

**Environmental
Product
Declaration**

According to EN15804+A2 (+indicators A1)

This declaration is for:
Binderholz solid wood panel

Provided by:
Binderholz GmbH



MRPI® registration:
1.1.00975.2025

Program operator:
Stichting MRPI®
Publisher:
Stichting MRPI®
www.mrpi.nl

Date of first issue:
13-9-2025
Date of this issue:
13-9-2025
Expiry date:
13-9-2030



**Nationale
MILIEUDATABASE**



COMPANY INFORMATION

Binderholz GmbH
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Austria

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<https://www.binderholz.com/>

MRPI® REGISTRATION

1.1.00975.2025

DATE OF THIS ISSUE

13-9-2025

EXPIRY DATE

13-9-2030

SCOPE OF DECLARATION

This MRPI®-EPD certificate is verified by Tim Mol, Eco Review. The LCA study has been done by Varun Ravikumar & Odile Koenders, SGS Search. The certificate is based on an LCA-dossier according to EN15804+A2 (+indicators A1). It is verified according to the 'MRPI®-EPD verification protocol November 2020.v4.0'. EPDs of construction products may not be comparable if they do not comply with EN15804+A2. Declaration of SVHC that are listed on the 'Candidate list of Substances of Very High Concern for authorisation' when content exceeds the limits for registration with ECHA.

PROGRAM OPERATOR

Stichting MRPI®
Kingsfordweg 151
1043 GR
Amsterdam

PRODUCT

Binderholz solid wood panel

DECLARED UNIT / FUNCTIONAL UNIT

1 Volume (m3)

DESCRIPTION OF PRODUCT

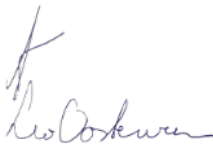
binderholz solid wood panels are single-ply or multi-ply panel-shaped solid wood products. In multi-ply panels, the single softwood layers are glued together at right angle. binderholz solid wood panels are produced according to /EN 13986/.

VISUAL PRODUCT



MORE INFORMATION

<https://www.binderholz.com/en-us/products/solid-wood-panels/>

Ing. L. L. Oosterveen MSc. MBA Managing Director MRPI	DEMONSTRATION OF VERIFICATION
	CEN standard EN15804 serves as the core PCR [1]
	Independent verification of the declaration and data according to EN15804+A2 (+indicators A1) Internal: External: X
	Third party verifier: Tim Mol, Eco Review 
	[1] PCR = Product Category Rules

DETAILED PRODUCT DESCRIPTION

Production

binderholz solid wood panels are made from at least one layer of board lamellae, whose narrow sides are glued together. binderholz multi-ply solid wood panels are made from board lamellae that are glued together crosswise, with an uneven number of layers. The sawn timber, before being transformed (cut) into board lamellae, is dried in a kiln. The narrow sides of the board lamellae are glued together using partly melt adhesives and melamine urea formaldehyde glues (MUF glues). Surface bonding of multi-ply panels is carried out using MUF glues.

The softwood board lamellae made of sawn timber with 8 % +/- 2 % wood moisture are used after -two-sided planning and optical sorting according to their surface quality. The thickness of the single lamellae after planning ranges from 4,5 to 13,5 mm (multi-ply panel) and from 15 to 62 mm (single-ply panels), for a width range from mainly approx. 100 to 200 mm (multi-ply panel) for the outer layers and approx. 43 mm for single-ply panels.

When the glue has cured completely, the panel surface is subjected to a final machining process and/or an optional, custom-tailored processing of binderholz solid wood panels.

