Environmental Product Declaration

In accordance with ISO 14025:2006 and EN 15804:2012+A2:2019/AC:2021 for:

Sebe-listen MDF

UNE-Produkter AB

Programme:	The International EPD System, www.environdec.com
Programme operator:	EPD International AB
Type of EPD:	EPD of a single product from a manufacturer
EPD registration number:	EPD-IES-0032943:001
Version date:	2026-07-06
Validity date:	2031-07-06

An EPD may be updated or depublished if conditions change. To find the latest version of the EPD and to confirm its validity, see www.environdec.com

GENERAL INFORMATION

Programme Information	
Programme:	The International EPD System
Address:	EPD International AB Box 210 60 SE-100 31 Stockholm Sweden
Website:	www.environdec.com
E-mail:	support@environdec.com

Product Category Rules (PCR)
CEN standard EN 15804 serves as the Core Product Category Rules (PCR)
Product Category Rules (PCR): *Constructions products, PCR 2019:14, version 2.0.1*
PCR review was conducted by: The Technical Committee of the International EPD System. See www.environdec.com for a list of members. Review chair: Claudia A. Peña, University of Concepción, Chile. The review panel may be contacted via the Secretariat www.environdec.com/contact
c-PCR: Wood and wood-based products for use in construction, version 1.0.0 (2019:14-c-PCR-006)

Third-party Verification
Independent third-party verification of the declaration and data, according to ISO 14025:2006, via: ☒ **Individual EPD verification without a pre-verified LCA/EPD tool** ☐ Individual EPD verification with a pre-verified LCA/EPD tool ☐ EPD process certification* without a pre-verified LCA/EPD tool ☐ EPD process certification* with a pre-verified LCA/EPD tool ☐ Fully pre-verified EPD tool Third-party verifier: Pär Lindman, Miljögiraff AB, par@miljogiraff.se Approved by: International EPD System *EPD process certification involves an accredited certification body certifying and periodically auditing the EPD process and conducting external and independent verification of EPDs that are regularly published. More information can be found in the General Programme Instructions on www.environdec.com.
Procedure for follow-up of data during EPD validity involves third party verifier: ☐ Yes ☒ No

The EPD owner has the sole ownership, liability, and responsibility for the EPD.

EPDs within the same product category but published in different EPD programmes, may not be comparable. For two EPDs to be comparable, they shall be based on the same PCR (including the same first-digit version number) or be based on fully aligned PCRs or versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical declared/functional units); have identical scope in terms of included life-cycle stages (unless the excluded life-cycle stage is demonstrated to be insignificant); apply identical impact assessment methods (including the same version of characterisation factors); and be valid at the time of comparison.
For further information about comparability, see EN 15804 and ISO 14025.

INFORMATION ABOUT EPD OWNER

Owner of the EPD: UNE-Produkter AB
Address: Box 58, 793 22 Leksand, Sweden
Contact: Lars Hjort, lars@une-prod.se
Address and contact information of the LCA practitioner commissioned by the EPD owner, if applicable: Peter Ylmén, RISE Technical Research Institutes of Sweden, peter.ylmen@ri.se
Description of the organisation: UNE-Produkter AB is a modern moulding planing mill with surface treatment in Leksand. It is a state-of-the-art and efficient facility with around fifteen employees.

PRODUCT INFORMATION

Product name: Sebe-listen MDF
Product identification: By name Sebe-listen MDF
UN CPC code: 312
Product description: Surface-treated floor skirtings, casings, stepped casings, ceiling mouldings, reveal and cover mouldings, reveal panels, and more, made of MDF. All types are manufactured with profiles according to SS 232812.
Name and location of production site(s): Leksand, Sweden

CONTENT DECLARATION

Content of MDF moulding.

Product content	Mass, kg	Post-consumer recycled material, mass-% of d.u.	Biogenic material, mass-% of d.u.	Biogenic material, kg C/d.u.
Medium density fiber board	588.00	0.00	67	210.00
Pine wood	70.40	0.00	8	25.14
Paint	43.20	0.00	0	0.00
TOTAL	701.60	0.00	75	235.14

Packaging materials	Mass, kg	Mass-% (versus the product)	Biogenic material, kg C/d.u.
Polyethylene	1.26	0.18	0.00
Steel	0.39	0.06	0.00
Polyethylene terephthalate	0.35	0.05	0.00
Polypropylene	0.09	0.01	0.00
TOTAL	2.08	0.30	0.00

