



For you to create



Fundermax

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**„Building sustainably means
building a sustainable future.“**

(Lukas T., producer of prefabricated houses)

Funderplan

Construction engineering

**„We are building on nature
within our own four walls.“**

(Daniel W., civil engineer)



Properties	Test method/reference standard	Unit	Value
Mechanical properties			
Apparent density	EN 323	kg/m ³	> 1000
Thickness	EN 324-1	mm	8.0
Swelling in thickness (24h)	EN 317	%	< 12
Moisture content	EN 322	%	> 6
Formaldehyde ₁	EN 16516	ppm	< 0.1
	EN 717-1	ppm	≤ 0.03
Formats of 'blunt' 3-field panel		mm	2640 x 1870 mm 2820 x 1875 mm (standard format) 3000 x 1875 mm 5640 x 1875 mm Cut to size on request
Formats of tongue and groove subfloor board		mm	2600 x 625 mm 2600 x 1250 mm

₁ The formaldehyde content is in the range of naturally grown wood

Classification: Fiberboard according to EN 316
Test standard: EN 622
Technical class: HB.HLA2 (heavy-duty load-bearing boards for use in humid conditions)
 Service class 2 according to EN 1995-1-1, use class 2 according to EN 335

Properties	Test method/reference standard	Unit	Value
Structural physical properties			
μ value ₂	EN ISO 12572	-	185
s_d -value	DIN 4108	m	1.48
Fire behaviour ₃	EN 13986	-	D-s2, d0
Fire behaviour tested	EN 13501-1	-	D-s1, d0
Fire resistance tested	EN 13501-2:2016 EN 13501-2:2016	without installation level with installation level	REI 45 REI 60
Protection time/fire resistance	EN 1363-1	Paneling on fire protection panels	9 min
Protection time/burn rate	EN 1363-1	Individual panel check	0.86mm/min
λ value ₄	EN 13986	W/mK	0.18

² Testing institute OFI, PB no: 404.394-1, 04.07.2011

³ Testing institute MA39, PB no: MA39-VFA2011-0960.01, 29.06.2011

⁴ Determination of thermal conductivity by interpolation EN 13986

Properties	Test method/reference standard	Unit	Value
Static properties (non-directional)			
Flexural strength f_{mk}	EN 310	N/mm ²	38
E-module ($E_{o,mean}$)	EN 310	N/mm ²	> 4,100
Characteristic embedment strength (\varnothing 1.8 mm)	EN 1995-1-1	N/mm ²	87.6
Characteristic embedment measured (\varnothing 1.5 mm) ₅	ON EN 383	N/mm ²	130.6
Characteristic embedment strength (\varnothing 3.0 mm)	EN 1995-1-1	N/mm ²	75.1
Characteristic embedment measured (\varnothing 3.0 mm) ₅	ON EN 383	N/mm ²	94.7
Shear strength f_{vk}	EN 1995-1-1	N/mm ²	16
Pressure f_{ck}	EN 1995-1-1	N/mm ²	24
Shear Modulus G_{mean} ^a	EN 1995-1-1	N/mm ²	1900
Modification coefficient k_{mod} (KLD; Kurz; NKL 1)	EN 12369-1	N/mm ²	0.85
Transverse tensile strength	EN 319	N/mm ²	> 0.65
Transverse tensile strength after boil test	EN 1087-1	N/mm ²	> 0.35

⁵ Testing institute TU Graz, PB no: PB10-417-1-01, 15.04.2010

Dimensional tolerances	Test methods	Unit	Value
Thickness	EN 324-1	mm	± 0.2
Length	EN 324-1	mm	± 5.0
Width	EN 324-1	mm	± 3.0