Delivery

The following dimensions are available for binderholz solid wood panels:

binderholz single-ply solid wood panels

Thickness: 14, 18, 20, 22, 24, 27, 32, 35, 40, 42, 50, 52, 56, 60 mm

Widths: 1.22 m

Lengths: 5.00 m

binderholz 3-ply solid wood panels

Thickness: 12, 16, 19, 22, 27, 30, 32, 35, 40, 42, 50, 60 mm

Widths: 1.25 and 2.05 m

Length: 5.00 and 6.00 m (6.00 only 3-ply)

binderholz 5-ply solid wood panels

Thickness: 35, 42, 52 mm

Widths: 2.05 m

Length: 5.00 m

Optional: cut to size

The dimensional tolerances are those stipulated in /EN 13353/. binderholz solid wood panels are produced at 8 % wood moisture (single-ply) and 8-10 % wood moisture (multi-ply panels).

Use stage

binderholz solid wood panels are used for visually demanding interior structures and for furniture. For structures, multi-ply solid wood panels are used as load-bearing elements and as reinforcing components. The components indicated apply for the composition during the period of use. Around 199 kg of carbon are bound in one m³ of binderholz solid wood panel with a moisture content of 8 % while in use. This corresponds to a full oxidation of around 730 kg CO₂ equivalent.

Environmental protection: Provided that the binderholz solid wood panels are used for the intended purposes, they do not pose any risk for water, air, and soil. Health protection: According to the current state of knowledge, no harms to and adverse effects on health are to be expected. Where formaldehyde is concerned, binderholz solid wood panels are low-emission products due to the low glue content, the structure of the panels and their application. Due to the use of MUF glues for gluing, binderholz solid wood panels emit formaldehydes in the range of 25 µg/m³ (0.02 ppm). Compared to the limit value (0.1 ml/m³ - 0.124 mg/m³) these values are to be classified as low acc. to /EN 717-1/.

The components and the manufacture of binderholz solid wood panels are identical to those of glue-laminated timber (glulam), which has been used in the building industry for over a hundred years. Accordingly, no end to their durability is known or to be expected, if the panels are used for the intended purposes. Therefore, the useful life of binderholz solid wood panels is assumed to be identical to the overall useful life of the respective building, with the proviso of use for the intended purpose. Age-related impacts on binderholz solid wood panels may result from their use according to the rules of engineering.

Due to their monolithic structure, binderholz solid wood panels can be reused or used for other purposes without any problem if they are selectively dismantled. If they cannot be reused as such, binderholz solid wood panels can be used for producing process heat and electricity in thermal utilisation thanks to its high thermal value of 17,284 MJ/kg.

Detailed information is available at www.binderholz.com.

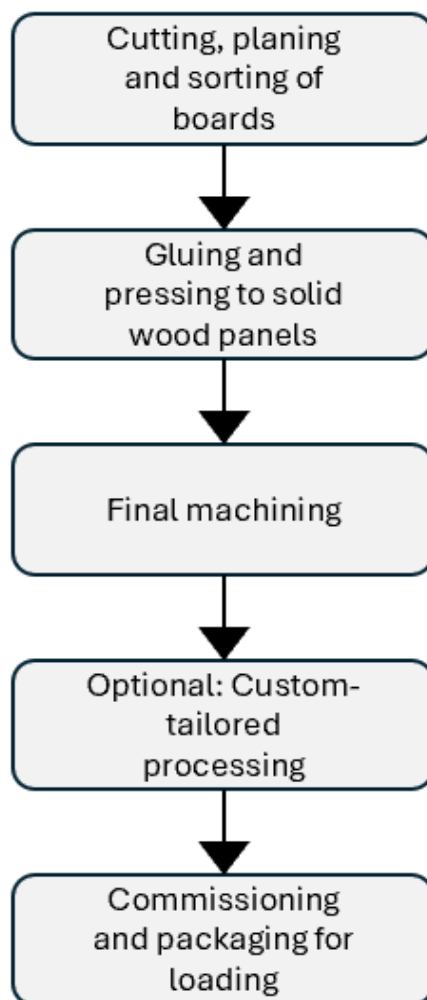
Component (> 1%)	(%)
Wood	95-100%
Adhesives	0-5%

This EPD is based on a Cradle-to-Grave study of solid wood panel for building construction. The product is produced by Binderholz GmbH in Binderholz SWP plant in St. Georgen, Austria. The LCA is based on production data from Binderholz from 2023 and modeled in SimaPro 9.5. Furthermore, this EPD is not according to the NMD Assessment Method. However, it is drawn on the basis of the NMD Assessment Method version 1.2 [1] except for module D where it deviates from NMD assessment method. This document describes a standard operating procedure for drawing up an LCA of a Dutch construction product, in addition to the NEN EN15804 [2], ISO 14040 [3], ISO 14044 [4] and ISO14025 [5]. For this study, background data from the ecoinvent 3.6 database was selected.