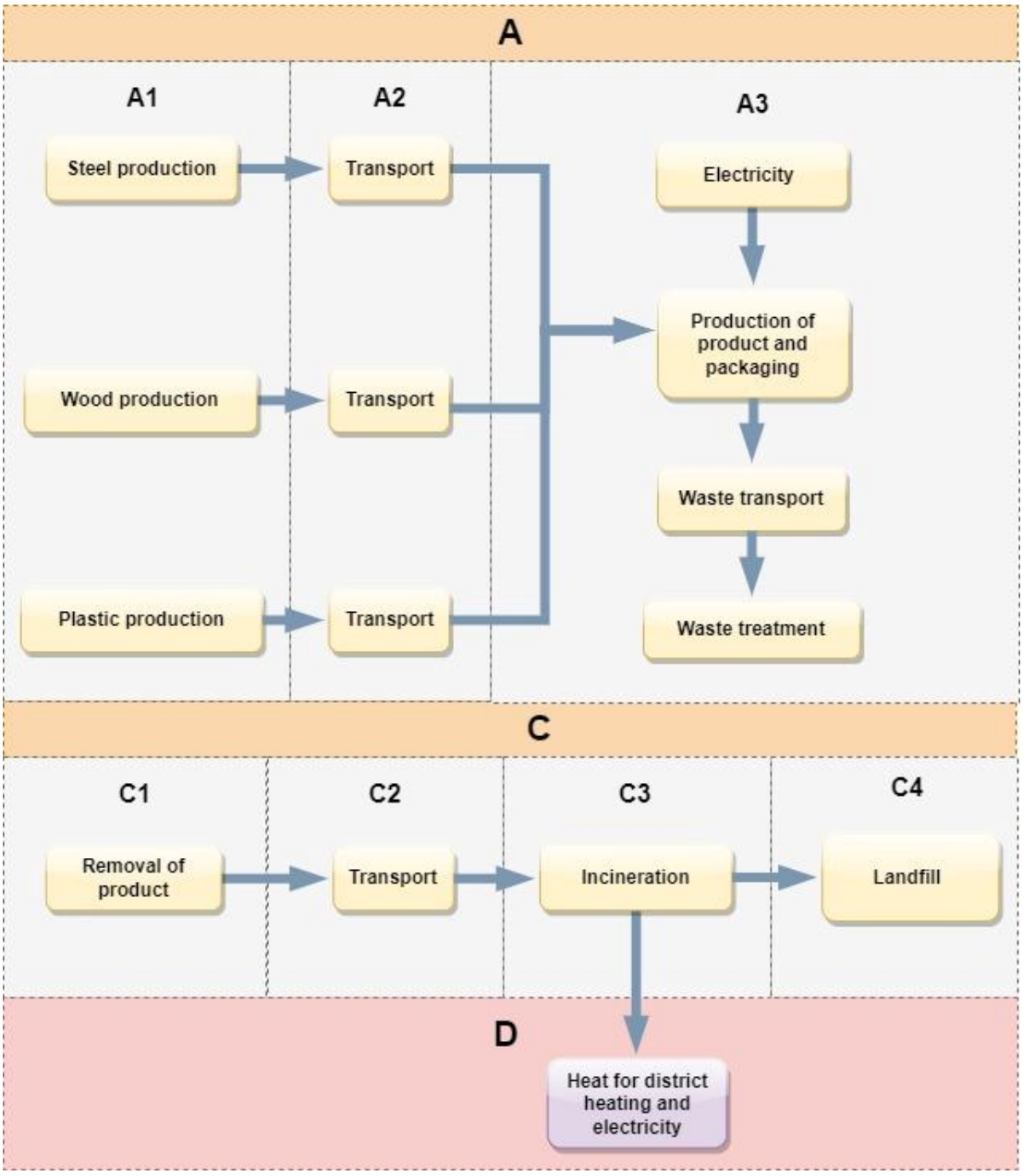
1 kg biogenic carbon in the product/packaging is equivalent to the uptake of 44/12 kg of CO2 .

Dangerous substances from the candidate list of SVHC for Authorisation is below 0.1% in the product.

LCA INFORMATION

Declared unit: 1 m³ of moulding with moisture content 10-14%
Conversion factor to mass: 1.4E-03 m³/kg
Time representativeness: 2024
Geographical scope: Sweden.
Database(s) and LCA software used: openLCA 2.5 with ecoinvent 3.11 modified for openLCA
Description of system boundaries: Type a) Cradle to gate with modules C1–C4 and module D (A1–A3 + C + D).

Process flow diagram:



More information:
A1-A3 The production mainly consists of two refining processes: planing of mouldings and industrial painting of mouldings. During production, a byproduct called wood shavings is also generated, which is burned in the boiler facility to meet the company's heating needs, with any surplus being delivered to the pellet industry.
The pine raw material comes from forestry operations in the vicinity of the industry. The timber is sawn, sorted, and dried at the sawmill. The raw material is handled by forklift, and all processes and storage take place under a roof. The finished product is protected with plastic packaging.
Transport distance of waste from the factory to the waste management facility is 48 km.
Residual electricity mix modelled for the manufacturing. The GWP-GHG value for the energy mix is 0.086 kg CO_2-equivalents per kWh.

