

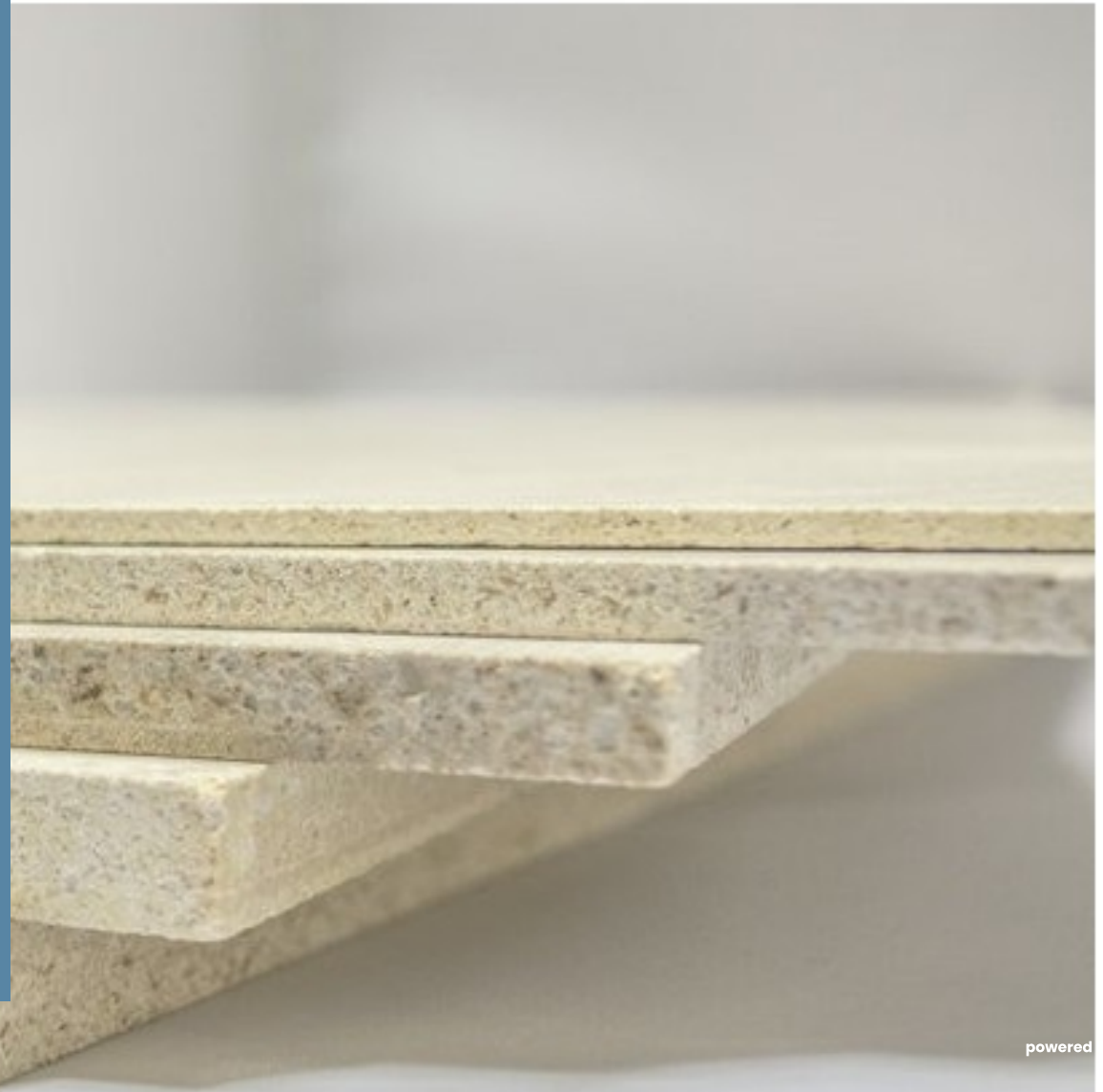
Result summary

MAGOXX boards (4-25mm)

SINH Build

Calculation number:	EPD-NIBE-20201012-7759
Generation on:	08-07-2021
Issue date:	08-07-2021
Valid until:	08-07-2026
Status:	verified

