epd-global
Powered by EPD-Norway

Environmental product declaration

in accordance with ISO 14025 and EN 15804+A2

Naturiq Balance course 15 parts

EPD-Global

Owner of the declaration:
Lekolar

Product:
Naturiq Balance course 15 parts

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:
EPD-Global

Declaration number:
NEPD-14169-14504

Issue date:
21.11.2025

Valid to:
21.11.2030

EPD software:
LCAno EPD generator ID: 1316065

General information

Product

Naturiq Balance course 15 parts

Owner of the declaration:

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Program operator:

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Manufacturer:

Lekolar

Declaration number:

NEPD-14169-14504

Place of production:

Lekolar
Hallarydsvägen 8
283 36 Osby, 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 27001, ISO 9001:2015, ISO 45001:2018, ISO 14001:2015

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 information, life cycle assessment data and evidences.

Organisation no:

556605-0646

Declared unit:

1 pcs Naturiq Balance course 15 parts

Issue date:

21.11.2025

Declared unit (cradle to gate) with option:

A1-A3, A4, A5, C1, C2, C3, C4, D

Valid to:

21.11.2030

Year of study:

2024

Functional unit:

Not relevant

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-Global'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-Global, and iii) the process is reviewed annually by an independent third party verifier. See Appendix G of EPD-Global'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-Global.

Developer of EPD: Frida Andersson

Reviewer of company-specific input data and EPD: Hanna Bremander

Verification of EPD tool:

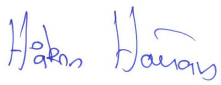
Independent third party verification of the EPD tool, background data and test-EPD in accordance with EPD-Global's procedures and guidelines for verification and approval of EPD tools.

Third party verifier:

Elisabet Amat, GREENIZE projects

(no signature required)

Approved:



Håkon Hauan, CEO EPD-Global

Product

Product description:

The balance course gives a soft and natural impression and blends beautifully into the outdoor environment. As children make their way along the obstacle course, their balance, coordination, and body awareness are challenged. Age group: 3+

It is delivered in separate components for on-site assembly and complies with relevant safety requirements for playground equipment.

Product specification

The product is suitable for outdoor installation and intended for use by children in playground environments. Its made from FSC-certified Robinia, a wood species with high resistance to weather exposure. It absorbs minimal water and stands out for its extremely long durability.

Materials	kg	%	Recycled share in material (kg)	Recycled share in material (%)
Metal - Stainless steel	17.00	2.62	3.71	21.83
Metal - Steel	2.00	0.3077	0.00	0.00
Plastic - Polyethylene (HDPE)	25.00	3.85	0.00	0.00
Plastic - Polypropylene (PP)	18.00	2.77	0.00	0.00
Wood - Solid ash	588.00	90.46	0.00	0.00
Total	650.00	100.00	3.71	

Packaging	kg	%	Recycled share in material (kg)	Recycled share in material (%)
Packaging - Paper	0.80	66.67	0.00	0.00
Packaging - Plastic straps	0.40	33.33	0.00	0.00
Total incl. packaging	651.20	100.00	3.71	

Technical data:

The product is designed and manufactured for compliance with EN 1176 requirements for playground equipment.

Market:

Nordic

Reference service life, product

15 years

Reference service life, building

LCA: Calculation rules

Declared unit:

1 pcs Naturiq Balance course 15 parts

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.

Materials	Source	Data quality	Year
Metal - Stainless steel	ecoinvent 3.6	Database	2019
Metal - Steel	ecoinvent 3.6	Database	2019
Packaging - Paper	ecoinvent 3.6	Database	2019
Packaging - Plastic straps	ecoinvent 3.6	Database	2019
Plastic - Polyethylene (HDPE)	ecoinvent 3.6	Database	2019
Plastic - Polypropylene (PP)	ecoinvent 3.6	Database	2019
Wood - Solid ash	modified ecoinvent 3.6	Database	2019