Allocation procedure: Flows that reach the end-of-waste state in modules A1-A3 were allocated as co-products in line with PCR 2019:14. The economic value of the product is significantly higher than the spillage in the production line. As a conservative assumption, the allocations made in the calculations have been made based on economic value with all environmental impact allocated to the product.

C1: The product is assumed to be demolished using 1.1 kWh/tonne diesel for the equipment
C2: The product is transported 130 km to the nearest waste management facility with a 16-32 tonne lorry (EURO 5) that have 50% load factor.
C3: The product is unloaded, sorted and chipped using 2.2 kWh/tonne electricity and 1.8 kWh/tonne diesel and then incinerated at an incineration plant.
C4: The ashes from incineration are landfilled.

D: The heat and electricity generated from waste incineration in C3 was calculated as negative emissions in module D.

The generic data from ecoinvent include capital goods. The allocation model for the data from ecoinvent is allocation, cut-off, EN15804, which complies with PCR 2019:14. Characterization factors based on EF 3.1 has been used.

The data regarding the manufacturing of the product are provided by measurements on site for year 2024 and therefore has high quality regarding geographical, spatial and temporal aspects. The manufacturer had no data on waste management in the C module, instead generic data from ecoinvent 3.11 were used. This will introduce some uncertainties regarding the absolute values in the results. The quality of the generic data was reviewed according to Table E1 in EN 15804+A2. All the used datasets have at least fair quality regarding time and technological relevance and adheres to the criteria in EN 15804. However, some dataset for waste treatment is representative for other countries. The technical level of Sweden is similar as these countries and the geographical relevance will therefore likely not have a large impact on the results. All data sets contributing to 80% or more of any of the core environmental indicators in the data quality assessment is included in the assessment.

Modules declared, geographical scope, share of primary data (in GWP-GHG results) and data variation (in GWP-GHG results):

	Product stage			Distribution/ installation stage		Use stage							End-of-life stage				Beyond product life cycle
	Raw material supply	Transport	Manufacturing	Transport	Construction installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling-potential
Module	**A1**	**A2**	**A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
Modules declared	X	X	X	ND	ND	ND	ND	ND	ND	ND	ND	ND	X	X	X	X	X
Geography	EUR	EUR	SE										SE	SE	SE	SE	SE
Variation – products	0%					-	-	-	-	-	-	-	-	-	-	-	-
Variation – sites	0%					-	-	-	-	-	-	-	-	-	-	-	-

Process	Source type	Source	Reference year	Data category	Share of GWP-GHG results for A1-A3
Fibreboard production	Database	Ecoinvent 3.11	< 5 years	Secondary data	79%
Paint production	Database	Ecoinvent 3.11	< 5 years	Secondary data	14%
Total share of primary data, of GWP-GHG results for A1-A3					6%

The share of primary data is calculated based on GWP-GHG results. It is a simplified indicator for data quality that supports the use of more primary data, to increase the representativeness of and comparability between EPDs. Note that the indicator does not capture all relevant aspects of data quality and is not comparable across product categories.

ENVIRONMENTAL PERFORMANCE

LCA results of the product - main environmental performance results

Mandatory impact category indicators according to EN 15804

The estimated impact results are only relative statements, which do not indicate the endpoints of the impact categories, exceeding threshold values, safety margins and/or risks.

The results of the end-of-life stage (modules C1-C4) should be considered when using the results of the product stage (modules A1-A3).

Results per declared unit

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-total	kg CO_2 eq.	4.7E+02	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.7E-02	1.7E+01	1.2E+03	0.0E+00	-6.9E+02
GWP-fossil	kg CO_2 eq.	1.5E+03	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.7E-02	1.7E+01	1.7E+02	0.0E+00	-6.9E+02
GWP-biogenic	kg CO_2 eq.	-1.1E+03	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.6E-05	3.7E-03	1.1E+03	0.0E+00	-3.6E-01
GWP-luluc	kg CO_2 eq.	2.5E+01	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.2E-05	5.8E-03	1.3E-02	0.0E+00	-1.5E+00
ODP	kg CFC 11 eq.	4.6E-05	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.8E-09	3.8E-07	1.3E-06	0.0E+00	-5.3E-06
AP	mol H^+ eq.	1.1E+01	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.4E-04	5.6E-02	2.2E-01	0.0E+00	-5.3E+00
EP-freshwater	kg P eq.	5.0E-01	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.7E-06	1.2E-03	4.9E-03	0.0E+00	-2.7E-01
EP-marine	kg N eq.	2.6E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.0E-05	1.9E-02	7.5E-02	0.0E+00	-6.9E-01
EP-terrestrial	mol N eq.	2.9E+01	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.2E-04	2.0E-01	7.4E-01	0.0E+00	-7.4E+00
POCP	kg NMVOC eq.	9.5E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.2E-04	8.4E-02	2.7E-01	0.0E+00	-2.3E+00
ADP-minerals& metals*	kg Sb eq.	9.9E-03	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.9E-08	6.0E-05	7.7E-05	0.0E+00	-3.8E-04
ADP-fossil*	MJ	3.1E+04	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.4E+00	2.5E+02	7.9E+02	0.0E+00	-8.4E+03
WDP*	m^3	1.4E+03	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.4E-03	1.3E+00	2.5E+01	0.0E+00	-1.2E+02

