

## Balsa

Family. Malvaceae

Botanical Name(s).

*Ochroma pyramidale*

*Ochroma lagopus* (synonymous)

Continent. Latin America

CITES. This species is not listed in the CITES Appendices (Washington Convention 2023).

### Description of logs

Diameter. From 50 to 80 cm

Thickness of sapwood. -

Floats. Yes

Log durability. Low (treatment necessary)

### Description of wood

Colour reference. Creamy white

Sapwood. Not demarcated

Texture. Coarse

Grain. Straight

Interlocked grain. Absent

Notes. Wood cream white to pink white.

### Physics and mechanics

*The properties indicated are for mature wood. These properties may vary significantly depending on the origin and growing conditions of the wood.*

Property	Average value
Specific gravity <sup>1</sup>	0.14
Monnin hardness <sup>1</sup>	0.3
Coefficient of volumetric shrinkage	0.21 % per %
Total tangential shrinkage (St)	5.2 %
Total radial shrinkage (Sr)	2.2 %
Ratio St/Sr	2.4
Fibre saturation point	34 %
Thermal conductivity (λ)	0.07 W/(m.K)
Lower heating value	
Crushing strength <sup>1</sup>	11 MPa
Static bending strength <sup>1</sup>	24 MPa
Modulus of elasticity <sup>1</sup>	5,140 MPa

<sup>1</sup> At 12 % moisture content, with 1 MPa = 1 N/mm

### Natural durability and preservation

Resistance to fungi. Class 5 - not durable



Quarter sawn



Flat sawn

Resistance to dry wood borers. Class S - susceptible (risk in all the wood)

Resistance to termites. Class S - susceptible

Treatability. Class 1 - easily permeable

Use class ensured by natural durability.

Class 1 - inside (no dampness)

Notes. Impregnation in autoclave is not recommended. Impregnation by soaking satisfactory.

### Requirement of a preservative treatment

Against dry wood borer. Requires appropriate preservative treatment

In case of temporary humidification. Requires appropriate preservative treatment

In case of permanent humidification. Use not recommended

### Drying

Drying rate. Normal to slow

Risk of distorsion. High risk

Risk of casehardening. Yes

Risk of checking. High risk

Risk of collapse. No known specific risk

Notes. Kiln drying is preferable to air drying to reduce the defects. Drying must be done slowly and carefully.

Suggested drying program.

Phases	Duration (H)	MC (%) probes	T (°C)	Rh (%)	UGL (%)
<b>Prewarm 1</b>		> 50	50	86	16.5
<b>Prewarm 2</b>	3	> 50	52	85	16.0
<b>Drying</b>		> 50	55	82	14.7
		50 - 40	55	80.0	13.8
		40 - 35	55	75.0	12.6
		35 - 30	56	73.0	12.0
		30 - 27	58	67.0	10.5
		27 - 24	60	58.0	8.9
		24 - 21	62	50.0	7.5
		21 - 18	64	45.0	6.8
		18 - 15	65	37.0	5.7
		15 - 12	65	34.0	5.3
		12 - 9	65	28.0	4.5
		9 - 6	65	24.0	4.0
<b>Conditioning</b>	6		58	(3)	(2)
<b>Cooling</b>	(1)		Stop	(3)	(2)

(1) ) Cooling: until the temperature inside the kiln no longer exceeds external temperature by more than 30 °C.

(2) UGL = final H% x 0,8 to 0,9.

(3) Subtract RH from the UGL determined in (2) and temperature, using the Hailwood-Horrobin equation.

### Sawing and machining

Blunting effect. Normal

Sawteeth recommended. Ordinary or alloy steel

Cutting tools. Ordinary

Peeling. Not recommended or without interest

Slicing. Not recommended or without interest

Notes. Sharp tools are necessary to avoid fuzzy surface.

## Assembling

Nailing and screwing. Poor

## Commercial grading

Appearance grading for sawn timbers.

Specific grading according to uses

Visual grading for structural applications

No visual grading for structural applications

## Fire safety

Conventional French grading.

Thickness > 14 mm: M3 (moderately inflammable)

Thickness < 14 mm: M4 (easily inflammable)

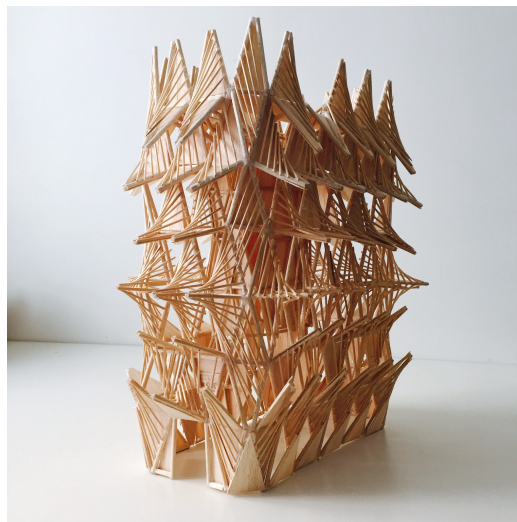
Euroclasses grading. hors classement

Specific gravity lower than 0.35

## End-uses

- Floats
- Insulation
- Model building
- Wood-ware

Notes. Filling is required to obtain a good finish.



"Sanctuaire" - Designed by Pauline Grapa (France).

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## Main local names

<b>Country</b>	<b>Local name</b>
Brazil	Pau de balsa
Colombia	Lanu
Ecuador	Balsa
El Salvador	Algodon
Guatemala	Lanilla
Honduras	Balsa
Honduras	Guano
Nicaragua	Gatillo
Peru	Balsa
Peru	Palo de balsa
Peru	Topa
Trinidad and Tobago	Bois flot
Venezuela	Balso