Environmental product declaration

in accordance with ISO 14025 and EN 15804+A2

Table S Ø500

Owner of the declaration:
Fora Form AS

Product:
Table S Ø500

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-4408-3641-EN

Registration number:
NEPD-4408-3641-EN

Issue date:
02.05.2023

Valid to:
02.05.2028

ver-270623

EPD Software:
LCA.no EPD generator ID: 61188

The Norwegian EPD Foundation

General information

Product

Table S Ø500

Owner of the declaration:

Fora Form AS
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Program operator:

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The Norwegian EPD Foundation
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Manufacturer:

Fora Form AS

Declaration number:

NEPD-4408-3641-EN

Place of production:

Fora Form AS
Mosflatevegen
6154 Ørsta, Norway

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:

NS-EN ISO 14001: 2015 No. 800406.NS-EN ISO 9001: 2015 No. 901268.NS-EN ISO 45001: 2018 No 907167.

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:

986 581 421

Declared unit:

1 pcs Table S Ø500

Issue date:

02.05.2023

Declared unit (cradle to gate) with option:

A1-A3,A4,A5,B1,B2,C1,C2,C3,C4,D

Valid to:

02.05.2028

Year of study:

2023

Functional unit:

Production of one table solution provided and maintained for a period of 15 years.

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: Kåre Sætre

Reviewer of company-specific input data and EPD: Stig Robert Sporstøl

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

Håkon Hauan, CEO EPD-Norge

Product

Product description:

S tables are smal tables designed by the duo Anderssen & Voll. With its effortless elegant expression, the table is suitable for most places where a smaller table top is needed.The table series consists of three variants , S,R ,L
S table that has circular geometry. R table that has rectangular geometry. L table with rectangular geometry and power outlet in the base

The table series makes every Chair into a work station, and the L series even offers electrical sockets for uncomplicated charging. Today's Offices has many different ways and Places to work. The L, R and S table makes working in any sofa or chair effortless and user-friendly.

Table top 25 mm solid oak with chamfered edge and rounded corners. Standard configuration is in black stained oak with the base is lacquered in the Sahara Collection from Jotun, which provides a textured surface.

Please note that the L and S table are also avaliable as a fixed version for assembly on the Senso sofa.

Product specification

Materials	kg	%	Recycled share in material (kg)	Recycled share in material (%)
Metal - Steel	5,60	59,01	1,12	20,00
Paint, solvent-based	0,15	1,58	0,00	0,00
Powder coating	0,04	0,42	0,00	0,00
Wood - Solid oak	3,70	38,99	0,00	0,00
Total	9,49		1,12	

Packaging	kg	%	Recycled share in material (kg)	Recycled share in material (%)
Packaging - Cardboard	2,00	100,00	0,72	36,00
Total incl. packaging	11,49		1,84	

Technical data:

Table S Ø500 Oak
Height 600 mm
Dia. 500 mm
Weight 9,65 kg.

Table S Ø340 Oak
Height 600 mm
Dia. 340 mm
Weight 7,4 kg.

Market:

Worldwide

Reference service life, product

15 years

Reference service life, building

LCA: Calculation rules

Declared unit:

1 pcs Table S Ø500

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:

