waste, incineration with fly ash extraction - C3 (kg)	kg	0,060			

Disposal (C4)	Unit	Value			
Landfilling of ashes from incineration of Wood, process per kg ashes and residues (kg)	kg	0,0013			
Landfilling of ashes from incineration of Polyurethane (PU), process per kg ashes and residues - C4 (kg)	kg	0,15			
Landfilling of ashes and residues from incineration of Scrap steel (kg)	kg	3,17			
Landfilling of ashes from incineration of Polyethylene, PE, process per kg ashes and residues - C4 (kg)	kg	0,00035			
Landfilling of ashes and residues from incineration of Scrap aluminium (kg)	kg	3,10			
Landfilling of ashes from incineration of Non-hazardous waste, process per kg ashes and residues - C4 (kg)	kg	0,014			
Landfilling of ashes from incineration of Plastics, Mixture, municipal incineration with fly ash extraction, process per kg ashes and residues - C4 (kg)	kg	0,00013			

Benefits and loads beyond the system boundaries (D)	Unit	Value			
Substitution of thermal energy, district heating, in Norway (MJ)	MJ	89,11			
Substitution of electricity, in Norway (MJ)	MJ	5,89			
Substitution of primary steel with net scrap (kg)	kg	1,30			
Substitution of primary aluminium with net scrap (kg)	kg	0,010			

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	6,04E+01	4,07E-01	6,43E+00	5,45E-01	1,60E-01
	GWP-fossil	kg CO_2 -eq	6,55E+01	4,06E-01	6,07E-02	5,18E-01	1,60E-01
	GWP-biogenic	kg CO_2 -eq	-5,17E+00	1,68E-04	6,37E+00	7,06E-03	6,42E-04
	GWP-luluc	kg CO_2 -eq	8,74E-02	1,45E-04	2,01E-05	1,95E-02	1,29E-04
	ODP	kg CFC11 -eq	4,20E-06	9,20E-08	1,28E-08	1,67E-07	1,60E-08
	AP	mol H+ -eq	3,31E-01	1,17E-03	2,87E-04	2,86E-03	2,09E-03
	EP-FreshWater	kg P -eq	4,70E-03	3,25E-06	4,98E-07	3,29E-05	8,08E-06
	EP-Marine	kg N -eq	7,09E-02	2,31E-04	9,50E-05	4,84E-04	1,61E-04
	EP-Terrestial	mol N -eq	6,60E-01	2,58E-03	1,03E-03	6,12E-03	1,68E-03
	POCP	kg NMVOC -eq	2,15E-01	9,90E-04	2,96E-04	1,55E-03	6,27E-04
	ADP-minerals&metals[1]	kg Sb-eq	1,45E-02	1,12E-05	1,48E-06	1,59E-05	3,78E-06
	ADP-fossil[1]	MJ	9,68E+02	6,14E+00	8,49E-01	3,74E+01	2,77E+00
	WDP[1]	m^3	3,47E+03	5,94E+00	1,08E+00	3,56E+03	9,91E+00