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

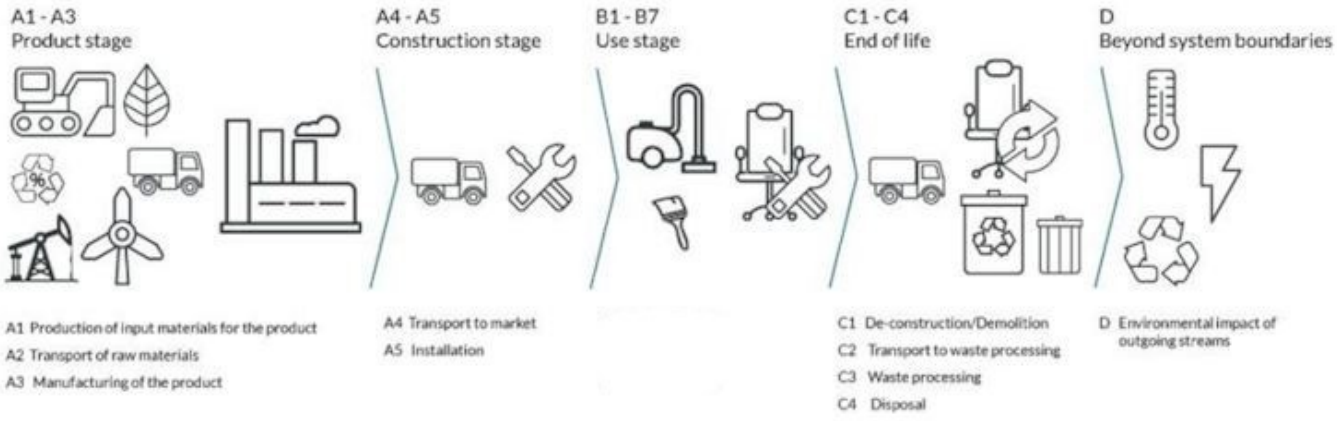
Product stage			Construction installation stage		Use stage							End of life stage				Beyond the system boundaries
Raw materials	Transport	Manufacturing	Transport	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	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	MND	MND	MND	MND	MND	MND	X	X	X	X	X

System boundary:

This EPD covers the product stage (A1–A3) and packaging-related impacts in A5. The flowchart illustrates the system boundaries for the analysis.

Modules A1–A3 include the extraction and processing of raw materials, transport to the production site, and manufacturing of the finished product. Module A5 includes end-of-life treatment of packaging materials only. These impacts are calculated automatically based on predefined assumptions. As this EPD represents only the production stage (A1–A3), the use-stage modules (B1–B7) are not declared.

For the End-of-life stage (C1-C4 and D), no activity for the deconstruction of the product is considered. After disassembly, the product is transported to a waste collection facility. The scenario for End-of-life treatment is solely based on default assumptions and generic datasets. Burdens associated with incineration and recycling are allocated to Module C3, whereas burdens associated with landfilling are allocated to Module C4.



Additional technical information:

LCA: Scenarios and additional technical information

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

This EPD declares only the product stage (A1–A3) and packaging-related impacts in A5.
No installation, use-stage, maintenance, or replacement scenarios are included.
A1–A3 Product stage:
Raw materials are extracted and processed (A1), transported to the manufacturing facility (A2), and assembled into the final product (A3). Energy and ancillary materials used in production are included. In A3, the energy use covers waste, manufacturing, heating of facilities, and packaging of the product.

A4 – Transport to site (assumed):
Transport to the customer is based on generic data of 300 km.

A5 (Packaging waste):
Only end-of-life treatment of packaging materials is considered. Packaging is assumed to be sorted and managed according to generic treatment pathways, and impacts are modeled based on assumptions. The EU pallet used for transport is assumed to be reused rather than treated as waste.

C1–C4 and D (Assumed only):
End-of-life scenarios are modeled using generic datasets and default assumptions. In C1, the product is assumed to undergo deconstruction or dismantling according to standard end-of-life practices for the product type. C2 includes transport to waste handling facilities, based on typical transport distances and commonly used vehicle types in generic datasets. In C3, materials are assumed to be sorted and processed following typical waste management procedures, which may include separation, shredding, or preparation for recycling or energy recovery. C4 covers final disposal processes, such as landfilling or incineration, depending on material characteristics and standard treatment pathways.
Module D reports potential benefits and loads beyond the system boundary, based on assumed recovery of materials or energy in accordance with established substitution principles.

