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The Norwegian EPD Foundation

ENVIRONMENTAL PRODUCT DECLARATION

in accordance with ISO 14025, ISO 21930 and EN 15804

Owner of the declaration:	JSC Svenheim
Program operator:	The Norwegian EPD Foundation
Publisher:	The Norwegian EPD Foundation
Declaration number:	NEPD-3402-2017-EN
Registration number:	NEPD-3402-2017-EN
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Valid to:	15.03.2027

Titan S40, cabinet with 3 drawers oak veneer

JSC Svenheim

Svenheim
MØBELINDUSTRI AS

www.epd-norge.no

General information

Product:

Titan S40, cabinet with 3 drawers oak veneer

Owner of the declaration:

JSC Svenheim
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Manufacturer:

JSC Svenheim

Declaration number:

NEPD-3402-2017-EN

Place of production:

JSC Svenheim
Naujoji str.132 LT-62175 Alytus
Lithuania

ECO Platform reference number:

Management system:

ISO 14001, Certificate No. 81858-2010-AE-LUT-FINAS ISO 9001, Certificate No. 81860-2010-AQ-LTU-FINAS Accredited unit: DNV Certification OY/AB, Finland

This declaration is based on Product Category Rules:

CEN Standard EN 15804:2012+A1:2013 serves as core PCR
NPCR 026:2018 Part B for furniture

Organisation no:

LT100004040014

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.

Issue date:

15.03.2022

Valid to:

15.03.2027

Declared unit:

1 Pcs Titan S40, cabinet with 3 drawers oak veneer

Year of study:

2021

Declared unit with option:

A1,A2,A3,A4,A5,C2,C3

Comparability:

EPDs from programmes other than the Norwegian EPD Foundation may not be comparable

Functional unit:

Development and verification of EPD:

The declaration has been developed and verified using EPD tool lca.tools ver EPD2020.11, developed by LCA.no AS. The EPD tool is integrated into the company's environmental management system, and has been approved by EPD-Norway

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. Individual third party verification of each EPD is not required when the EPD tool is i) integrated into the company's environmental management system, ii) the procedures for use of the EPD tool are approved by EPDNorway, and iii) the proccess is reviewed annualy. See Appendix G of EPD-Norway's General Programme Instructions for further information on EPD tools.

Developer of EPD:

Linas Vosylius

Reviewer of company-specific input data and EPD:

Jan Petter Nilsen

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.

Erik Svanes, Norsus AS

(no signature required)

Approved:

Sign

Håkon Hauan, CEO EPD-Norge

Key environmental indicators	Unit	Cradle to gate A1 - A3
Global warming	kg CO2 eqv	36,98
Total energy use	MJ	1024,00
Amount of recycled materials	%	3,77

Product

Market:

Europe

Product description:

Titan S40, cabinet with 3 drawers body and front oak veneer with folded frame inside drawer

Product specification

Titan S40 cabinet available in beech, birch, oak and ash veneer, white, light or dark grey, black, beech, birch, oak or ash MFC. Fronts also available in white, grey or black HPL and 21 different painted colours.

Technical data:

Total weight 22,20kg with packaging

Reference service life, product

15 years

Reference service life, building

Materials	kg	%	Recycled share in material (kg)	Recycled share in material (%)
Printed paper	0,10	0,40	0,00	0,00
Metal - Steel	1,36	4,71	0,27	20,00
Wood - Medium Density Fibreboard (MDF)	1,25	6,06	0,00	0,00
Plastic - Acrylonitrile butadiene styrene (ABS)	0,29	1,00	0,00	0,00
Plastic - Polystyrene expandable (EPS)	2,60	9,00	0,00	0,00
Wood - Chipboard	18,29	72,82	0,00	0,00
Glue for wood	0,19	0,66	0,00	0,00
Wood - Veneer	0,85	5,36	0,00	0,05
Total:	24,93		0,27	

Packaging	kg		Recycled share in material (kg)	Recycled share in material (%)
Packaging - Cardboard	0,92		0,70	76,30
Total including packaging	25,85		0,97	

LCA: Calculation rules

Declared unit:

1 Pcs Titan S40, cabinet with 3 drawers oak veneer

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:

