



# Environmental product declaration

in accordance with ISO 14025 and EN 15804+A2

U12-30 - Korg Armchair





The Norwegian EPD Foundation

Owner of the declaration:

Nola Industrier Aktiebolag

**Product:** 

U12-30 - Korg Armchair

**Declared unit:** 

This declaration is based on Product Category Rules:

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

NPCR 026:2022 Part B for Furniture

Program operator:

The Norwegian EPD Foundation

**Declaration number:** 

NEPD-7901-7574-EN

Registration number: NEPD-7901-7574-EN

Issue date: 24.10.2024

Valid to: 24.10.2029

**EPD** software:

LCAno EPD generator ID: 620507



## **General information**

#### **Product**

U12-30 - Korg Armchair

#### **Program operator:**

The Norwegian EPD Foundation
Post Box 5250 Majorstuen, 0303 Oslo, Norway

Phone: +47 977 22 020 web: www.epd-norge.no

# **Declaration number:**

NEPD-7901-7574-EN

#### 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

# 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 U12-30 - Korg Armchair

#### Declared unit (cradle to gate) with option:

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

#### Functional unit:

1 Korg Armchair, from the Korg furniture series, as delivered to the final customer

#### 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:

Elisabet Amat, GREENIZE projects

(no signature required)

#### Owner of the declaration:

Nola Industrier Aktiebolag Contact person: Anders Åkesson Phone: 08-702 19 60 e-mail: anders.akesson@nola.se

#### Manufacturer:

Nola Industrier Aktiebolag

#### Place of production:

Nola Industrier Aktiebolag Blekingegatan 26 118 56 Stockholm, Sweden

# Management system:

#### Organisation no:

556207-4442

#### Issue date:

24.10.2024

#### Valid to:

24.10.2029

# Year of study:

2022

# **Comparability:**

EPD of construction products may not be comparable if they not comply with EN 15804 and 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: Joachim Henriksson

Reviewer of company-specific input data and EPD: Anders Åkesson

#### Approved:

Håkon Hauan, CEO EPD-Norge



#### **Product**

#### **Product description:**

Korg armchair is part of the Korg furniture group. Korg is a neat, expressive wire furniture for outdoor use, anchored in a cylindrical base. The thread's thin, vertical lines and checkered seat interact with each other and create a clear graphic expression. At the same time, the function of the material makes it easy for water to drain off. The sofa can also be assembled into several parts and variations, see Korg building system.

#### **Product specification**

U12-30 - Korg Armchair

Width: 64 cm Height: 88 cm Sitting height: 45 cm Depth: 61 cm

Materials	kg	%	Recycled share in material (kg)	Recycled share in material (%)
Powder coating	0,14	0,98	0,00	0,00
Metal - Stainless steel	0,10	0,70	0,02	21,83
Metal - Steel	13,82	97,05	0,00	0,00
Zinc	0,18	1,26	0,00	0,00
Total	14,24	100,00	0,02	

Packaging	kg	%	Recycled share in material (kg)	Recycled share in material (%)
Packaging - Cardboard	1,50	11,82	0,00	0,00
Packaging - Pallet	11,00	86,68	0,00	0,00
Packaging - Plastic	0,19	1,50	0,00	0,00
Total incl. packaging	26,93	100,00	0,02	

#### Technical data:

# Market:

Global.

# Reference service life, product

15 years.

#### Reference service life, building

#### LCA: Calculation rules

#### **Declared unit:**

1 pcs U12-30 - Korg Armchair

# **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.

Energy flows and materials representing less than 1% of the total are excluded. Cut-off does not apply for REACH materials.

# 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. Allocation as per EN 15804.

Impacts from primary production of virgin material are assigned to respective component production and includes transportation.

Impacts from repair and replacement are not included in the use stage, as the materials used in the product are designed to last longer than the stated lifespan

Impacts from primary production of recycled materials are assigned to respective component production, and includes recycling and transportation processes.

