

TEBOROOF



Roofing applications in traditional timber framed constructions



DESCRIPTION

Base board: Maritime Pine throughout Plywood

Faces (IAW EN 635-3): III / III



Finishing: unsanded 2 sides

Edge machining: with tongue & groove

Average density (IAW EN 323): 580 kg/m³ (+/- 10%)

Bonding (IAW EN 314-2): class 3

Service (IAW EN 636): class 1-2-3 (interior, humid and exterior conditions) - flooring IAW EN 12871

Formaldehyde release classification (IAW EN 717-1): E0.5 ($\leq 0,062$ mg/m³)

Content of Pentachlorophenol (IAW EN 13986): PCP ≈ 0 ppm

SIZES, NUMBER OF PLYS & PACKAGING

Thicknesses (mm)	Number of plies	Sizes (mm)	Packing	
			1235 mm	610 mm
12	(5)	2500 x 610 / 1235	50	100
15	(5)		40	80
18	(7)		34	68
21	(7)	2440 x 610 / 1220	30	60
24	(9)		24	48
25	(9)	2700 x 1200	22	44
27	(9)		25	50
30	(11)		20	40

Other sizes & thicknesses: on request

OPTIONS

Preservative treatments, fungicide & Insecticide, antitermite: optional on request

Cutting & TG processing: optional on request

STORAGE

Flat, on intermediate bearers, in an enclosed dry and ventilated building, clear of the ground. As far as storage on site is concerned, provision should be made to cover the panels with an opaque waterproof sheeting with the underside of the stacks clear of the ground.

FURTHER PROCESSING & INSTALLATION

Compliance with standard practice, with regulations and with health and safety rules should be maintained at all times.

Cutting and machining in the workshop possible except laser technology.

PRODUCTION SITES

Production on Thébault's sites in France

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TECHNICAL PROPERTIES

Characteristic values (MPa) IAW EN 789 - 1058 for structural calculations IAW Eurocodes

		12	15	18	21	24	25	27	30
Modulus of elasticity (E_m)	//	7596	9152	9220	8188	7983	6444	7695	7500
	-L	2078	3298	3230	4262	4467	4815	4755	4950
Bending strength (f_m)	//	23,2	24,4	23	20,4	17	14,9	18,6	15,5
	-L	10,1	13,7	12,1	15,1	12,5	15,5	14,8	12,7
Others characteristic values	Available on DOP : Strength in: Tension (f_t), Compression (f_c), Panel shear (f_v) and Planar shear (f_p) Modulus of elasticity in: Tension (E_t), Compression (E_c), Panel shear (G_v) and planar shear (G_p)								

Sizing - Span tables

Maximum permissible span between supports IAW EN 1991-1-1 (5/03/2003).

The table below has been calculated in accordance with the French national annex NF P06 -11-2 to EN 1991-1-1. It is given for indication purposes only. It is therefore the designer's responsibility to calculate the sizing of the structural project in accordance with the national Annex to EN 1991-1-1 applicable in the European country where the plywood is going to be used.

		Service class 2		
		12	15	18
Categories of use retained	H - Roofs not accessible except normal maintenance and repair	675	825	1200

Nail and screw holding ($t = 15$ mm)

Nail	Face and edge: 300 N	
Screw	Face	Edge
	1450 N	1150 N

Bending radius (mm)

Thickness	12	15	18
//	3000	3750	4750
-L	2400	3000	3800

Sound absorption coefficient

IAW EN 13986 Table N°10	Frequency range	
	250 Hz to 500 Hz	1000 Hz to 2000 Hz
	0,10	0,30

Thermal conductivity

IAW EN 13986	$\lambda = 0,13$
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Characteristic density

IAW EN 789	540 kg/m ³
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Vapour permeability

IAW EN 13986 Table 9	Wet cup	Dry cup
	44 μ	187 μ

Airborne sound absorption

IAW EN 13986 Paragraph 5.10	The sound transmission loss R of a single wood-based panel, measured in dB, is related to the mean surface mass m_A in kg/m ² according to the following equation (which is only valid for the frequency range of 1 kHz to 3 kHz and at a surface mass > 5 kg/m ²): $R = 13 \times \lg(m_A) + 14$
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Uses

Use in structural applications (IAW EN 13986, IAW EN 12871, 636-3, EN 636-2, EN 636-1)	Suitable for use as structural element in exterior conditions (service class 3), humid conditions (service class 2) and interior conditions (service class 1)
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Reaction to fire

End use condition In reference to table 8 of EN 13986 - 2004+A1:2015	Minimum thickness	Class excluding floorings	Class floorings
Without an air gap behind the panel	9 mm	D-s2,d0	D _{fl} -s1
With a closed or an open air gap not more than 22 mm behind the woodbased panel	9 mm	D-s2,d2	-
With a closed air gap behind the wood-based panel	15 mm	D-s2,d1	D _{fl} -s1
With an open air gap behind the wood-based panel	18 mm	D-s2,d0	D _{fl} -s1
Any	3 mm	E	E _{fl}

TECHNICAL SUITABILITY & CERTIFICATION

CE Structure attestation of conformity 2+ CE structure 2+ «Roofing 12 to 40 mm»	0380 - DOP* - CPR - EN 13986 : 2004 + A1 : 2015 - EN 636-3 S E1 * DOP : Declaration of Performance available on www.groupe-thebault.com
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Quality marks (country)		Ecocertification	CE Marking	Information on the emission level of volatile substances within the indoor air, showing a risk of toxicity in case of inhalation, based on a scale going from A+ (very low emissions) to C (high emissions). Scenarios flooring/ceiling
NF Extérieur CTB-X (F)	BFU 100 (D)	PEFC	CE S (Structural)	
	(equivalent) 			