PRODUCT STAGE			CONSTRUCTION PROCESS STAGE		USE STAGE							END OF LIFE STAGE				BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARIES
Raw material supply	Transport	Manufacturing	Transport gate to site	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	X	X	X	X	X	X	X	X	X	X

X = Modules Assessed

ND = Not Declared



ENVIRONMENTAL IMPACT per functional unit or declared unit (indicators A1)

	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
ADPE	kg Sb eq.	0,00E+00	0,00E+00	0,00E+00	1,97E-03	4,47E-04	3,14E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,95E-05	2,48E-05	2,51E-06	-3,92E-04
ADPF	MJ	0,00E+00	0,00E+00	0,00E+00	6,39E-01	1,94E-01	4,62E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,24E-02	2,16E-02	2,68E-03	-2,04E+00
GWP	kg CO2 eq.	0,00E+00	0,00E+00	0,00E+00	8,45E+01	2,49E+01	9,23E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,05E+00	2,08E+01	1,68E+00	-2,55E+02
ODP	kg CFC11 eq.	0,00E+00	0,00E+00	0,00E+00	1,23E-05	4,91E-06	4,56E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,65E-07	5,16E-07	5,84E-08	-1,66E-05
POCP	kg ethene eq.	0,00E+00	0,00E+00	0,00E+00	2,20E-01	1,59E-02	2,63E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,83E-03	1,46E-02	5,23E-04	-4,86E-02
AP	kg SO2 eq.	0,00E+00	0,00E+00	0,00E+00	4,95E-01	6,55E-02	1,56E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,31E-02	7,85E-02	1,54E-03	-2,36E-01
EP	kg (PO4) 3 eq.	0,00E+00	0,00E+00	0,00E+00	1,33E-01	1,06E-02	3,53E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,62E-03	2,02E-02	6,57E-04	-4,80E-02

ADPE	=	Abiotic Depletion Potential for non-fossil resources
ADPF	=	Abiotic Depletion Potential for fossil resources
GWP	=	Global Warming Potential
ODP	=	Depletion potential of the stratospheric ozone layer
POCP	=	Formation potential of tropospheric ozone photochemical oxidants
AP	=	Acidification Potential of land and water
EP	=	Eutrophication Potential

ENVIRONMENTAL IMPACT per functional unit or declared unit (core indicators A2)