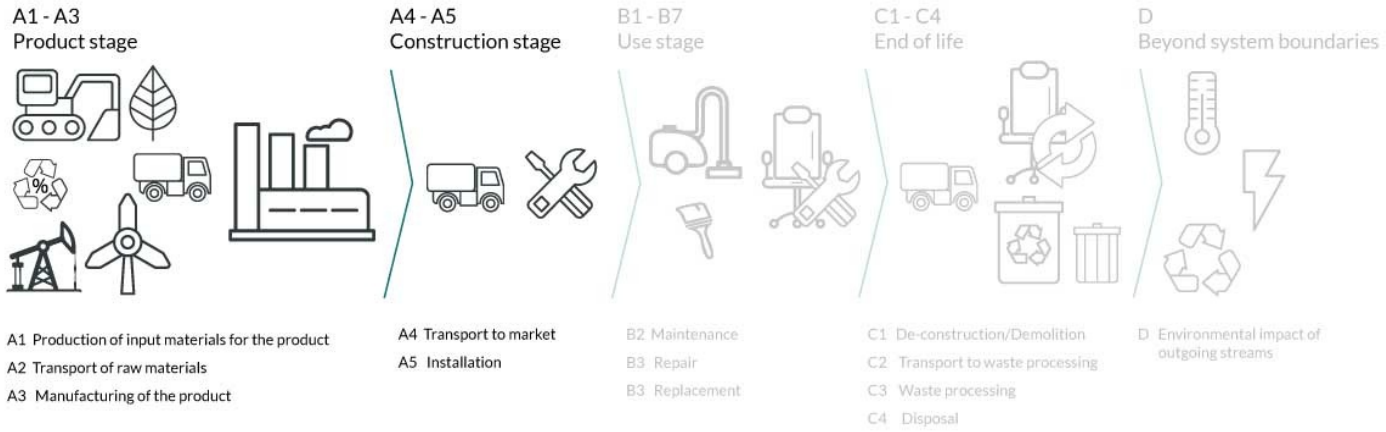
The allocation is made in accordance with the provisions of EN 15804. Effects of primary production of recycled materials is allocated to the main product in which the material was used. The recycling process and transportation of the material is allocated to this analysis.

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
Plastic - Acrylonitrile butadiene styrene (ABS)	ecoinvent 3.4	Database	2015
Metal - Steel	ecoinvent 3.3	Database	2016
Glue for wood	ecoinvent 3.4	Database	2017
Packaging - Cardboard	ecoinvent 3.4	Database	2017
Plastic - Polystyrene expandable (EPS)	ecoinvent 3.4	Database	2017
Printed paper	ecoinvent 3.4	Database	2017
Wood - Chipboard	ecoinvent 3.4	Database	2017
Wood - Medium Density Fibreboard (MDF)	ecoinvent 3.4	Database	2017
Wood - Veneer	S-P-00172	EPD	2017

System boundary:



Additional technical information:

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)

Type	Capacity utilisation (incl. return) %	Type of vehicle	Distance km	Fuel/Energy consumption	Unit	Value (l/t)
Truck	55,0 %	Truck, over 32 tonnes, EURO 6	1426	0,022606	l/tkm	32,24
Railway					l/tkm	
Boat	71,0 %	Ship, Coastal Barge (250 - 3000t load)	490	0,011179	l/tkm	5,48
Other Transportation					l/tkm	

Assembly (A5)

.	Unit	Value
Auxiliary	kg	
Water consumption	m^3	
Electricity consumption	kWh	
Other energy carriers	MJ	
Material loss	kg	
Output materials from waste treatment	kg	0,9200
Dust in the air	kg	
VOC emissions	kg	

End of Life (C1, C3, C4)

.	Unit	Value
Hazardous waste disposed	kg	
Collected as mixed construction waste	kg	
Reuse	kg	
Recycling	kg	3,9600
Energy recovery	kg	17,3200
To landfill	kg	

Transport to waste processing (C2)

Type	Capacity utilisation (incl. return) %	Type of vehicle	Distance km	Fuel/Energy consumption	Unit	Value (l/t)
Truck	38,8 %	Truck, 16-32 tonnes, EURO 6	72	0,043626	l/tkm	3,14
Railway					l/tkm	
Boat					l/tkm	
Other Transportation					l/tkm	