Indicator		**Unit**	B4	C1	C2	C3	C4	D
	GWP-total	kg CO_2 -eq	0	0	2,42E-01	1,14E+01	8,06E-02	-2,07E+00
	GWP-fossil	kg CO_2 -eq	0	0	2,42E-01	1,12E+01	8,05E-02	-2,05E+00
	GWP-biogenic	kg CO_2 -eq	0	0	1,00E-04	1,93E-01	5,79E-05	-2,30E-03
	GWP-luluc	kg CO_2 -eq	0	0	8,60E-05	7,43E-05	2,26E-05	-2,03E-02
	ODP	kg CFC11 -eq	0	0	5,47E-08	5,90E-08	2,27E-08	-3,76E-02
	AP	mol H+ -eq	0	0	6,94E-04	9,96E-03	5,30E-04	-1,20E-02
	EP-FreshWater	kg P -eq	0	0	1,93E-06	4,36E-06	8,43E-07	-1,38E-04
	EP-Marine	kg N -eq	0	0	1,37E-04	5,53E-03	1,87E-04	-2,95E-03
	EP-Terrestial	mol N -eq	0	0	1,54E-03	5,31E-02	2,07E-03	-3,10E-02
	POCP	kg NMVOC -eq	0	0	5,88E-04	1,26E-02	5,95E-04	-1,17E-02
	ADP-minerals&metals[1]	kg Sb-eq	0	0	6,67E-06	2,21E-06	1,26E-06	-2,98E-05
	ADP-fossil[1]	MJ	0	0	3,65E+00	4,85E+00	1,69E+00	-2,07E+01
	WDP[1]	m^3	0	0	3,53E+00	1,48E+01	4,19E+00	-7,23E+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	4,24E-06	2,49E-08	4,24E-09	2,28E-08	9,11E-09
	IRP[2]	kgBq U235 -eq	2,44E+00	2,69E-02	3,63E-03	1,21E+00	8,89E-03
	ETP-fw[1]	CTUe	2,66E+03	4,55E+00	1,13E+00	2,26E+01	3,78E+00
	HTP-c[1]	CTUh	1,43E-07	0,00E+00	3,40E-11	9,97E-10	4,26E-10
	HTP-nc[1]	CTUh	1,74E-06	4,98E-09	1,42E-09	2,16E-08	3,36E-09
	SQP[1]	dimensionless	3,49E+02	4,30E+00	5,69E-01	1,63E+01	9,58E-01

Indicator		Unit	B4	C1	C2	C3	C4	D
	PM	Disease incidence	0	0	1,48E-08	4,31E-08	9,46E-09	-3,84E-07
	IRP[2]	kgBq U235 -eq	0	0	1,60E-02	7,73E-03	6,85E-03	-4,73E-02
	ETP-fw[1]	CTUe	0	0	2,71E+00	4,77E+01	1,12E+00	-1,22E+02
	HTP-c[1]	CTUh	0	0	0,00E+00	9,89E-10	4,20E-11	-7,89E-09
	HTP-nc[1]	CTUh	0	0	2,96E-09	3,26E-08	1,24E-09	1,09E-07
	SQP[1]	dimensionless	0	0	2,55E+00	5,67E-01	3,74E+00	-5,03E+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	1,45E+02	8,79E-02	1,40E-02	1,71E+01	2,35E-01
	PERM	MJ	3,14E+01	0,00E+00	-2,65E+01	0,00E+00	0,00E+00
	PERT	MJ	1,76E+02	8,79E-02	-2,65E+01	1,71E+01	2,35E-01
	PENRE	MJ	8,72E+02	6,14E+00	8,49E-01	3,75E+01	2,77E+00
	PENRM	MJ	1,83E+02	0,00E+00	0,00E+00	0,00E+00	7,61E-01
	PENRT	MJ	1,06E+03	6,14E+00	8,49E-01	3,75E+01	3,53E+00
	SM	kg	8,71E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	RSF	MJ	1,05E+00	3,15E-03	4,63E-04	9,09E-02	8,97E-03
	NRSF	MJ	1,81E+00	1,12E-02	1,91E-03	2,33E-01	2,24E-03
	FW	m^3	1,13E+00	6,57E-04	4,00E-04	4,31E-01	4,09E-03