	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-total	kg CO2 eq.	0,00E+00	0,00E+00	0,00E+00	8,86E+01	2,51E+01	9,35E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,07E+00	2,11E+01	2,14E+00	-2,59E+02
GWP-fossil	kg CO2 eq.	0,00E+00	0,00E+00	0,00E+00	8,61E+01	2,51E+01	9,29E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,07E+00	2,09E+01	2,86E-01	-2,58E+02
GWP-biogenic	kg CO2 eq.	0,00E+00	0,00E+00	0,00E+00	-7,29E+02	1,08E-02	5,40E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,32E-03	6,94E+02	3,83E+01	-6,58E-01
GWP-luluc	kg CO2 eq.	0,00E+00	0,00E+00	0,00E+00	1,44E+00	7,65E-03	1,20E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,09E-03	1,98E-03	1,10E-04	-1,42E-01
ODP	kg CFC11 eq.	0,00E+00	0,00E+00	0,00E+00	1,44E-05	6,16E-06	5,02E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,08E-07	5,42E-07	7,29E-08	-1,75E-05
AP	mol H+ eq.	0,00E+00	0,00E+00	0,00E+00	6,68E-01	8,08E-02	2,03E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,75E-02	1,15E-01	2,03E-03	-2,36E-01
EP-fresh water	kg PO4 eq.	0,00E+00	0,00E+00	0,00E+00	1,09E-02	2,00E-04	3,65E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,53E-05	1,13E-04	4,90E-06	-1,15E-02
EP-marine	kg N eq.	0,00E+00	0,00E+00	0,00E+00	1,72E-01	1,77E-02	5,61E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,26E-03	5,28E-02	1,36E-03	-6,01E-02
EP-terrestrial	mol N eq.	0,00E+00	0,00E+00	0,00E+00	2,24E+00	1,97E-01	6,54E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,90E-02	6,04E-01	7,52E-03	-1,19E-01
POCP	kg NMVOC eq.	0,00E+00	0,00E+00	0,00E+00	8,25E-01	7,75E-02	1,90E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,97E-02	1,58E-01	2,69E-03	-2,48E-01
ADP-minerals & metals	kg Sb eq.	0,00E+00	0,00E+00	0,00E+00	1,97E-03	4,47E-04	3,14E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,95E-05	2,48E-05	2,51E-06	-3,92E-04
ADP-fossil	MJ, net calorific value	0,00E+00	0,00E+00	0,00E+00	1,38E+03	4,08E+02	8,49E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,72E+01	4,27E+01	5,56E+00	-3,67E+03
WDP	m3 world eq. Deprived	0,00E+00	0,00E+00	0,00E+00	6,97E+01	1,32E+00	7,72E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,45E-01	1,41E+00	2,34E-01	-3,06E+01

GWP-total	=	Global Warming Potential total
GWP-fossil	=	Global Warming Potential fossil fuels
GWP-biogenic	=	Global Warming Potential biogenic total
GWP-luluc	=	Global Warming Potential land use and land use change
ODP	=	Depletion potential of the stratospheric ozone layer
AP	=	Acidification Potential, Accumulated Exceedence
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 Exceedence
POCP	=	Formation potential of tropospheric ozone photochemical oxidants
ADP-minerals & metals	=	Abiotic Depletion Potential for non-fossil resources [1]
ADP-fossil	=	Abiotic Depletion for fossil resources potential [1]
WDP	=	Water (user) deprivation potential, deprivation-weighted water consumption [1]

Disclaimer [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 experience with the indicator.

ENVIRONMENTAL IMPACT per functional unit or declared unit (additional indicators A2)

Unit		A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PM	Disease incidence	0,00E+00	0,00E+00	0,00E+00	8,22E-06	2,20E-06	1,03E-07	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,77E-07	9,12E-07	3,83E-08	-9,34E-07
IRP	kBq U235 eq.	0,00E+00	0,00E+00	0,00E+00	6,82E+00	1,78E+00	2,20E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,06E-01	1,59E-01	2,21E-02	-6,01E+00
ETP-fw	CTUe	0,00E+00	0,00E+00	0,00E+00	3,60E+03	3,25E+02	8,81E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,83E+01	1,31E+02	5,32E+00	2,98E+03
HTP-c	CTUh	0,00E+00	0,00E+00	0,00E+00	9,93E-08	7,88E-09	4,19E-09	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,36E-09	1,06E-07	1,50E-10	-3,82E-08
HTP-nc	CTUh	0,00E+00	0,00E+00	0,00E+00	2,78E-06	3,56E-07	7,06E-08	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,57E-08	3,62E-07	5,92E-09	-1,26E-06
SQP	-	0,00E+00	0,00E+00	0,00E+00	5,98E+04	4,67E+02	4,16E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,03E+01	1,30E+01	1,32E+01	-5,90E+03

- PM = Potential incidence of disease due to PM emissions
- IRP = Potential Human exposure efficiency relative to U235 [1]
- ETP-fw = Potential Comparative Toxic Unit for ecosystems [2]
- HTP-c = Potential Comparative Toxic Unit for humans, cancer [2]
- HTP-nc = Potential Comparative Toxic Unit for humans, non-cancer [2]
- SQP = Potential soil quality index [2]

Disclaimer [1]:

- 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.