LCA: Results

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

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

Product stage			Construction installation stage		User stage							End of life stage				.	Beyond the system bondaries
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	MND	X	X	MND	.	MND

Environmental impact

Parameter	Unit	A1	A2	A3	A4	A5	C2	C3
GWP	kg CO_2 -eq	2,69E+01	8,87E-01	9,15E+00	3,14E+00	4,40E-02	2,55E-01	1,92E+02
ODP	kg CFC11 -eq	2,14E-06	1,75E-07	3,96E-07	6,14E-07	5,17E-09	4,80E-08	1,53E-06
POCP	kg C_2H_4-eq	1,03E-02	1,37E-04	4,17E-03	4,95E-04	8,05E-06	3,86E-05	3,03E-03
AP	kg SO_2 -eq	1,18E-01	2,27E-03	3,83E-02	1,05E-02	2,38E-04	5,99E-04	8,88E-02
EP	kg PO_4^{3-} -eq	1,79E-02	3,24E-04	6,08E-03	1,73E-03	7,09E-05	7,86E-05	2,77E-02
ADPM	kg Sb -eq	9,38E-05	2,43E-06	1,15E-05	6,53E-06	7,12E-08	7,91E-07	2,12E-05
ADPE	MJ	3,77E+02	1,40E+01	8,17E+01	4,96E+01	4,23E-01	3,85E+00	1,45E+02

GWP Global warming potential; ODP Depletion potential of the stratospheric ozone layer; POCP Formation potential of tropospheric photochemical oxidants; AP Acidification potential of land and water; EP Eutrophication potential; ADPM Abiotic depletion potential for non fossil resources; ADPE Abiotic depletion potential for fossil resources

Reading example: 9,0 E-03 = 9,0*10-3 = 0,009
*INA Indicator Not Assessed

Resource use

Parameter	Unit	A1	A2	A3	A4	A5	C2	C3
RPEE	MJ	3,19E+02	2,35E-01	9,77E+01	9,28E-01	1,47E+01	5,68E-02	2,56E+03
RPEM	MJ	1,90E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
TPE	MJ	5,09E+02	2,35E-01	9,77E+01	9,28E-01	1,47E+01	5,68E-02	2,56E+03
NRPE	MJ	4,40E+02	1,44E+01	1,53E+02	5,12E+01	4,36E-01	3,94E+00	1,86E+03
NRPM	MJ	1,26E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
TRPE	MJ	5,66E+02	1,44E+01	1,53E+02	5,12E+01	4,36E-01	3,94E+00	1,86E+03
SM	kg	9,75E-01	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
NRSF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
W	m^3	1,29E-01	3,11E-03	6,97E-02	1,21E-02	1,59E-03	7,45E-04	5,91E-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

Reading example: 9,0 E-03 = 9,0*10-3 = 0,009
*INA Indicator Not Assessed

End of life - Waste

Parameter	Unit	A1	A2	A3	A4	A5	C2	C3
HW	kg	7,21E-04	8,08E-06	1,70E-04	2,91E-05	6,30E-07	2,32E-06	3,96E-04
NHW	kg	9,65E+00	1,08E+00	2,87E+00	4,15E+00	4,21E-02	2,11E-01	1,03E+02
RW	kg	INA*	INA*	INA*	INA*	INA*	INA*	INA*

HW Hazardous waste disposed; NHW Non hazardous waste disposed; RW Radioactive waste disposed

Reading example: 9,0 E-03 = 9,0*10-3 = 0,009
*INA Indicator Not Assessed

End of life - Output flow

Parameter	Unit	A1	A2	A3	A4	A5	C2	C3
CR	kg	2,28E-01	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	4,05E-02	0,00E+00	0,00E+00	0,00E+00	1,19E+01
MER	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,41E-01
EEE	MJ	INA*	INA*	INA*	INA*	INA*	INA*	INA*
ETE	MJ	INA*	INA*	INA*	INA*	INA*	INA*	INA*

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

Reading example: 9,0 E-03 = 9,0*10-3 = 0,009
*INA Indicator Not Assessed

Additional Norwegian 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
Energy, electricity, European average: 1 kWh	ecoinvent 3.4	594,20	g CO2-ekv/kWh

Dangerous substances

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

Indoor environment

Additional environmental information

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.
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