Emissions from disposal of the product are included and allocated per material. Energy recovery from incineration of relevant materials is included and allocated on a national level.



# 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. Data has been gathered from sub suppliers and public, current, published EPDs or ecoinvent 3.6 database.

Materials	Source	Data quality	Year
Metal - Stainless steel	ecoinvent 3.6	Database	2019
Metal - Steel	ecoinvent 3.6	Database	2019
Packaging - Cardboard	Modified ecoinvent 3.6	Database	2019
Packaging - Pallet	ecoinvent 3.6	Database	2019
Packaging - Plastic	ecoinvent 3.6	Database	2019
Powder coating	Ecoinvent 3.6	Database	2019
Zinc	ecoinvent 3.6	Database	2019

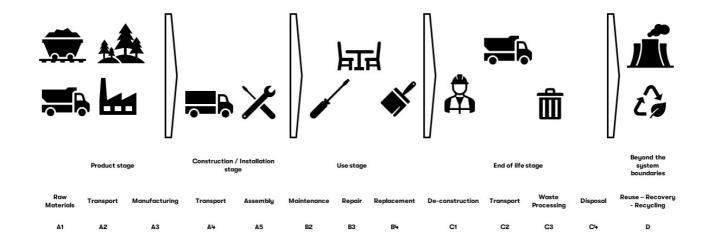


# System boundaries (X=included, MND=module not declared, MNR=module not relevant)

	Product stage			uction on stage		Use stage					End of li	fe 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	В3	B4	B5	В6	В7	C1	C2	C3	C4	D
X	X	X	X	X	MND	Χ	Χ	X	MND	MND	MND	X	Χ	X	X	X

# System boundary:

Sweden



# Additional technical information:

https://nola.se/produkter/korg-fatolj/



# LCA: Scenarios and additional technical information

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

Production scenario assumes production in Sweden at sub-suppliers with transport of materials and components between certain production steps.

Usage scenario assumes no repair or replacement and minimal maintenance during the 15 year lifespan of the product, as materials and surface treatments are selected to require servicing during lifetime of product. The installation location is assumed to be within Sweden.

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 5 (km)	53,3 %	400	0,023	l/tkm	9,20
Assembly (A5)	Unit	Value			
Waste, packaging, plastic film (LDPE), to average treatment - A5 (kg)	kg	0,19			
Waste, packaging, corrugated board box, 0 % recycled, to average treatment (kg)	kg	1,50			
Waste, packaging, Pallet, EUR wooden pallet, single use, average treatment (kg)	kg	11,00			
Transport to waste processing (C2)	Capacity utilisation (incl. return) %	Distance (km)	Fuel/Energy Consumption	Unit	Value (Liter/tonne)
Truck, 16-32 tonnes, EURO 5 (km)	36,7 %	50	0,044	l/tkm	2,20
Waste processing (C3)	Unit	Value			
Waste, materials to recycling (kg)	kg	4,72			
Waste treatment per kg Scrap steel, incineration with fly ash extraction (kg)	kg	13,92			
Waste treatment per kg Non-hazardous waste, incineration with fly ash extraction - C3 (kg)	kg	0,32			
Disposal (C4)	Unit	Value			
Landfilling of ashes and residues from incineration of Scrap steel (kg)	kg	9,20			
Landfilling of ashes from incineration of Non- hazardous waste, process per kg ashes and residues - C4 (kg)	kg	0,08			
Benefits and loads beyond the system boundaries (D)	Unit	Value			
Substitution of primary steel with net scrap (kg)	kg	4,72			
Substitution of electricity (MJ)	MJ	0,19			
Substitution of thermal energy, district heating (MJ)	МЈ	2,88			



# **LCA: Results**

The LCA results are presented below for the declared unit defined on page 2 of the EPD document.