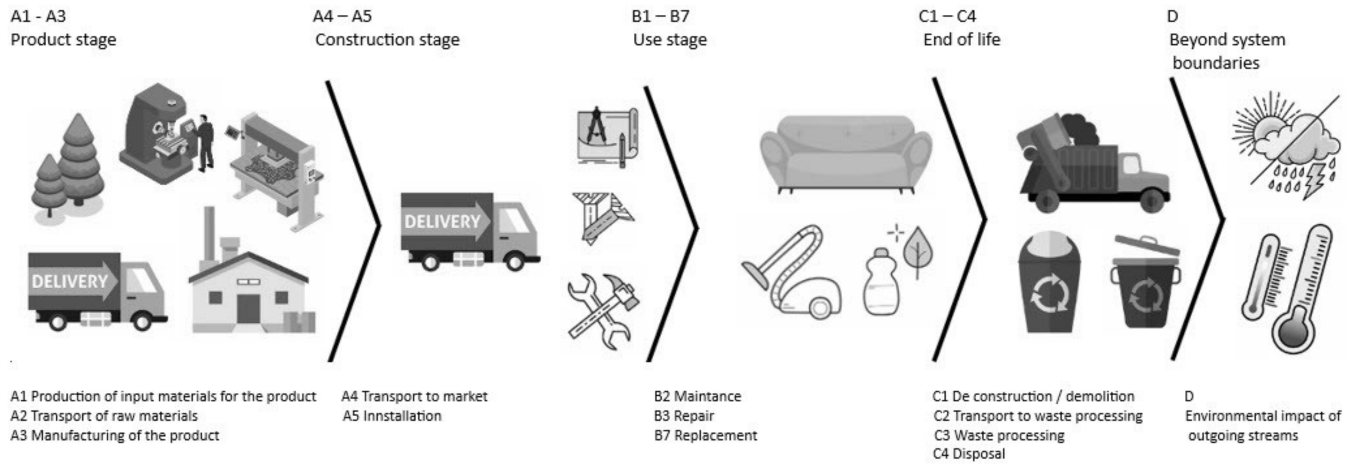
Specific data for the product composition are provided by the manufacturer. They represent the production of the declared product and were collected for EPD development in the year of study. Background data is based on registered EPDs according to EN 15804, Ostfold Research databases, ecoinvent and other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

Materials	Source	Data quality	Year
Metal - Steel	ecoinvent 3.6	Database	2019
Packaging - Cardboard	ecoinvent 3.6	Database	2019
Paint, solvent-based	ecoinvent 3.6	Database	2019
Powder coating	Ecoinvent 3.6	Database	2019
Wood - Solid oak	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	X	X	MND	MND	MND	MND	MND	X	X	X	X	X

System boundary:



Additional technical information:

We want you to enjoy your furniture for many years to come. If you follow our advice in this Quality and Maintenance Manual you contribute to prolonged life of your furniture. We only use environmentally friendly materials and processes in our manufacturing unit in Ørsta Norway. Our goal is to manufacture furniture that can last for generations. All furniture made by Fora Form are made of FSC certified wood, manufactured according to ISO 14001, and has an EPD on all products. This ensures sustainability and a "cradle to cradle" philosophy. We actively work to reduce waste. All packing materials and waste are being recycled according to Norsk Gjenvinning.
Norwegian and Swedish Møbelfakta are accredited test facilities where furniture quality, strength, durability, flammability, safety, emissions and materials are tested and documented. A piece of furniture, which lives up to the three areas of requirements of Møbelfakta, has undergone extensive testing, is produced according to ethical guidelines and has been approved according to environmental requirements. Møbelfakta is a guarantee of high quality products. Almost all of Fora Forms collection is Møbelfakta approved.
Fora Form are ISO 9001 quality management,ISO 14001 environmental management and ISO 45001 occupational health and safety management certified. Sustainability is important for Fora Form.
We continuously work to sort and reduce our waste, and collaborate with Norsk Gjenvinning and Grønt Punkt (Green Dot Norway plc) regarding recycling of used packing materials. All wood is FSC certified.
Our manufacturing unit in Ørsta use electricity that is 100% originated from renewable sources.
Transportation to an average customer in Oslo is 540 km

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, HVO, EURO 6 (kgkm)	36,7 %	540	0,043	l/tkm	23,22

Assembly (A5)	Unit	Value			
Waste, packaging, corrugated board box, to average treatment (kg)	kg	2,00			

Maintenance (B2)	Unit	Value			
Water, tap water (kg)	kg/DU	1,00			

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 Non-hazardous waste, incineration with fly ash extraction - C3 (kg)	kg	0,04			
Waste treatment per kg Scrap steel, incineration with fly ash extraction (kg)	kg	5,60			
Waste treatment per kg Wood, incineration with fly ash extraction (kg)	kg	3,70			
Waste, materials to recycling (kg)	kg	1,90			

Disposal (C4)	Unit	Value			
Landfilling of ashes and residues from incineration of Scrap steel (kg)	kg	3,70			
Landfilling of ashes from incineration of Non-hazardous waste, process per kg ashes and residues - C4 (kg)	kg	0,01			
Landfilling of ashes from incineration of Wood, process per kg ashes and residues (kg)	kg	0,04			