R<THiNK



1 MAGOXX boards (4-25mm)

1.1 COMPANY INFORMATION / DECLARATION OWNER

Manufacturer: SINH Build

Production Location: Production location China

Address: -, -Shanghai

E-mail:

Website:

1.2 EPD INFORMATION

Calculation number: EPD-NIBE-20210615-20084

Date of issue: 08-07-2021

End of validity: 08-07-2026

Version NIBE's EPD Application: v2.0

Version database: v3.03 (2021-03-26)

PCR: NMD Determination method Environmental performance Construction works v1.0
July 2020

1.3 VERIFICATION OF THE DECLARATION

CEN standard EN 15804:2012 serves as the core PCR.

Independent verification of the declaration. according to EN ISO 14025:2010.

Internal External

Deze LCA studie van Magoxx board is goedgekeurd voor opname in de NMD door Agrodome B.V.



Third party verifier: Sissy Verspeek, Agrodome

1.4 DECLARED UNIT

m2 (plaatmateriaal elementwanden)

Functional unit:

Een vierkante meter plaatmateriaal voor elementwanden. Afwerkingen en onderhoud dienen meegenomen te worden. Bevestigingsmiddelen worden buiten beschouwing gelaten.

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1.5 SCOPE OF DECLARATION

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	MND	MND	MND	MND	X	X	X	X	X

(X = included, MND = module not declared)

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1.6 PRODUCT DESCRIPTION

Plaatmateriaal toepasbaar op gevel, binnenwanden, en vloeren.

De plaat bestaat met name uit de grondstoffen magnesium oxide (45%), Magnesium sulfaat (30%), bamboe zaagsel (15%).

Maatvoering: standaardplaten 1200*2700/ 1200*3000 mm. De plaat is 4-25 mm dik.

Gewicht: binnenwanden 1000 kg/m³, gevel 1100 kg/m³.

Het product voldoet aan brandwerend klasse A1, conform EN1364-1. Het materiaal is lichtgewicht, en vochtwerend.

1.7 DESCRIPTION OF THE MANUFACTURING PROCESS

De grondstoffen magnesium oxide, magnesium sulfaat, bamboe zaagsel, perlite en de linking composiet H₃PO₄ worden samengevoegd en gemixt.

Het mengsel krijgt een cement achtige structuur en wordt op een productielijn gespoten. Hier wordt een glasvezelmat en katoengaas toegevoegd.

Een cilinder rolt de pasta tot de gewenste dikte (4-25 mm).

Een mes snijdt het materiaal op de juiste maat. De platen worden op een droogrek geplaatst en gaan 2 weken in een klimaat kamer.

Voor het productie proces is 0,9259 Kwh/m² nodig. De platen worden verpakt in plastic folie en verscheept op pallets.