<b>Environme</b>	ntal impact							
	Indicator	Uni	t	A1-A3	A4	A5	B2	В3
	GWP-total	kg CO <sub>2</sub>	-eq	3,04E+01	9,80E-01	1,96E+01	0	0
	GWP-fossil	kg CO <sub>2</sub>	-eq	4,92E+01	9,79E-01	3,35E-01	0	0
	GWP-biogenic	kg CO <sub>2</sub>	-eq	-1,90E+01	4,02E-04	1,92E+01	0	0
	GWP-luluc	kg CO <sub>2</sub>	-eq	2,39E-01	2,86E-04	8,51E-05	0	0
(3)	ODP	kg CFC1	1 -eq	4,22E-06	2,26E-07	5,33E-08	0	0
Œ.	AP	mol H+	-eq	2,67E-01	4,12E-03	2,51E-03	0	0
<del></del>	EP-FreshWater	kg P -	eq	2,97E-03	7,46E-06	3,78E-06	0	0
<del></del>	EP-Marine	kg N -	eq	5,33E-02	1,24E-03	1,08E-03	0	0
**	EP-Terrestial	mol N	-eq	6,10E-01	1,37E-02	1,14E-02	0	0
	POCP	kg NMV0	OC -eq	2,45E-01	4,40E-03	2,95E-03	0	0
	ADP-minerals&metals <sup>1</sup>	kg Sb-	-eq	1,49E-02	1,67E-05	5,47E-06	0	0
	ADP-fossil <sup>1</sup>	МЈ	MJ		1,52E+01	3,88E+00	0	0
<u></u>	WDP <sup>1</sup>	m <sup>3</sup>	m <sup>3</sup>		1,17E+01	6,00E+00	0	0
				3,70E+04	,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
	Indicator	Unit	B4	C1	C2	C3	C4	D
	Indicator	Unit	B4	C1	C2	C3	C4	D
	<b>Indicator</b> GWP-total	<b>Unit</b> kg CO <sub>2</sub> -eq	B4 0	C1 0	C2 2,25E-01	C3 8,16E-01	C4 9,88E-02	D -5,21E+00
	Indicator  GWP-total  GWP-fossil	<b>Unit</b> kg CO <sub>2</sub> -eq kg CO <sub>2</sub> -eq	B4 0 0	C1 0	C2 2,25E-01 2,24E-01	C3 8,16E-01 8,15E-01	C4 9,88E-02 9,87E-02	D -5,21E+00 -5,21E+00
<b>P</b>	Indicator  GWP-total  GWP-fossil  GWP-biogenic	Unit kg CO <sub>2</sub> -eq kg CO <sub>2</sub> -eq kg CO <sub>2</sub> -eq	B4 0 0	C1 0 0	C2 2,25E-01 2,24E-01 9,15E-05	C3 8,16E-01 8,15E-01 1,37E-03	C4 9,88E-02 9,87E-02 7,50E-05	D -5,21E+00 -5,21E+00 -2,90E-03
<b>P P P P P P P P P P</b>	Indicator  GWP-total  GWP-fossil  GWP-biogenic  GWP-luluc	Unit  kg CO <sub>2</sub> -eq  kg CO <sub>2</sub> -eq  kg CO <sub>2</sub> -eq  kg CO <sub>2</sub> -eq	B4 0 0 0 0	0 0 0 0	C2 2,25E-01 2,24E-01 9,15E-05 7,85E-05	C3 8,16E-01 8,15E-01 1,37E-03 3,15E-05	C4 9,88E-02 9,87E-02 7,50E-05 3,05E-05	D -5,21E+00 -5,21E+00 -2,90E-03 -2,90E-03
	Indicator  GWP-total  GWP-fossil  GWP-biogenic  GWP-luluc  ODP	Wnit  kg CO <sub>2</sub> -eq  kg CO <sub>2</sub> -eq  kg CO <sub>2</sub> -eq  kg CO <sub>2</sub> -eq	B4 0 0 0 0 0	0 0 0 0 0	C2 2,25E-01 2,24E-01 9,15E-05 7,85E-05 5,12E-08	C3 8,16E-01 8,15E-01 1,37E-03 3,15E-05 1,12E-08	C4 9,88E-02 9,87E-02 7,50E-05 3,05E-05 3,16E-08	D -5,21E+00 -5,21E+00 -2,90E-03 -2,90E-03 -1,22E-03
	Indicator  GWP-total  GWP-fossil  GWP-biogenic  GWP-luluc  ODP  AP	kg CO <sub>2</sub> -eq mol H+ -eq	B4 0 0 0 0 0 0	0 0 0 0 0	C2 2,25E-01 2,24E-01 9,15E-05 7,85E-05 5,12E-08 9,17E-04	C3 8,16E-01 8,15E-01 1,37E-03 3,15E-05 1,12E-08 5,86E-04	C4 9,88E-02 9,87E-02 7,50E-05 3,05E-05 3,16E-08 7,16E-04	D -5,21E+00 -5,21E+00 -2,90E-03 -2,90E-03 -1,22E-03 -2,59E-02