Acronyms: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

** Disclaimer: 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.*

Additional mandatory and voluntary impact category indicators

Results per declared unit

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-GHG[1]	kg CO_2 eq.	1.5E+03	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.7E-02	1.7E+01	1.7E+02	0.0E+00	-6.9E+02
PM	disease inc.	1.8E-04	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.0E-09	1.4E-06	2.4E-06	0.0E+00	-5.7E-05
IRP*	kBq U_{235} eq.	5.1E+02	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.0E-03	2.9E-01	1.1E+00	0.0E+00	-1.4E+02
ETP-fw**	CTUe	6.6E+03	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.1E-01	3.3E+01	2.6E+02	0.0E+00	-1.0E+03
HTP-c**	CTUh	9.3E-06	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.4E-12	3.0E-09	3.1E-07	0.0E+00	-1.2E-07
HTP-nc**	CTUh	1.7E-05	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.7E-10	1.5E-07	1.5E-06	0.0E+00	-4.5E-06
SQP**	-	1.2E+05	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.8E-01	1.5E+02	6.4E+01	0.0E+00	-4.6E+03

Acronyms: PM = Potential incidence of disease due to particular 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 = Land use related impacts/Soil quality

* 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

** 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.

[1] This indicator accounts for all greenhouse gases except biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. As such, the indicator is identical to GWP-total except that the CF for biogenic CO_2 is set to zero.

Resource use indicators

The primary energy use indicators have been calculated with option A.

Results per declared unit

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PERE	MJ	1.4E+04	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.2E-02	4.0E+00	7.5E+03	0.0E+00	-2.1E+03
PERM	MJ	9.9E+03	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0E+00	0.0E+00	-7.4E+03	0.0E+00	0.0E+00
PERT	MJ	2.4E+04	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.2E-02	4.0E+00	1.3E+01	0.0E+00	-2.1E+03
PENRE	MJ	3.0E+04	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.4E+00	2.5E+02	1.7E+03	0.0E+00	-8.4E+03
PENRM	MJ	9.7E+02	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0E+00	0.0E+00	-9.3E+02	0.0E+00	0.0E+00
PENRT	MJ	3.1E+04	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.4E+00	2.5E+02	7.9E+02	0.0E+00	-8.4E+03
SM	kg	8.2E-02	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
RSF	MJ	5.6E+01	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.3E-04	5.6E-02	1.7E-01	0.0E+00	-3.1E+00
NRSF	MJ	0.0E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
FW	m^3	3.4E+01	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.6E-05	3.0E-02	2.0E-01	0.0E+00	-2.8E+00

Acronyms :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 re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water

Waste indicators

Results per declared unit

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste disposed	kg	0.0E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Non-hazardous waste disposed	kg	0.0E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Radioactive waste disposed	kg	0.0E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

Output flow indicators

Results per declared unit

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Components for reuse	kg	0.0E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Material for recycling	kg	1.6E-02	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Materials for energy recovery	kg	8.6E+02	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Exported energy, electricity	MJ	0.0E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0E+00	0.0E+00	1.4E+03	0.0E+00	0.0E+00
Exported energy, thermal	MJ	0.0E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0E+00	0.0E+00	9.4E+03	0.0E+00	0.0E+00

ABBREVIATIONS

Abbreviation	Definition
EN	European Norm (Standard)
ISO	International Organization for Standardization
CEN	European Committee for Standardization
CPC	Central product classification
GPI	General Programme Instructions
SVHC	Substances of Very High Concern
d.u.	Declared unit

REFERENCES

1. General Programme Instructions of the International EPD® System. Version 5.0.1
2. PCR 2019:14, Constructions products, version 2.0.1
3. 2019:14-c-PCR-006 Wood and wood-based products for use in construction, version 1.0.0
4. SS 232812 Trävaror - Trälister - Mått
5. openLCA EN15804 add-on to ecoinvent v3.11, https://nexus.openlca.org/database/EN15804%20add-on
6. LCA report for UNE-Produkter

VERSION HISTORY

Original Version of the EPD, 2026-07-06

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INTERNATIONAL EPD SYSTEM

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