

Technical data

PHYSICAL PROPERTIES	STANDARD	UNIT	AVERAGE	MINIMUM	MAXIMUM
Bulk density 12-15%	DIN 52182	kg/m ³	268	218	353
Oven-dry density 0%	DIN 52182	kg/m ³	253	205	335
Moisture content at 20/65	EN 12183-1	[%]	13,40	13,04	13,64
Drying shrinkage radial	DIN 52184	%	0,69	0,5	0,8
Drying shrinkage tangential		%	2,46	2,0	2,8
Differential shrinkage radial		%	0,12	0,08	0,15
Differential shrinkage tangential		%	0,22	0,16	0,27
Thermal resistance		W/(mK)	0,09		
DURABILITY	STANDARD	REMARK			
Durability of the outer heartwood * against Basidiomycetes	EN 113-2 (2020) EN 350 (2016)	Durability class 1v			
	STANDARD	CRACK AMOUNT	CRACK WIDTH	REMARK	
Crack evaluation after 3 months	i.A. ISO 4628-4	0	0	No cupping or warping measurable	

The weathering and dimensional stability were determined using a rapid weathering test developed at the Burckhardt Institute of the University of Göttingen. In this test, the test specimens (40 x 14 x 2 cm) are watered through a plastic tube located 20 mm above them, with approximately 12 nozzles, and illuminated with lamps positioned 40 mm above the samples. The lamps consist of three rows, with a total of twelve Siccatherm 250 W lamps and also twelve Ultra-Vitalux 300 W lamps (UVA radiation power 315 - 400 nm with 13.6 W, UVB radiation power 280 - 315 nm with 3 W), divided and alternated for use. Every 4 weeks, the test specimens were assessed for crack evaluation according to ISO 4628-4 (crack amount 0-5, crack width 0-5) and scanned for visual examination.

* Examined exemplarily was the hybrid NordMax21® (Paulownia tomentosa x Paulownia fortunei)

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MECHANICAL PROPERTIES	STANDARD	UNIT	AVERAGE	MINIMUM	MAXIMUM
Flexural strength	i.A. DIN 52186	N/mm ²	42,47	36,24	50,47
Flexural modulus	i.A. DIN 52186	N/mm ²	5033	3120	6842
Tensile strength parallel to the grain	i.A. DIN 52188	N/mm ²	43	27,17	61,72
Compressive strength parallel to the grain	i.A. DIN 52185	N/mm ²	23,42	14,64	40,26
Impact strength	DIN 52189	Nm/cm ²	2,2	1,0	3,4
Indentation resistance Brinell hardness radial	i.A. DIN 1534	N/mm ²	7,22	4,79	10,68
Indentation resistance Brinell hardness tangential	i.A. DIN 1534	N/mm ²	7,33	4,98	12,25
Indentation resistance Brinell hardness longitudinal	i.A. DIN 1534	N/mm ²	23,50	16,38	31,37
Screw withdrawal resistance radial	i.A. EN 320	N	511	338	737
Screw withdrawal resistance longitudinal	i.A. EN 320	N	509	175	771
Screw withdrawal resistance tangential	i.A. EN 320	I	544	36	793

EMISSION BEHAVIOR

Test chamber tests for the determination and evaluation of VOC and formaldehyde emissions
(loading of the test chamber 1.0 m²/m³ (corresponding to wall materials))

According to the DIBt principles for the health assessment of building products in indoor environments

Result: All requirements of the AgBB scheme regarding measurements after 28 days are met
(Formaldehyde: 0.004 mg/m³, requirement: ≤ 0.12 mg/m³), further values available upon request.

According to the French VOC regulation decret n° 2011-321 of March 23, 2011, and arrêté du 19 avril 2011

Result: All parameters meet the requirements for measurements after 28 days with emission class A+
(Formaldehyde: 4 µg/m³, requirement: ≤ 10 µg/m³), further values available upon request.