	Indicator  GWP-total  GWP-fossil  GWP-biogenic  GWP-luluc  ODP  AP  EP-FreshWater	Wnit  kg CO <sub>2</sub> -eq  kg CO <sub>2</sub> -eq  kg CO <sub>2</sub> -eq  kg CO <sub>2</sub> -eq  kg CFC11 -eq  mol H+ -eq  kg P -eq	B4 0 0 0 0 0 0	0 0 0 0 0 0	C2 2,25E-01 2,24E-01 9,15E-05 7,85E-05 5,12E-08 9,17E-04 1,76E-06	C3 8,16E-01 8,15E-01 1,37E-03 3,15E-05 1,12E-08 5,86E-04 2,68E-06	C4 9,88E-02 9,87E-02 7,50E-05 3,05E-05 3,16E-08 7,16E-04 9,68E-07	D -5,21E+00 -5,21E+00 -2,90E-03 -2,90E-03 -1,22E-03 -2,59E-02 -3,21E-04
	Indicator  GWP-total  GWP-fossil  GWP-biogenic  GWP-luluc  ODP  AP  EP-FreshWater  EP-Marine	kg CO <sub>2</sub> -eq kg CO <sub>2</sub> -eq kg CO <sub>2</sub> -eq kg CO <sub>2</sub> -eq kg CFC11 -eq mol H+ -eq kg P -eq kg N -eq	B4 0 0 0 0 0 0 0	0 0 0 0 0 0 0	C2 2,25E-01 2,24E-01 9,15E-05 7,85E-05 5,12E-08 9,17E-04 1,76E-06 2,72E-04	C3 8,16E-01 8,15E-01 1,37E-03 3,15E-05 1,12E-08 5,86E-04 2,68E-06 2,19E-04	C4 9,88E-02 9,87E-02 7,50E-05 3,05E-05 3,16E-08 7,16E-04 9,68E-07 2,56E-04	D -5,21E+00 -5,21E+00 -2,90E-03 -2,90E-03 -1,22E-03 -2,59E-02 -3,21E-04 -5,38E-03
	Indicator  GWP-total  GWP-fossil  GWP-biogenic  GWP-luluc  ODP  AP  EP-FreshWater  EP-Marine  EP-Terrestial	Wnit  kg CO <sub>2</sub> -eq  kg CO <sub>2</sub> -eq  kg CO <sub>2</sub> -eq  kg CO <sub>2</sub> -eq  kg CFC11 -eq  mol H+ -eq  kg P -eq  kg N -eq  mol N -eq	B4 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0	C2 2,25E-01 2,24E-01 9,15E-05 7,85E-05 5,12E-08 9,17E-04 1,76E-06 2,72E-04 3,01E-03	C3 8,16E-01 8,15E-01 1,37E-03 3,15E-05 1,12E-08 5,86E-04 2,68E-06 2,19E-04 2,34E-03	C4 9,88E-02 9,87E-02 7,50E-05 3,05E-05 3,16E-08 7,16E-04 9,68E-07 2,56E-04 2,83E-03	D -5,21E+00 -5,21E+00 -2,90E-03 -2,90E-03 -1,22E-03 -2,59E-02 -3,21E-04 -5,38E-03 -5,50E-02
	Indicator  GWP-total  GWP-fossil  GWP-biogenic  GWP-luluc  ODP  AP  EP-FreshWater  EP-Marine  EP-Terrestial  POCP	kg CO <sub>2</sub> -eq kg CO <sub>2</sub> -eq kg CO <sub>2</sub> -eq kg CO <sub>2</sub> -eq kg CFC11 -eq mol H+ -eq kg P -eq kg N -eq kg NMVOC -eq	B4 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	C2 2,25E-01 2,24E-01 9,15E-05 7,85E-05 5,12E-08 9,17E-04 1,76E-06 2,72E-04 3,01E-03 9,21E-04	C3 8,16E-01 8,15E-01 1,37E-03 3,15E-05 1,12E-08 5,86E-04 2,68E-06 2,19E-04 2,34E-03 6,96E-04	C4 9,88E-02 9,87E-02 7,50E-05 3,05E-05 3,16E-08 7,16E-04 9,68E-07 2,56E-04 2,83E-03 8,16E-04	D -5,21E+00 -5,21E+00 -2,90E-03 -2,90E-03 -1,22E-03 -2,59E-02 -3,21E-04 -5,38E-03 -5,50E-02 -2,61E-02