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 %	300.00	0.043	l/tkm	12.90

Assembly (A5)	Unit	Value			
Waste, packaging, kraft paper, unbleached, to average treatment (kg)	kg	0.80			
Waste, packaging, PET straps, to average treatment - A5 (kg)	kg	0.40			

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 %	85.00	0.043	l/tkm	3.66

Waste processing (C3)	Unit	Value			
Waste treatment per kg Wood, incineration with fly ash extraction (kg)	kg	588.00			
Waste treatment per kg Polypropylene (PP), incineration with fly ash extraction - C3 (kg)	kg	18.00			
Waste, materials to recycling (kg)	kg	6.45			
Waste treatment per kg Scrap steel, incineration with fly ash extraction (kg)	kg	19.00			
Waste treatment per kg Polyethylene, PE, incineration with fly ash extraction - C3 (kg)	kg	25.00			

Disposal (C4)	Unit	Value			
Landfilling of ashes from incineration of Wood, process per kg ashes and residues (kg)	kg	6.76			
Landfilling of ashes from incineration of Polypropylene, PP, process per kg ashes and residues - C4 (kg)	kg	0.5357			
Landfilling of ashes and residues from incineration of Scrap steel (kg)	kg	12.55			
Landfilling of ashes from incineration of Polyethylene, PE, process per kg ashes and residues - C4 (kg)	kg	0.881			

Benefits and loads beyond the system boundaries (D)	Unit	Value			
Substitution of thermal energy, district heating, in Norway (MJ)	MJ	7363.23			
Substitution of electricity, in Norway (MJ)	MJ	486.70			
Substitution of primary steel with net scrap (kg)	kg	5.16			

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	C1	C2	C3	C4	D
	GWP-total	kg CO_2 -eq	-5.31E+02	3.19E+01	1.44E+00	0	9.05E+00	1.11E+03	5.04E-01	-4.99E+01
	GWP-fossil	kg CO_2 -eq	4.46E+02	3.19E+01	4.46E-02	0	9.04E+00	1.29E+02	5.04E-01	-4.84E+01
	GWP-biogenic	kg CO_2 -eq	-9.78E+02	1.32E-02	1.40E+00	0	3.74E-03	9.80E+02	3.01E-04	-9.13E-02
	GWP-luluc	kg CO_2 -eq	1.44E+00	1.14E-02	6.71E-06	0	3.22E-03	1.27E-03	1.00E-04	-1.47E+00
	ODP	kg CFC11 -eq	5.47E-05	7.23E-06	4.63E-09	0	2.05E-06	7.03E-07	8.56E-08	-3.11E+00
	AP	mol H+ -eq	2.13E+00	9.17E-02	1.00E-04	0	2.60E-02	1.08E-01	2.33E-03	-3.80E-01
	EP-FreshWater	kg P -eq	1.99E-02	2.55E-04	1.71E-07	0	7.22E-05	1.33E-04	6.26E-06	-4.14E-03
	EP-Marine	kg N -eq	4.60E-01	1.81E-02	5.60E-05	0	5.14E-03	5.17E-02	7.76E-04	-1.21E-01
	EP-Terrestial	mol N -eq	5.20E+00	2.03E-01	3.59E-04	0	5.75E-02	5.51E-01	8.70E-03	-1.30E+00
	POCP	kg NMVOC -eq	1.93E+00	7.78E-02	1.09E-04	0	2.20E-02	1.35E-01	2.45E-03	-3.71E-01
	ADP-minerals&metals[1]	kg Sb-eq	1.29E-02	8.81E-04	4.84E-07	0	2.50E-04	3.41E-05	4.64E-06	-5.22E-04
	ADP-fossil[1]	MJ	8.35E+03	4.82E+02	3.12E-01	0	1.37E+02	6.64E+01	6.73E+00	-6.58E+02
	WDP[1]	m^3	5.88E+04	4.67E+02	6.91E-01	0	1.32E+02	1.61E+02	3.99E+01	-7.31E+03

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"