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1.8 RESULTS

Environmental effects	Unit	A1	A2	A3	A4	A5	B1	B2	B3	C1	C2	C3	C4	D	Total
ADPE	Kg Sb	1.15E-6	0.00E+0	6.14E-7	1.78E-9	1.08E-7	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	-2.70E-9	1.87E-6
ADPF	Kg Sb	1.61E-2	0.00E+0	8.02E-3	4.69E-6	1.24E-3	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	-3.82E-4	2.50E-2
GWP	Kg CO2 Equiv.	5.27E+0	0.00E+0	1.25E+0	6.27E-4	3.99E-1	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	-4.17E-2	6.88E+0
ODP	Kg CFC-11 Equiv.	8.96E-8	0.00E+0	1.21E-8	1.17E-10	7.41E-9	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	-4.84E-9	1.04E-7
POCP	Kg Ethene Equiv.	1.77E-3	0.00E+0	3.42E-4	3.72E-7	1.09E-4	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	-5.89E-6	2.22E-3
AP	Kg SO2 Equiv.	1.66E-2	0.00E+0	5.31E-3	2.72E-6	1.13E-3	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	-2.72E-5	2.30E-2
EP	Kg PO43- Equiv.	3.26E-3	0.00E+0	6.05E-4	5.48E-7	1.99E-4	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	-4.02E-6	4.06E-3
HTP	kg 1.4 DB	1.43E+0	0.00E+0	4.17E-1	2.57E-4	9.71E-2	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	-2.17E-3	1.94E+0
FAETP	kg 1.4 DB	2.73E+0	0.00E+0	9.62E-2	7.47E-6	1.42E-1	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	-2.19E-5	2.97E+0
MAETP	kg 1.4 DB	1.45E+3	0.00E+0	8.10E+1	2.66E-2	7.74E+1	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	-9.86E-2	1.61E+3
TETP	kg 1.4 DB	1.40E-2	0.00E+0	4.16E-3	8.86E-7	9.19E-4	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	-6.76E-6	1.90E-2
AP	mol H+ eqv.	2.08E-2	0.00E+0	6.48E-3	3.61E-6	1.40E-3	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	-3.51E-5	2.86E-2
GWP-total	kg CO2 eqv.	4.93E+0	0.00E+0	1.27E+0	6.32E-4	3.83E-1	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	-4.22E-2	6.54E+0
GWP-b	kg CO2 eqv.	-4.48E-1	0.00E+0	-2.61E-2	1.83E-7	-2.37E-2	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	-1.02E-5	-4.98E-1
GWP-f	kg CO2 eqv.	5.38E+0	0.00E+0	1.29E+0	6.32E-4	4.07E-1	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	-4.22E-2	7.04E+0
GWP-luluc	kg CO2 eqv.	1.91E-3	0.00E+0	2.11E-4	1.88E-7	1.12E-4	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	-1.17E-6	2.23E-3
ETP-fw	CTUe	2.92E+2	0.00E+0	3.62E+1	7.03E-3	1.73E+1	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	-3.94E-2	3.46E+2

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PM	disease incidence	6.87E-7	0.00E+0	9.94E-8	5.73E-11	3.96E-8	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	-1.02E-10	8.26E-7
EP-m	kg N eqv.	4.28E-3	0.00E+0	1.31E-3	1.27E-6	2.90E-4	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	-1.04E-5	5.87E-3
EP-fw	kg P eqv.	9.78E-5	0.00E+0	3.32E-5	9.49E-9	6.90E-6	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	-7.61E-8	1.38E-4
EP-T	mol N eqv.	5.16E-2	0.00E+0	1.46E-2	1.40E-5	3.43E-3	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	-1.16E-4	6.96E-2
HTP-c	CTUh	2.14E-8	0.00E+0	9.77E-10	2.67E-13	1.13E-9	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	-2.66E-12	2.35E-8
HTP-nc	CTUh	3.99E-7	0.00E+0	2.46E-8	8.95E-12	2.15E-8	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	-3.61E-11	4.45E-7
IR	kBq U235 eqv.	7.95E-2	0.00E+0	1.06E-2	4.17E-5	4.79E-3	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	-2.30E-4	9.48E-2
SQP	Pt	3.82E+1	0.00E+0	3.61E+0	8.17E-3	2.12E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	-9.60E-3	4.40E+1
ODP	kg CFC 11 eqv.	9.48E-8	0.00E+0	1.17E-8	1.47E-10	7.67E-9	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	-5.49E-9	1.09E-7
POCP	kg NMVOC eqv.	1.41E-2	0.00E+0	3.96E-3	3.99E-6	9.31E-4	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	-3.76E-5	1.89E-2
ADP-f	MJ	2.72E+1	0.00E+0	1.26E+1	9.80E-3	2.05E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	-7.06E-1	4.11E+1
ADP-mm	kg Sb-eqv.	1.15E-6	0.00E+0	6.14E-7	1.78E-9	1.08E-7	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	-2.70E-9	1.87E-6
WDP	m3 world eqv.	5.96E-1	0.00E+0	1.78E-1	6.97E-5	4.36E-2	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	-2.93E-3	8.15E-1