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

#### Remarks to environmental impacts

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

<sup>\*</sup>INA Indicator Not Assessed

<sup>1.</sup> 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



	Indicator	Unit	A1-A3	A4	A5	B2	В3
	PM	Disease incidence	4,44E-06	8,62E-08	3,11E-08	0	0
	IRP <sup>2</sup>	kgBq U235 -eq	1,34E+01	6,65E-02	1,43E-02	0	0
	ETP-fw <sup>1</sup>	CTUe	2,47E+03	1,11E+01	4,47E+00	0	0
40. ****	HTP-c <sup>1</sup>	CTUh	3,53E-07	0,00E+00	4,56E-10	0	0
46 E	HTP-nc <sup>1</sup>	CTUh	1,73E-06	1,08E-08	2,18E-08	0	0
	SQP <sup>1</sup>	dimensionless	2,32E+03	1,75E+01	2,29E+00	0	0

I	ndicator	Unit	B4	C1	C2	C3	C4	D
	PM	Disease incidence	0	0	1,62E-08	2,46E-08	1,32E-08	-4,39E-07
	IRP <sup>2</sup>	kgBq U235 -eq	0	0	1,48E-02	2,45E-03	9,29E-03	1,71E-02
<b>3</b>	ETP-fw <sup>1</sup>	CTUe	0	0	2,49E+00	7,30E+00	1,32E+00	-2,91E+02
40.* *** <u>\$</u>	HTP-c <sup>1</sup>	CTUh	0	0	0,00E+00	7,17E-10	4,60E-11	-2,50E-08
<del>%</del>	HTP-nc <sup>1</sup>	CTUh	0	0	2,69E-09	4,53E-09	1,19E-09	5,41E-07
	SQP <sup>1</sup>	dimensionless	0	0	2,33E+00	1,93E-01	5,03E+00	-4,86E+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 = Soil Quality (dimensionless)

