

Specifications Structural LignumStrand

ESSENTIAL CHARACTERISTICS	Symbol	Unit	Regulation	Observation	Lignumstrand E 10,7	Lignumstrand ignifugo E 9,5F
Bending strength edge	$f_{m1,0,edge,k}$	N/mm ²	EN 14374 (4.4.2) EN 408 (19)	Characteristic	35	27.3
Bending strength face	$f_{m1,90 flat,k}$	N/mm ²	EN 14374 (4.4.3) EN 408 (19)	Characteristic	39.6	34.4
Tension strength parallel to grain	$f_{t,0,k}$	N/mm ²	EN 14374 (4.4.4) EN 408 (13)	Characteristic	29.1	18.7
Tension strength. Perpendicular to grain, flatwise	$f_{t,90 flat}$	N/mm ²	EN 14374 (4.4.5) EN 408 (16)	Characteristic	0.66	0.38
Compression strength. Parallel to grain	$f_{c,0,k}$	N/mm ²	EN 14374 (4.4.6) EN 408 (15)	Characteristic	29	21
Compression strength. Perpendicular to grain, edgewise	$f_{c,90 edge,k}$	N/mm ²	EN 14374 (4.4.7) EN 408 (16)	Characteristic	8.7	8.2
Compression strength. Perpendicular to grain, flatwise	$f_{c,90 flat,k}$	N/mm ²	EN 14374 (4.4.7) EN 408 (16)	Characteristic	10.8	11.2
Shear strength. Edgewise	$f_{v,0 edge,k}$	N/mm ²	EN 14374 (4.4.8) EN 408 (18)	Characteristic	8.6	7
Shear strength. Flatwise. Parallel to grain	$f_{v,0 flat,k}$	N/mm ²	EN 14374 (4.4.9) EN 789 (11)	Characteristic	3.2	1.7
Modulus of elasticity, Perpendicular to grain, edgewise	$E_{90 edge, mean}$	N/mm ²	EN 14374 (4.5.2) EN 408 (9)	Mean	10,700	9,500
Modulus of elasticity. Parallel to grain, along	$E_{0, mean}$	N/mm ²	EN 14374 (4.5.2) EN 408 (9)	Mean	11,600	10,600
Modulus of elasticity . Perpendicular to grain, flatwise	$E_{90, edge, mean}$	N/mm ²	EN 14374 (4.5.3) EN 408 (9)	Mean	180	170
Shear modulus. Edgewise	$G_{0 edge, mean}$	N/mm ²	EN 14374 (4.5.4) EN 408 (18)	Mean	2100	1500
Shear modulus. Flatwise, parallel to grain	$G_{0 edge, mean}$	N/mm ²	EN 14374 (4.5.5) EN 789 (11)	Mean	470	440
Density	ρ	Kg/m ³	EN 323	Mean	722	736
Durability against biological attack: <i>Hylotropes bajulus</i> .			EN 350-2016 EN46:2016	class	DC D	DC D
Durability against biological attack: <i>Reticulitermes spp.</i>			EN 350-2016 EN117:2012	class	DC S	DC D
Durability against biological attack: <i>Basidiomicetes fungus</i>			EN 350-2016 EN113:1996 + A1:2004	class	DC 4	DC 1
Fire classification			UNE-EN 13823	class	D-s1,d0	C-s1,d0
Charring rate. Face	$\beta_{0f(0-30)}$	mm/min	EAD 130308-00-0304 Anexe A	Characteristic values	0.53	0.45
Charring rate . Edge	$\beta_{0e(0-30)}$	mm/min			0.56	0.52
Nominal charring rate	$\beta_n(0-30)$	mm/min			0.59	0.54
Formaldehyde release		mg/m ³	EN 717-1	emission class	<0,001 E1	<0,001 E1
VOCs & VOSCs emission	EN 16516		AgBB 2018	Pass/Not Pass	Pass	Pass
			Belgian	Pass/Not Pass	Pass	Pass
			French	class	A+	A+