Disclaimer [2]:

- 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 experience with the indicator.

OUTPUT FLOWS AND WASTE CATEGORIES per functional unit or declared unit (A1 en A2)

	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
HWD	kg	0,00E+00	0,00E+00	0,00E+00	3,75E-03	9,89E-04	1,08E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,21E-04	1,05E-04	8,54E-06	-3,10E-03
NHWD	kg	0,00E+00	0,00E+00	0,00E+00	2,71E+01	3,54E+01	7,44E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,92E+00	2,47E+00	2,23E+01	-9,54E+00
RWD	kg	0,00E+00	0,00E+00	0,00E+00	7,32E-03	2,78E-03	2,56E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,21E-04	1,61E-04	3,34E-05	-6,18E-03
CRU	kg	0,00E+00	0,00E+00	0,00E+00	1,29E+01	0,00E+00	2,22E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,22E+01	0,00E+00	0,00E+00
MFR	kg	0,00E+00	0,00E+00	0,00E+00	2,59E+01	0,00E+00	4,45E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,45E+01	0,00E+00	0,00E+00
MER	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EEE	MJ	0,00E+00	0,00E+00	0,00E+00	-6,55E+02	0,00E+00	6,89E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,12E+03	0,00E+00	0,00E+00
ETE	MJ	0,00E+00	0,00E+00	0,00E+00	-1,13E+03	0,00E+00	1,19E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,94E+03	0,00E+00	0,00E+00

HWD = Hazardous Waste Disposed
 NHWD = Non Hazardous Waste Disposed
 RWD = Radioactive Waste Disposed
 CRU = Components for reuse
 MFR = Materials for recycling
 MER = Materials for energy recovery
 EEE = Exported Electrical Energy
 ETE = Exported Thermal Energy

RESOURCE USE per functional unit or declared unit (A1 and A2)

	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PERE	MJ	0,00E+00	0,00E+00	0,00E+00	-7,53E+03	0,00E+00	-7,53E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERM	MJ	0,00E+00	0,00E+00	0,00E+00	7,53E+03	0,00E+00	7,53E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRE	MJ	0,00E+00	0,00E+00	0,00E+00	1,16E+03	4,33E+02	1,12E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,01E+01	4,57E+01	5,91E+00	0,00E+00
PENRM	MJ	0,00E+00	0,00E+00	0,00E+00	3,10E+02	0,00E+00	-2,14E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	MJ	0,00E+00	0,00E+00	0,00E+00	1,47E+03	4,33E+02	9,07E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,01E+01	4,57E+01	5,91E+00	-3,97E+03
SM	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	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	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NSRF	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	m3	0,00E+00	0,00E+00	0,00E+00	3,44E+00	4,64E-02	5,60E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,34E-03	1,84E-01	5,85E-03	-1,81E+00

PERE	=	Use of renewable primary energy excluding renewable primary energy 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 excluding non-renewable 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
NSRF	=	Use of non-renewable secondary fuels
FW	=	Use of net fresh water

BIOGENIC CARBON CONTENT per functional unit or declared unit (A1 and A2)

	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
BBCpr	kg C	0,00E+00	0,00E+00	0,00E+00	1,99E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
BCCpa	kg C	0,00E+00	0,00E+00	0,00E+00	1,33E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

BCCpr	=	Biogenic carbon content in product
BCCpa	=	Biogenic carbon content in packaging

CALCULATION RULES

Declared Unit
1m3

Data collection

Input and output data have been provided by binderholz for the year 2023 for the following categories of data:

- Materials (raw materials and auxiliary materials);
- Energy (electricity and heat);
- Emissions to air, water and soil.

Waste and other economic flows have also been included in the data collection.