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	C1	C2	C3	C4	D
	PM	Disease incidence	5.25E-05	1.95E-06	1.61E-09	0	5.54E-07	1.06E-06	3.54E-08	-2.18E-05
	IRP[2]	kgBq U235 -eq	2.90E+01	2.11E+00	1.37E-03	0	5.98E-01	1.28E-01	2.93E-02	-3.88E+00
	ETP-fw[1]	CTUe	9.54E+03	3.58E+02	3.66E-01	0	1.01E+02	1.46E+02	7.93E+00	-3.64E+03
	HTP-c[1]	CTUh	1.88E-06	0.00E+00	1.00E-11	0	0.00E+00	2.42E-08	3.66E-10	-8.81E-08
	HTP-nc[1]	CTUh	9.83E-06	3.91E-07	4.21E-10	0	1.11E-07	1.12E-06	1.27E-08	-2.59E-06
	SQP[1]	dimensionless	3.84E+04	3.37E+02	3.50E-01	0	9.56E+01	9.74E+00	1.78E+01	-4.09E+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 = Soil Quality (dimensionless)

"Reading example: 9.0 E-03 = 9.0*10-3 = 0.009"

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	C1	C2	C3	C4	D
	PERE	MJ	1.17E+04	6.91E+00	6.28E-03	0	1.96E+00	2.18E+00	2.51E-01	-3.77E+03
	PERM	MJ	8.24E+03	0.00E+00	-1.13E+01	0	0.00E+00	-8.23E+03	0.00E+00	0.00E+00
	PERT	MJ	1.99E+04	6.91E+00	-1.13E+01	0	1.96E+00	-8.22E+03	2.51E-01	-3.77E+03
	PENRE	MJ	7.28E+03	4.83E+02	3.12E-01	0	1.37E+02	6.64E+01	6.73E+00	-6.58E+02
	PENRM	MJ	1.66E+03	0.00E+00	-9.18E+00	0	0.00E+00	-1.65E+03	0.00E+00	0.00E+00
	PENRT	MJ	8.94E+03	4.83E+02	-8.87E+00	0	1.37E+02	-1.59E+03	6.73E+00	-6.58E+02
	SM	kg	3.71E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	RSF	MJ	1.84E+01	2.47E-01	1.85E-04	0	7.00E-02	5.17E-02	6.34E-03	-4.56E-01
	NRSF	MJ	7.61E+00	8.84E-01	6.34E-04	0	2.50E-01	0.00E+00	2.31E+00	-2.18E+02
	FW	m^3	4.30E+00	5.16E-02	1.54E-04	0	1.46E-02	1.43E-01	6.13E-03	-4.55E+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"

End of life - Waste

Indicator		Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
	HWD	kg	3.36E+00	2.49E-02	0.00E+00	0	7.05E-03	0.00E+00	1.86E+01	-5.82E-02
	NHWD	kg	2.58E+02	2.35E+01	1.20E+00	0	6.65E+00	0.00E+00	2.58E+00	-1.67E+01
	RWD	kg	3.15E-02	3.29E-03	0.00E+00	0	9.31E-04	0.00E+00	3.78E-05	-3.18E-03

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"

End of life - Output flow

Indicator		Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
	CRU	kg	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	MFR	kg	3.41E+01	0.00E+00	9.48E-01	0	0.00E+00	6.45E+00	0.00E+00	0.00E+00
	MER	kg	5.86E+01	0.00E+00	5.59E-02	0	0.00E+00	6.50E+02	0.00E+00	0.00E+00
	EEE	MJ	4.07E+01	0.00E+00	4.58E-02	0	0.00E+00	4.87E+02	0.00E+00	0.00E+00
	EET	MJ	6.16E+02	0.00E+00	6.93E-01	0	0.00E+00	7.37E+03	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"

Biogenic Carbon Content

Indicator	Unit	At the factory gate
Biogenic carbon content in product	kg C	2.67E+02
Biogenic carbon content in accompanying packaging	kg C	3.79E-01

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, Denmark (kWh)	ecoinvent 3.6	338.20	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 performance indicators	Unit	Product stage	Construction stage		End-of-life				Net benefits and loads from reuse, recovery, and/or recycling
		A1-A3	A4	A5	C1	C2	C3	C4	D
GWPtotal	kg CO_2 -eq	-530.83	31.93	1.44	0.00	9.05	1108.64	0.50	-49.93
Total energy consumption	MJ	18963.04	490.55	0.32	0.00	138.99	68.63	9.30	-4650.46
Share of recycled materials	%	0.57							

Additional environmental impact indicators required in NPCR Part A for construction products									
Indicator	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
GWPIOBC	kg CO_2 -eq	4.56E+02	3.19E+01	4.46E-02	0	9.05E+00	1.29E+02	5.18E-01	-4.93E+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.

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