Test parameters (according to natureplus)	Limit $\mu\text{g}/\text{m}^3$	Concentration $\mu\text{g}/\text{m}^3$
Total volatile organic compounds (TVOC)	≤ 300	123
Acetic acid		123
of which:		
Total bicyclic terpenes	≤ 200	n.n.
Total sensitizing substances according to MAK IV, BgVV list cat. A, TRGS 907	≤ 100	n.n.
Total VOC (VOC, VVOC, SVOC) classified in: Regulation (EC) no. 1272/2008: Category Carc. 2, Muta 2, Repr. 2; TRGS 905: K3, M3, R3; IARC: Group 2B; DFG MAK list: III3	≤ 50	n.n.
Total (VOC) without NIK	≤ 100	n.n.
Total semi-volatile organic compounds (TSVOC)	≤ 100	n.n.
R value	≤ 1	0.246

Emissions tests according to natureplus guideline 0208 on hard and medium-hard fiberboards. TÜV SÜD Industrie Service GmbH – test report: 130207-1.
Far below legal requirements.

Fastening (\varnothing 1.8 mm bracket) _e	Min.	Max.
Bracket spacing (S_{br})	2.7 cm	14.4 cm
Bracket spacing (S_{br})	–	28.8 cm
Minimum distance stressed edge (a_{4t})		
Bracket (\varnothing 1.8 mm)	0.54 cm	–
Nail (\varnothing 2.5 mm)	0.75 cm	–
Design value of wall resistance ($F_{i,v,Rd}$)	38.76 kN	7.26 kN

_e Fastening also possible with 2.5 mm groove nails

Input materials	Trade name	Source of supply	Product share
Timber	Spruce/beechn	local	96.7 %
Water repellents	HYDROWAX 46	Sasol Wax GmbH Worthdamm 13-27 D-20457 Hamburg	1.9 %
Phenolic resin	BOROFEN BF-35	Fenolit d.d. SI-1353 Borovnica	1.4 %



Packaging, 3-field panel

Format (mm)	Pal./truck	m ²	Pcs./pal.	m ² /pal.
2820 x 1875	11	5.29	40	211
2640 x 1875	11	4.95	40	198
3000 x 1875	11	5.63	40	225
5640 x 1875		10.58	12	127

Packaging, tongue and groove subfloor board

Format = deck area (mm)	Pal./truck	m ²	Pcs./pal.	m ² /pal.
2600 x 625	35	1.625	50	81.25
2600 x 1250	35	3.25	25	81.25

Disclaimer

The information in this document is provided solely for purposes of general information. Customers and third parties are obligated to inform themselves about Fundermax products, including their suitability for certain purposes. We strongly recommend obtaining independent professional advice on compliance with local planning and application requirements, current legislation, regulations, norms, guidelines and testing standards. Fundermax accepts no liability in connection with the use of this document. Responsibility for correct and appropriate planning and workmanship lies solely with those planning or processing the materials. All of our verbal and written statements, offers, bids, sales, shipments and/or contracts, and all activities associated therewith, are subject to the valid version of the Fundermax GmbH terms and conditions of sales and delivery (see www.fundermax.com). For the current version of this brochure, visit www.fundermax.com

Important Instructions

Wood dust

We explicitly draw attention to the dangers of inhaling wood dust. The occupational health and safety strategy (AUT) must be selected on the basis of the current guidelines on wood dust issued by the Federal Ministry of Labour (or the applicable national regulations outside of Austria).

Storage

Store dry, level and covered. Use only when dry.

Installation

It is expressly recommended that the product be adequately conditioned with regard to the usage humidity before installation. During processing, care must be taken that there are no flying bumps.

Disposal

Disposal is possible by means of landfill, material recycling or thermal recycling (in suitable plants) as biomass. The material is biodegradable. Depending on origin, the following waste code numbers from the European Waste Catalogue (EWC) are possible: 030105, 170201, waste code according to ÖNORM: 17201.

Warranty

Fundermax guarantees the quality of Funderplan within the scope of the specified values and test standards. However, we are expressly not liable for defects in the substructure or assembly, as we have no influence on their execution. The local building regulations must be strictly observed, we assume no liability in this regard. All information corresponds to the current state of the art. The suitability for certain applications is not generally guaranteed. Please also see our general terms and conditions of sale and delivery.

Technical support

We would be happy to answer any questions you may have regarding the processing and use of Funderplan Biofaser panels in timber construction.

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