ADPE=Depletion of abiotic resources-elements | **ADPF**=Depletion of abiotic resources-fossil fuels | **GWP**=Global warming | **ODP**=Ozone layer depletion | **POCP**=Photochemical oxidants creation | **AP**=Acidification of soil and water | **EP**=Eutrophication | **HTP**=Human toxicity | **FAETP**=Ecotoxicity, fresh water | **MAETP**=Ecotoxicity, marine water (MAETP) | **TETP**=Ecotoxicity, terrestrial | **AP**=Acidification (AP) | **GWP-total**=Global warming potential (GWP-total) | **GWP-b**=Global warming potential - Biogenic (GWP-b) | **GWP-f**=Global warming potential - Fossil (GWP-f) | **GWP-luluc**=Global warming potential - Land use and land use change (GWP-luluc) | **ETP-fw**=Ecotoxicity, freshwater (ETP-fw) | **PM**=Particulate Matter (PM) | **EP-m**=Eutrophication marine (EP-m) | **EP-fw**=Eutrophication, freshwater (EP-fw) | **EP-T**=Eutrophication, terrestrial (EP-T) | **HTP-c**=Human toxicity, cancer (HTP-c) | **HTP-nc**=Human toxicity, non-cancer (HTP-nc) | **IR**=Ionising radiation, human health (IR) | **SQP**=Land use (SQP) | **ODP**=Ozone depletion (ODP) | **POCP**=Photochemical ozone formation - human health (POCP) | **ADP-f**=Resource use, fossils (ADP-f) | **ADP-mm**=Resource use, minerals and metals (ADP-mm) | **WDP**=Water use (WDP)

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Parameter	Unit	A1	A2	A3	A4	A5	B1	B2	B3	C1	C2	C3	C4	D	Total
PERE	MJ	7.50E+0	0.00E+0	1.28E+0	1.03E-4	4.44E-1	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	-1.45E-3	9.22E+0
PERM	MJ	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
PERT	MJ	7.50E+0	0.00E+0	1.28E+0	1.03E-4	4.44E-1	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	-1.45E-3	9.22E+0
PENRE	MJ	2.87E+1	0.00E+0	1.21E+1	1.04E-2	2.11E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	-7.83E-1	4.21E+1
PENRM	MJ	0.00E+0	0.00E+0	1.20E+0	0.00E+0	6.02E-2	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	1.26E+0
PENRT	MJ	2.87E+1	0.00E+0	1.33E+1	1.04E-2	2.17E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	-7.83E-1	4.34E+1
SM	Kg	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
RSF	MJ	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
NRSF	MJ	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
FW	M3	1.71E-2	0.00E+0	4.40E-3	1.85E-6	1.19E-3	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	-3.71E-5	2.27E-2
HWD	Kg	3.75E-5	0.00E+0	1.70E-5	6.23E-9	2.87E-6	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	-8.93E-7	5.65E-5
NHWD	Kg	2.19E-1	0.00E+0	9.65E-2	5.96E-4	2.42E-2	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	-2.22E-4	3.40E-1
RWD	Kg	7.24E-5	0.00E+0	9.58E-6	6.59E-8	4.37E-6	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	-3.42E-7	8.61E-5
CRU	Kg	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
MFR	Kg	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
MER	Kg	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
EE	MJ	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	4.96E-1	4.96E-1
EET	MJ	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	3.14E-1	3.14E-1
EEE	MJ	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	1.82E-1	1.82E-1
SP	s€	s€ 0,72	s€ 0,00	s€ 0,14	s€ 0,00	s€ 0,05	s€ 0,00	s€ 0,00	s€ 0,00	s€ 0,00	s€ 0,00	s€ 0,00	s€ 0,00	s€ 0,00	s€ 0,91

PERE=renewable primary energy ex. raw materials | PERM=renewable primary energy used as raw materials | PERT=renewable primary energy total | PENRE=non-renewable primary energy ex. raw materials | PENRM=non-renewable primary energy used as raw materials | PENRT=non-renewable primary energy total | SM=use of secondary material | RSF=use of renewable secondary fuels | NRSF=use of non-renewable secondary fuels | FW=use of net fresh water | HWD=hazardous waste disposed | NHWD=non hazardous waste disposed | RWD=radioactive waste disposed | CRU=Components for re-use | MFR=Materials for recycling | MER=Materials for energy recovery | EE=Exported energy | EET=Exported Energy Thermic | EEE=Exported Energy Electric

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1.9 ADDITIONAL INFORMATION

Allocation

There is no allocation applied for the environmental profiles / datasets used in this LCA.