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

<sup>\*</sup>INA Indicator Not Assessed

<sup>1.</sup> 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

<sup>2.</sup> 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	В3
, i	PERE		MJ	3,53E+02	1,92E-01	7,86E-02	0	0
	PERM		MJ	1,77E+02	0,00E+00	-1,77E+02	0	0
ļ.	PERT		MJ	5,30E+02	1,92E-01	-1,76E+02	0	0
	PENRE		MJ	8,66E+02	1,52E+01	3,88E+00	0	0
42	PENRM		MJ	8,07E+00	0,00E+00	-8,07E+00	0	0
<b>IA</b>	PENRT		MJ	8,74E+02	1,52E+01	-4,19E+00	0	0
<u></u>	SM		kg	2,18E-02	0,00E+00	0,00E+00	0	0
2	RSF		MJ	1,39E+00	6,70E-03	2,31E-03	0	0
	NRSF	MJ		3,37E+01	2,25E-02	2,46E-02	0	0
<b>%</b>	FW		$m^3$	8,04E-01	1,73E-03	2,73E-03	0	0
	ndicator	Unit	B4	C1	C2	C3	C4	D
i j							C-T	
(3)	PERE	MJ	0	0	4,78E-02	4,58E-02	4,15E-02	-5,02E+00
	PERE	MJ	0	0	4,78E-02 0,00E+00			
						4,58E-02	4,15E-02	-5,02E+00
2	PERM	МЈ	0	0	0,00E+00	4,58E-02 0,00E+00	4,15E-02 0,00E+00	-5,02E+00 0,00E+00
i i	PERM PERT	MJ	0	0	0,00E+00 4,78E-02	4,58E-02 0,00E+00 4,58E-02	4,15E-02 0,00E+00 4,15E-02	-5,02E+00 0,00E+00 -5,02E+00
I F	PERM PERT PENRE	M1 M1	0 0	0 0	0,00E+00 4,78E-02 3,38E+00	4,58E-02 0,00E+00 4,58E-02 8,27E-01	4,15E-02 0,00E+00 4,15E-02 2,33E+00	-5,02E+00 0,00E+00 -5,02E+00 -4,39E+01
I I I	PERM PERT PENRE PENRM	MJ MJ	0 0 0 0	0 0 0	0,00E+00 4,78E-02 3,38E+00 0,00E+00	4,58E-02 0,00E+00 4,58E-02 8,27E-01 0,00E+00	4,15E-02 0,00E+00 4,15E-02 2,33E+00 0,00E+00	-5,02E+00 0,00E+00 -5,02E+00 -4,39E+01 0,00E+00
	PERM PERT PENRE PENRM PENRT	MI MI MI MI	0 0 0 0 0	0 0 0 0	0,00E+00 4,78E-02 3,38E+00 0,00E+00 3,38E+00	4,58E-02 0,00E+00 4,58E-02 8,27E-01 0,00E+00 8,27E-01	4,15E-02 0,00E+00 4,15E-02 2,33E+00 0,00E+00 2,33E+00	-5,02E+00 0,00E+00 -5,02E+00 -4,39E+01 0,00E+00 -4,39E+01
	PERM PERT PENRE PENRM PENRT SM	MJ MJ MJ MJ kg	0 0 0 0 0	0 0 0 0 0	0,00E+00 4,78E-02 3,38E+00 0,00E+00 3,38E+00 0,00E+00	4,58E-02 0,00E+00 4,58E-02 8,27E-01 0,00E+00 8,27E-01 0,00E+00	4,15E-02 0,00E+00 4,15E-02 2,33E+00 0,00E+00 2,33E+00 0,00E+00	-5,02E+00 0,00E+00 -5,02E+00 -4,39E+01 0,00E+00 -4,39E+01 0,00E+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 resources used as raw materials; PENRT = Total use of non renewable primary energy resources; SM = Use of secondary materials; PENRM = 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	dicator		Unit		A4	A5	B2	В3
	HWD	HWD		kg		8,34E-04	0,00E+00	0	0
Ō	NHWD	NHWD		kg		1,32E+00	1,27E+01	0	0
- -	RWD		k	g	6,56E-03	1,04E-04	0,00E+00	0	0
In	dicator		Unit	B4	C1	C2	C3	C4	D
Ā	HWD		kg	0	0	1,73E-04	0,00E+00	9,21E+00	-2,70E-02
Ū	NHWD		kg	0	0	1,62E-01	3,20E-01	6,17E-02	-2,13E+00
8	RWD		kg	0	0	2,31E-05	0,00E+00	1,44E-05	1,31E-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								
Ind	icator	Ur	Unit		A4	A5	B2	В3
<b>®</b>	CRU	k	)	0,00E+00	0,00E+00	0,00E+00	0	0
&▷	MFR	k	J	2,76E+00	0,00E+00	1,49E+00	0	0
DF	MER	kį	J	0,00E+00	0,00E+00	1,09E+01	0	0
50	EEE	M	J	0,00E+00	0,00E+00	7,68E+00	0	0
Da	EET	M	J	0,00E+00	0,00E+00	1,16E+02	0	0
Indicato	or	Unit	B4	C1	C2	C3	C4	D
<b>∅&gt;</b>	CRU	kg	0	0	0,00E+00	0,00E+00	0,00E+00	0,00E+00
\$>	MFR	kg	0	0	0,00E+00	4,72E+00	0,00E+00	0,00E+00
D7	MER	kg	0	0	0,00E+00	1,42E+01	0,00E+00	0,00E+00
50	EEE	MJ	0	0	0,00E+00	3,86E-01	0,00E+00	0,00E+00
D	EET	MJ	0	0	0,00E+00	5,84E+00	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							
Unit	At the factory gate						
kg C	0,00E+00						
kg C	5,24E+00						
	kg C						