Benefits and loads beyond the system boundaries (D)	Unit	Value			
Substitution of electricity, in Norway (MJ)	MJ	2,60			
Substitution of primary steel with net scrap (kg)	kg	1,52			
Substitution of thermal energy, district heating, in Norway (MJ)	MJ	39,29			

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	B1	B2	C1	C2	C3	C4	D
GWP-total	kg CO_2 -eq	2,98E+01	2,45E-01	3,43E+00	0	3,46E-04	0	1,62E-01	6,33E+00	4,15E-02	-1,91E+00
GWP-fossil	kg CO_2 -eq	3,86E+01	2,44E-01	3,24E-02	0	3,43E-04	0	1,62E-01	1,65E-01	4,15E-02	-1,90E+00
GWP-biogenic	kg CO_2 -eq	-9,07E+00	4,13E-04	3,40E+00	0	2,16E-06	0	6,69E-05	6,17E+00	3,12E-05	-1,39E-03
GWP-luluc	kg CO_2 -eq	2,91E-01	3,80E-04	1,07E-05	0	5,59E-07	0	5,76E-05	1,61E-05	1,26E-05	-8,60E-03
ODP	kg CFC11 -eq	3,49E-06	5,03E-08	6,83E-09	0	3,00E-11	0	3,66E-08	6,91E-09	1,29E-08	-1,66E-02
AP	mol H+ -eq	2,72E-01	1,71E-03	1,53E-04	0	2,00E-06	0	4,65E-04	7,85E-04	2,94E-04	-1,02E-02
EP-FreshWater	kg P -eq	2,73E-03	8,96E-06	2,66E-07	0	2,74E-08	0	1,29E-06	1,70E-06	4,13E-07	-1,23E-04
EP-Marine	kg N -eq	4,22E-02	4,53E-04	5,07E-05	0	3,18E-07	0	9,20E-05	3,55E-04	1,05E-04	-2,33E-03
EP-Terrestial	mol N -eq	4,52E-01	5,06E-03	5,49E-04	0	3,70E-06	0	1,03E-03	3,79E-03	1,16E-03	-2,42E-02
POCP	kg NMVOC -eq	1,52E-01	1,85E-03	1,58E-04	0	1,16E-06	0	3,94E-04	9,77E-04	3,35E-04	-1,02E-02
ADP-minerals&metals[1]	kg Sb -eq	1,44E-03	2,97E-05	7,87E-07	0	9,59E-09	0	4,47E-06	3,86E-07	7,21E-07	-3,11E-05
ADP-fossil[1]	MJ	4,86E+02	5,16E+00	4,53E-01	0	5,86E-03	0	2,45E+00	6,45E-01	9,53E-01	-1,73E+01
WDP[1]	m^3	1,74E+03	1,53E+01	5,74E-01	0	1,04E-01	0	2,37E+00	1,55E+00	1,86E+00	4,62E+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

