

Environmental product declaration

in accordance with ISO 14025 and EN 15804+A2

Sawn timber (spruce or pine)



EPD-Global

Owner of the declaration:

Moelven Industrier ASA

Product:

Sawn timber (spruce or pine)

Declared unit:

1 m³

This declaration is based on Product Category Rules:

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

NPCR 015:2021 Part B for wood and wood-based products for use in construction

Program operator:

EPD-Global

Declaration number:

NEPD-15726-19663

Issue date:

28.05.2026

Latest revision

v2.0 Date: 02.07.2026

Valid to:

28.05.2031

EPD software:

LCAno EPD generator ID: 1672926

General information

Product

Sawn timber (spruce or pine)

Program operator:

EPD-Global
Post Box 5250 Majorstuen, 0303 Oslo, Norway
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Declaration number:

NEPD-15726-19663

This declaration is based on Product Category Rules:

CEN Standard EN 15804:2012+A2:2019 serves as core PCR
NPCR 015:2021 Part B for wood and wood-based products for use in construction

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.

Declared unit:

1 m³ Sawn timber (spruce or pine)

Declared unit with option:

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

Functional unit:

1 m³ of sawn timber from spruce or pine

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

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)

Owner of the declaration:

Moelven Industrier ASA
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Manufacturer:

Moelven Industrier ASA

Place of production:

Moelven Industrier ASA
Industrivegen 2
2390 Moelv, Norway

Management system:

Se under Teknisk tilleggsinformasjon

Organisation no:

914 348 803

Issue date:

28.05.2026

Valid to:

28.05.2031

Year of study:

2024

Comparability:

EPDs of construction products may not be comparable if they do not comply with EN 15804 and are not viewed 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-Global. NEPD79

Developer of EPD: Elin Ahremark

Reviewer of company-specific input data and EPD: Michaela Pfeiffer

Approved:



Håkon Hauan, CEO EPD-Global

Product

Product description:

Sawn timber from spruce or pine is manufactured from Nordic raw materials. The products are sawn and kiln-dried, and are available in a variety of dimensions. They are primarily supplied to Moelven's integrated planing mills, as well as to external planing mills. The products are offered in strength classes from C14 to C30

Product specification

The calculations are based on a weighted average density of spruce and pine from Moelven's sawing mills. The resulting average density is 491 kg/m³.

Materials	Value	Unit
Timber - Spruce and Pine	491	kg
Plastic packaging material	0,59	kg
Wood packaging material	1,64	kg

Technical data:

Spruce and pine timber is based on average densities of spruce (470kg/m³) and pine (530 kg/m³). The moisture content ranges between 12% and 20%, depending on the application. Sawn timber is manufactured in accordance with EN-13120:1999+A1, while structural timber is strength-graded in accordance with EN 14081.

Market:

Primarily Norway and Sweden

Reference service life, product

The product is a raw material; therefore, no reference service life (RSL) is applicable or stated

Reference service life, building or construction works

60 years

LCA: Calculation rules

Declared unit:

1 m³ Sawn timber (spruce or pine)

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 when specific information are missing. These cut-off criteria do not apply for hazardous materials and substances.

- Infrastructure related to buildings and machinery/equipment has been excluded from module A3 (included only for the boiler)
- End-of-life treatment of electrical waste

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. Note: Economic allocation has been applied throughout the value chain for all co-products, in accordance with EN 15804:2021, with the exception of wood raw material (so-called "school 1"). Different interpretations of the standard have resulted in varying practical approaches across the Nordic countries. This life cycle assessment follows the "school 1" approach as described by EPD Norway (2024). Results may change following the final harmonisation of the regulations

Data quality:

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

This EPD is based on averaged production data from six production sites.