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	a CO2-ea/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 <sub>2</sub> -eq	30,40	0,98	52,07	46,86
Total energy consumption	MJ	1254,15	15,45	1280,32	1236,96
Amount of recycled materials	%	0.08			

Additional environmental impact indicators required in NPCR Part A for construction products							
Indicator	Unit		A1-A3	A4	A5	B2	В3
GWPIOBC	kg CO <sub>2</sub> -eq		4,96E+01	9,80E-01	3,35E-01	0	0
Indicator	Unit	B4	C1	C2	C3	C4	D
GWPIOBC	kg CO <sub>2</sub> -eq	0	0	2,25E-01	4,69E-01	9,95E-02	-7,79E+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.



# **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 Environmental product declaration - Core rules for the product category of construction products.

ISO 21930:2017 Sustainability in buildings and civil engineering works - Core rules for environmental product declarations of construction products.

ecoinvent v3, Allocation, cut-off by classification, Swiss Centre of Life Cycle Inventories.

Iversen et al., (2021) eEPD v2021.09 Background information for EPD generator tool system verification, LCA.no Report number: 07.21 Ruud et al., (2023) EPD generator for NPCR026 Part B for Furniture - Background information for EPD generator application and LCA data, LCA.no report number 01.23

NPCR Part A: Construction products and services. Ver. 2.0. March 2021, EPD-Norge.

NPCR 026 Part B for Furniture. Ver. 2.0 March 2022, EPD-Norge.

and norge	Program operator and publisher	Phone: +47 977 22 020
@ epd-norge	The Norwegian EPD Foundation	e-mail: post@epd-norge.no
Global program operatør	Post Box 5250 Majorstuen, 0303 Oslo, Norway	web: www.epd-norge.no
■ 8	Owner of the declaration:	Phone: 08-702 19 60
nola	Nola Industrier Aktiebolag	e-mail: anders.akesson@nola.se
11344	Blekingegatan 26, 118 56 Stockholm	web: https://nola.se/
	Author of the Life Cycle Assessment	Phone: +47 916 50 916
(LCA)	LCA.no AS	e-mail: post@lca.no
	Dokka 6A, 1671 Kråkerøy	web: www.lca.no
	Developer of EPD generator	Phone: +47 916 50 916
(LCA <sup>)</sup>	LCA.no AS	e-mail: post@lca.no
.no	Dokka 6A, 1671 Kråkerøy	web: www.lca.no
ECO PLATFORM	ECO Platform	web: www.eco-platform.org
VERIFIED	ECO Portal	web: ECO Portal