Allocation

For allocation, the principles of EN 15804 have been followed. Different types of products are produced at the production site; Since the production processes of these products are similar, energy use is attributed to different products based on annual production and weight per cubic meter. Material inputs are known per product and directly attributed to the products in question. During the production, other products are produced as well. These products are produced from the offcuts of wood generated during the production of SWP in the production facility. An economic allocation is done to attribute the impact of the production to the respective products in modules A1, A2 and A3.

Cut-off

This LCA contains all relevant data. The following processes are not included in this LCA:

- Assumed is that the maintenance and use of auxiliary equipment have a negligible contribution to the total (<1%). Because of this, these processes are not taken in account in this LCA, except such processes that are included in the Ecoinvent background data.
- Assumed is that the capital goods and infrastructure processes have a negligible contribution. These processes are not taken in account in this LCA, except such processes that are included in the Ecoinvent background data.

There is no reason to believe that relevant in- or outputs are excluded from this study.

Data quality level and criteria from the Product Environmental Footprint Category Rules

Representativeness	Quality level	Remarks
Geographical Representativeness	Very good	Data used is obtained from the area under study
Technical Representativeness	Good	The collected data directly relates to the manufacturing site, processes and product of the study.
Time Representativeness	Good	<3 year difference The production data has been collected for reference year 2022. This data was the most recent data available at the time of conducting the LCA study.

Energy modelling

Binderholz purchases green electricity from its energy supplier. The supplier-specific consumption data has been applied for the electricity use in the EPD.

Upstream energy	Energy dataset	GWP (kg CO2e/kWh)	Share in stage A1-3 (%)
Electricity	Consumption mix	0,0335	5%

SCENARIOS AND ADDITIONAL TECHNICAL INFORMATION

A1. Supply of raw materials

This module declares the sourcing and processing of all raw materials and energy that take place upstream of the production process. Materials used in the production of solid wood panels were modelled using the ecoinvent database and data from binderholz, as well as raw material data from the suppliers.

A2. Transportation of raw materials to manufacturer

This includes the transport distance of the raw materials to binderholz's production facility.

A3. Production

This module covers the production process of the product and includes all processes related to production. The use of energy, the generation of waste, and direct emissions from the production process are taken into account.

A4. Transport to project location

The products are transported to the project location by truck. Because these locations are located throughout the country (the Netherlands), the transport is from production location to Utrecht.

Transport	Distance (km)
Lorry >32 metric ton, EURO6	900

A5. Construction and installation process

This module includes the processing of packaging waste and the production and processing of installation losses as well as energy required for installation.

B1-7. Usage phase

The product as assessed for this EPD does not require any maintenance during the use phase.

C1. De-construction demolition

The product uninstallation process uses no or very little energy, therefore the impact in this module is considered negligible.

C2. Transport to waste processing

This module includes transportation to the waste treatment facility. Default distances from the NMD Assessment scenario for wood is used, it is considered that 10% of the material is recycled, 5% reused, 80% incinerated and 5% landfilled.

C3. Waste management

In the end-of-life stage the products are partly incinerated, sent to landfill, recycled and reused. The default NMD end-of-life scenario for beams and planks (#34) is used.

C4. Final waste processing

Includes the final waste processing by means of landfill.

Transport	Distance (km)
Recycling	50
Landfill	50
Incineration	100

D. Income and expenditure beyond the system boundaries

In module D, the avoided production of material through recycling and avoided production of electricity and heat through incineration are included in this module. The material that is recycled is believed to replace raw wood. The material that is incinerated is based on the lower calorific value of the material and the average efficiency of waste incineration plants in the Netherlands, namely 18% electricity and 31% heat. For the avoided energy consumption, a distinction is made between energy from biomass and fossil raw materials. The heat recovery process in Module D for heat recovery from wood incineration uses heat replaced by burning natural gas instead of incineration of wood chips and deviates from the NMD determination method.

DECLARATION OF SVHC

No substances of very high concern are present in concentrations greater than 0.1 % by weight in the product.

REFERENCES

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- [2] EN 15804:2012+A2:2019 Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products.
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