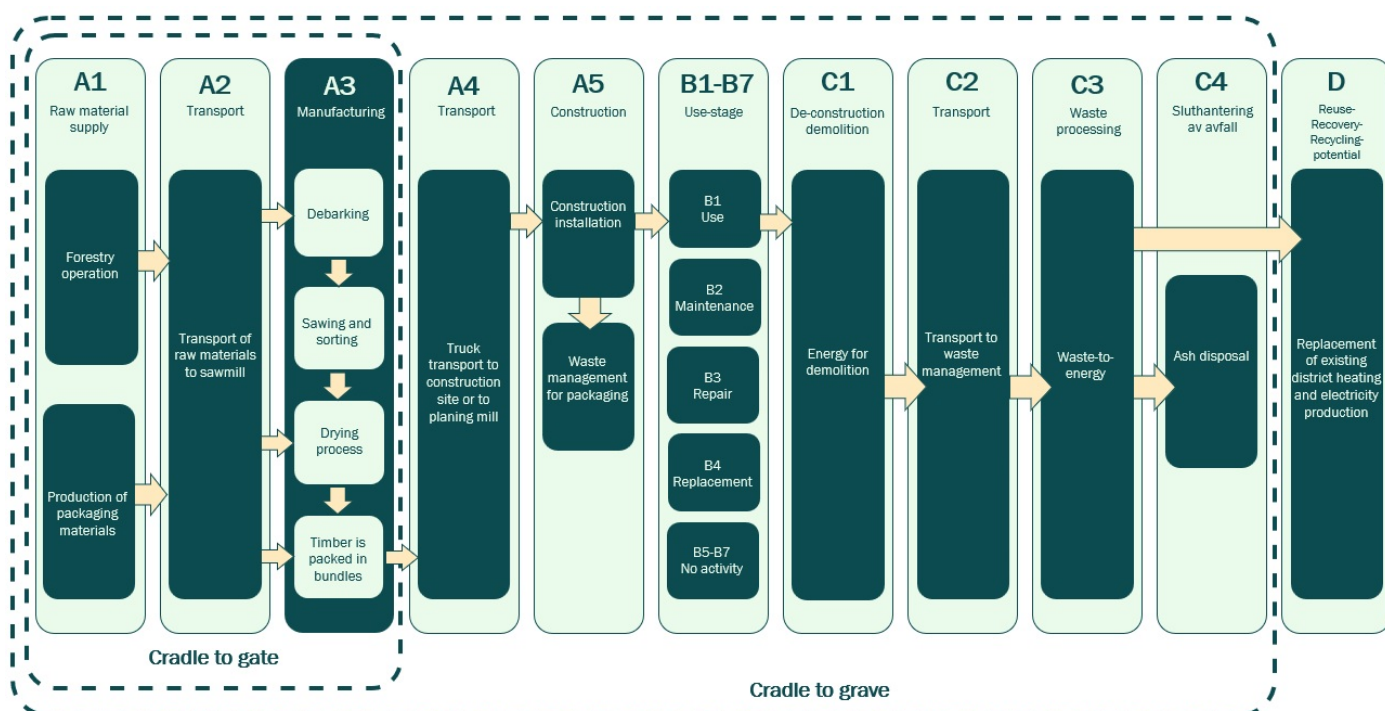
Materials	Source	Data quality	Year
Packaging - Wood	ecoinvent 3.10.1	Database	2023
Plastemballasje	ecoinvent 3.6	Database	2019
Wood	Tretekk (NTI), Ecoinvent 3.10	Database	2023

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:

Averaging of product groups from the manufacturer and resolution of data collection leaves dressing activities outside the system boundary although some of the sawn timber also undergo dressing or sizing that reduces cross section dimensions. Sorting activities after drying are within the system boundary.



Additional technical information:

Certifications and environmental information related to the declared product:

- PEFC ST 2002:2020 Chain of custody of Forest Based Products
- FSC-STD-40-004; FSC-STD-40-003; FSC-STD-40-005

LCA: Scenarios and additional technical information

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

A4: Sawn timber is primarily supplied to Moelven's integrated planing mills. Average transport to planing mill is included.

A5 and C1-C2: The product is used as a material for further processing into a wide range of applications and does not remain in the construction without additional processing. Therefore, activities in these life cycle stages are not included, except for waste from packaging.

C3-C4 and D:

Parts of the product are assumed to be discarded earlier than the reference scenario applied in the calculations, which is based on a 60-year service life for finished construction products. These modules are included to balance the modelled uptake of biogenic carbon and energy in module A1 with the emissions that occur during the incineration of wood at the end of its life. A corresponding balancing for product packaging is not included in this life cycle assessment.

Transport from production place to user (A4)	Capacity utilisation (incl. return) %	Distance (km)	Fuel/Energy Consumption	Unit	Value (Liter/tonne)
Lastebil med henger, EURO 6 (kgkm)	55.0 %	50.00	0.023	l/tkm	1.15
Assembly (A5)	Unit	Value			
Avfallsbehandling plast (kg) dekkplast	kg	0.6195			
Avfallsbehandling treemballasje, inkl. biogent karbon (kg)	kg	1.72			
Waste processing (C3)	Unit	Value			
Avfallsbehandling ubehandlet tre, 0% vann, forbrenning, NorgeT1 (kg)	kg	419.60			
Benefits and loads beyond the system boundaries (D)	Unit	Value			
Substitution of thermal energy, district heating (MJ)	MJ	5676.06			
Substitution of electricity (MJ)	MJ	818.09			