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

Additional environmental impact indicators

Indicator		Unit	A1-A3	A4	A5	B1	B2	C1	C2	C3	C4	D
	PM	Disease incidence	2,79E-06	5,66E-08	2,26E-09	0	1,70E-11	0	9,90E-09	1,58E-08	5,40E-09	-2,53E-07
	IRP[2]	kgBq U235 -eq	1,80E+00	1,69E-02	1,94E-03	0	4,05E-05	0	1,07E-02	1,55E-03	3,81E-03	-1,48E-02
	ETP-fw[1]	CTUe	2,78E+03	7,54E+00	6,04E-01	0	6,35E-03	0	1,81E+00	3,11E+00	5,60E-01	-1,11E+02
	HTP-c[1]	CTUh	1,65E-07	0,00E+00	1,80E-11	0	1,00E-12	0	0,00E+00	4,01E-10	1,90E-11	-8,37E-09
	HTP-nc[1]	CTUh	2,45E-06	1,26E-08	7,58E-10	0	2,10E-11	0	1,98E-09	7,85E-09	5,30E-10	1,58E-07
	SQP[1]	dimensionless	5,14E+02	9,63E+00	3,04E-01	0	1,64E-03	0	1,71E+00	1,24E-01	2,08E+00	-2,28E+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	B1	B2	C1	C2	C3	C4	D
	PERE	MJ	1,18E+02	2,34E-01	7,45E-03	0	7,95E-04	0	3,50E-02	2,69E-02	1,76E-02	-2,13E+01
	PERM	MJ	6,82E+01	0,00E+00	-1,64E+01	0	0,00E+00	0	0,00E+00	-5,18E+01	0,00E+00	0,00E+00
	PERT	MJ	1,86E+02	2,34E-01	-1,64E+01	0	7,95E-04	0	3,50E-02	-5,17E+01	1,76E-02	-2,13E+01
	PENRE	MJ	4,87E+02	5,16E+00	4,53E-01	0	5,87E-03	0	2,45E+00	6,50E-01	9,54E-01	-1,73E+01
	PENRM	MJ	0,00E+00	0,00E+00	0,00E+00	0	0,00E+00	0	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	PENRT	MJ	4,87E+02	5,16E+00	4,53E-01	0	5,87E-03	0	2,45E+00	6,50E-01	9,54E-01	-1,73E+01
	SM	kg	1,84E+00	0,00E+00	0,00E+00	0	0,00E+00	0	0,00E+00	0,00E+00	0,00E+00	7,92E-01
	RSF	MJ	3,47E-01	7,60E-03	2,47E-04	0	6,39E-05	0	1,25E-03	5,74E-04	4,67E-04	5,69E-02
	NRSF	MJ	1,64E+00	2,62E-02	1,02E-03	0	6,30E-05	0	4,48E-03	0,00E+00	3,41E-02	5,66E-01
	FW	m^3	3,04E-01	2,11E-03	2,14E-04	0	1,01E-03	0	2,62E-04	1,06E-03	8,59E-04	-2,77E-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	B1	B2	C1	C2	C3	C4	D
	HWD	kg	2,74E-01	7,25E-04	2,00E-03	0	1,11E-06	0	1,26E-04	0,00E+00	3,72E+00	-8,85E-03
	NHWD	kg	1,20E+01	7,68E-01	2,26E-02	0	7,12E-05	0	1,19E-01	0,00E+00	3,35E-02	-7,61E-01
	RWD	kg	1,85E-03	2,07E-05	2,99E-06	0	3,43E-08	0	1,67E-05	0,00E+00	5,85E-06	-1,24E-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	B1	B2	C1	C2	C3	C4	D
	CRU	kg	0,00E+00	0,00E+00	0,00E+00	0	0,00E+00	0	0,00E+00	0,00E+00	0,00E+00	0,00E+00
	MFR	kg	0,00E+00	0,00E+00	1,86E+00	0	0,00E+00	0	0,00E+00	1,90E+00	0,00E+00	7,93E-01
	MER	kg	0,00E+00	0,00E+00	2,72E-06	0	0,00E+00	0	0,00E+00	9,34E+00	0,00E+00	5,04E-04
	EEE	MJ	0,00E+00	0,00E+00	1,14E-01	0	0,00E+00	0	0,00E+00	2,73E+00	0,00E+00	-5,75E-04
	EET	MJ	0,00E+00	0,00E+00	1,73E+00	0	0,00E+00	0	0,00E+00	4,13E+01	0,00E+00	-8,70E-03

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	1,68E+00
Biogenic carbon content in accompanying packaging	kg C	9,26E-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	Data source	Amount	Unit
Electricity, European average (kWh)	ecoinvent 3.6	428,03	g CO2-eq/kWh

Dangerous substances

No substances given by the REACH Candidate list or the Norwegian priority list are intentionally added to the product.

Indoor environment

Our furniture doesn't contain any substanses that effect indoor clima, and therefore satisfies the requirements for low emissions.

Additional Environmental Information

Additional environmental impact indicators required in NPCR Part A for construction products											
Indicator	Unit	A1-A3	A4	A5	B1	B2	C1	C2	C3	C4	D
GWPIOBC	kg CO_2 -eq	3,99E+01	2,45E-01	0,00E+00	0	3,46E-04	0	1,62E-01	5,51E+00	2,00E-03	-2,74E+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 (%)
Table S Ø340	9,40	32,63	552,19	19,81

Key Environmental Indicators

Indicator	Unit	A1-A3	A4	A1-C4	A1-D
GWPtotal	kg CO_2 -eq	29,79	0,24	40,00	38,09
Total energy consumption	MJ	606,79	5,43	616,86	578,89
Amount of recycled materials	%	16,01			

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.
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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.

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