Indicator		**Unit**	B4	C1	C2	C3	C4	D
	PERE	MJ	0	0	5,23E-02	1,39E-01	3,54E-02	-4,71E+01
	PERM	MJ	0	0	0,00E+00	-4,93E+00	0,00E+00	0,00E+00
	PERT	MJ	0	0	5,23E-02	-4,79E+00	3,54E-02	-4,71E+01
	PENRE	MJ	0	0	3,65E+00	4,86E+00	1,69E+00	-2,07E+01
	PENRM	MJ	0	0	0,00E+00	-1,83E+02	0,00E+00	0,00E+00
	PENRT	MJ	0	0	3,65E+00	-1,79E+02	1,69E+00	-2,07E+01
	SM	kg	0	0	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	RSF	MJ	0	0	1,87E-03	3,27E-03	9,28E-04	4,37E-02
	NRSF	MJ	0	0	6,69E-03	0,00E+00	4,81E-02	-1,19E+00
	FW	m^3	0	0	3,91E-04	1,67E-02	1,52E-03	-6,04E-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	6,61E+00	3,17E-04	0,00E+00	7,72E-02	6,29E-04
	NHWD	kg	1,16E+01	2,99E-01	3,75E+00	1,42E-01	7,35E-02
	RWD	kg	2,59E-02	4,18E-05	0,00E+00	5,37E-04	8,86E-06

Indicator		Unit	B4	C1	C2	C3	C4	D
	HWD	kg	0	0	1,88E-04	0,00E+00	6,39E+00	-7,41E-03
	NHWD	kg	0	0	1,78E-01	6,00E-02	1,56E-01	-7,90E-01
	RWD	kg	0	0	2,49E-05	0,00E+00	1,04E-05	-3,97E-05

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	B3
	CRU	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	MFR	kg	4,22E-02	0,00E+00	3,49E+00	1,59E-02	0,00E+00
	MER	kg	6,99E-02	0,00E+00	5,11E-06	3,58E-02	0,00E+00
	EEE	MJ	4,54E-02	0,00E+00	2,14E-01	4,38E-05	0,00E+00
	EET	MJ	6,86E-01	0,00E+00	3,24E+00	6,63E-04	0,00E+00

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	1,99E+00	0,00E+00	0,00E+00
	MER	kg	0	0	0,00E+00	1,26E+01	0,00E+00	0,00E+00
	EEE	MJ	0	0	0,00E+00	6,10E+00	0,00E+00	0,00E+00
	EET	MJ	0	0	0,00E+00	9,24E+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*10-3 = 0,009"
*INA Indicator Not Assessed

Biogenic Carbon Content

Indicator	Unit	At the factory gate
Biogenic carbon content in product	kg C	5,23E-02
Biogenic carbon content in accompanying packaging	kg C	1,74E+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, Sweden (kWh)	ecoinvent 3.6	54,94	g CO2-eq/kWh

Dangerous substances

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

Indoor environment

Additional Environmental Information

Key Environmental Indicators

Key environmental indicators	Unit	A1-A3	A4	A1-C4	A1-D
GWPtotal	kg CO_2 -eq	60,41	0,41	79,68	77,61
Total energy consumption	MJ	1020,07	6,25	1095,56	1026,67
Amount of recycled materials	%	49,63			

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	6,69E+01	4,07E-01	6,07E-02	5,44E-01	1,60E-01

Indicator	Unit	B4	C1	C2	C3	C4	D
GWPIOBC	kg CO_2 -eq	0	0	2,42E-01	1,12E+01	8,13E-02	-2,77E+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.

Variants and Options

Key environmental indicators (A1-A3) for variants of this EPD				
Variants	Weight (kg)	GWPtotal (kg CO_2 -eq)	Total energy consumption (MJ)	Amount of recycled materials (%)
Milo Low 03	17,40	60,41	1020,07	50,09
Milo Low 08	15,35	63,09	1081,18	36,78
Milo Low 09	15,85	65,75	1120,96	36,25
Milo High 03	21,07	69,30	1223,30	50,79
Milo High 08	19,04	72,10	1286,91	40,06
Milo High 09	19,54	74,75	1326,70	39,55
Milo Wing 03	21,85	73,81	1290,04	49,59
Milo Wing 08	19,79	76,49	1351,06	39,21
Milo Wing 09	20,29	79,14	1390,85	38,74

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