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	-7.36E+02	2.43E+00	2.70E+00	0	0	7.75E+02	0	-3.72E+01
	GWP-fossil	kg CO ₂ -eq	3.53E+01	2.43E+00	6.76E-02	0	0	5.27E+00	0	-3.59E+01
	GWP-biogenic	kg CO ₂ -eq	-7.71E+02	1.58E-03	2.63E+00	0	0	7.69E+02	0	-1.24E-01
	GWP-luluc	kg CO ₂ -eq	1.56E-01	9.46E-04	9.94E-06	0	0	1.65E-03	0	-1.15E+00
	ODP	kg CFC11 -eq	2.25E-06	4.70E-08	7.20E-09	0	0	3.39E-07	0	-2.40E+00
	AP	mol H ⁺ -eq	3.01E-01	5.74E-03	1.36E-04	0	0	7.83E-02	0	-3.27E-01
	EP-FreshWater	kg P -eq	3.33E-03	1.70E-04	2.43E-07	0	0	1.04E-04	0	-8.49E-03
	EP-Marine	kg N -eq	1.15E-01	1.50E-03	7.80E-05	0	0	3.83E-02	0	-9.31E-02
	EP-Terrestrial	mol N -eq	1.29E+00	1.63E-02	4.66E-04	0	0	4.07E-01	0	-1.01E+00
	POCP	kg NMVOC -eq	3.84E-01	9.97E-03	1.50E-04	0	0	9.88E-02	0	-2.81E-01
	ADP-minerals&metals ¹	kg Sb-eq	2.22E-04	6.96E-06	3.23E-07	0	0	1.44E-05	0	-1.01E-03
	ADP-fossil ¹	MJ	5.04E+02	3.65E+01	4.86E-01	0	0	3.56E+01	0	-5.03E+02
	WDP ¹	m ³	1.97E+02	1.87E-01	7.16E-01	0	0	1.19E+00	0	-2.97E+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

"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	9.31E-06	2.35E-07	2.51E-09	0	0	9.47E-07	0	-1.67E-05
 IRP ²	kgBq U235 -eq	1.16E+00	4.40E-02	2.16E-03	0	0	9.86E-02	0	-4.47E+00
 ETP-fw ¹	CTUe	3.87E+02	4.30E+00	4.13E-01	0	0	1.07E+02	0	-2.52E+03
 HTP-c ¹	CTUh	1.03E-07	0.00E+00	1.20E-11	0	0	2.01E-08	0	-5.28E-08
 HTP-nc ¹	CTUh	4.72E-07	2.35E-08	4.09E-10	0	0	8.82E-07	0	-2.99E-06
 SQP ¹	dimensionless	1.74E+03	3.67E+01	6.03E-01	0	0	8.35E+01	0	-3.16E+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 = Potential Soil Quality Index (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	1.58E+03	5.94E-01	2.93E+01	0	0	8.08E+03	0	-3.41E+03
	PERM	MJ	8.08E+03	0.00E+00	-2.93E+01	0	0	-8.06E+03	0	0.00E+00
	PERT	MJ	9.65E+03	5.94E-01	8.92E-03	0	0	2.01E+01	0	-3.41E+03
	PENRE	MJ	2.97E+02	3.65E+01	4.87E-01	0	0	3.56E+01	0	-5.03E+02
	PENRM	MJ	2.51E+01	0.00E+00	-2.63E+01	0	0	0.00E+00	0	0.00E+00
	PENRT	MJ	3.22E+02	3.65E+01	-2.58E+01	0	0	3.56E+01	0	-5.03E+02
	SM	kg	3.03E-03	0.00E+00	0.00E+00	0	0	0.00E+00	0	0.00E+00
	RSF	MJ	2.97E-01	1.99E-04	1.34E-04	0	0	1.81E+01	0	-1.68E-01
	NRSF	MJ	6.38E-01	0.00E+00	3.51E-04	0	0	1.15E+01	0	-1.71E+02
	FW	m ³	2.99E+00	5.39E-03	1.40E-04	0	0	1.48E-01	0	-6.92E+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	1.07E+00	5.28E-02	1.48E-05	0	0	4.59E-02	0	-6.84E-01	
 NHWD	kg	8.80E+00	1.06E+00	6.38E-01	0	0	1.31E+00	0	-3.77E+01	
 RWD	kg	6.07E-03	1.09E-05	1.94E-06	0	0	1.11E-04	0	-2.62E-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	0.00E+00	0	0.00E+00	
 MFR	kg	6.52E-01	0.00E+00	3.16E-01	0	0	0.00E+00	0	0.00E+00	
 MER	kg	1.52E+00	0.00E+00	1.72E+00	0	0	5.08E+02	0	0.00E+00	
 EEE	MJ	9.77E-01	0.00E+00	4.76E-05	0	0	8.18E+02	0	0.00E+00	
 EET	MJ	1.45E+01	0.00E+00	7.20E-04	0	0	5.68E+03	0	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	2.10E+02
Biogenic carbon content in accompanying packaging	kg C	6.75E-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
Elektrisitet, Norge (kWh)	ecoinvent 3.6	24.33	g CO ₂ -eq/kWh
Elektrisitet, Sverige (kWh)	ecoinvent 3.10.1	37.73	g CO ₂ -eq/kWh

Dangerous substances

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

Indoor environment

Not relevant

Additional Environmental Information

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	3.55E+01	2.43E+00	6.77E-02	0	0	5.34E+00	0	-3.67E+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.

Bibliography

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