

Melancieira

Family. Fabaceae

Botanical Name(s).

Alexa grandiflora

Alexa imperatricis

Alexa leiopetala

Alexa wachenheimii

Continent. Latin America

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

Description of logs

Diameter. From 60 to 100 cm

Thickness of sapwood. From 5 to 10 cm

Floats. No

Log durability. Low (treatment necessary)

Description of wood

Colour reference. Light yellow

Sapwood. Not clearly demarcated

Texture. Coarse

Grain. Straight or interlocked

Interlocked grain. Slight

Notes. Heartwood light yellow to reddish brown.

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 ¹	0.76
Monnin hardness ¹	4.9
Coefficient of volumetric shrinkage	0.61 % per %
Total tangential shrinkage (St)	10.7 %
Total radial shrinkage (Sr)	5.0 %
Ratio St/Sr	2.1
Fibre saturation point	30 %
Thermal conductivity (λ)	0.25 W/(m.K)
Lower heating value	
Crushing strength ¹	60 MPa
Static bending strength ¹	96 MPa
Modulus of elasticity ¹	15,810 MPa

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

Natural durability and preservation



Half-quarter sawn



Quarter sawn

Resistance to fungi. Class 2 - durable

Resistance to dry wood borers. Class D - durable (heartw. durable but sapw. not clearly demarcated)

Resistance to termites. Class D - durable

Treatability. Class 3 - poorly permeable

Use class ensured by natural durability.

Class 3 - not in ground contact, outside

Notes. The possible presence of few demarcated sapwood may have an influence on the expected durability. According to the European standard NF EN 335 (2013), performance length might be modified by the intensity of end-use exposition.

Requirement of a preservative treatment

Against dry wood borer. Requires appropriate preservative treatment

In case of temporary humidification. Does not require any preservative treatment

In case of permanent humidification. Use not recommended

Drying

Drying rate. Slow

Risk of distorsion. High risk

Risk of casehardening. Yes

Risk of checking. High risk

Risk of collapse. Yes

Suggested drying program.

Phases	Duration (H)	MC (%) probes	T (°C)	Rh (%)	UGL (%)
Prewarm 1		> 50	50	87	17.0
Prewarm 2	4	> 50	50	86	16.5
Drying		> 50	53	85	15.7
		50 - 40	53	82.0	14.6
		40 - 35	54	78.0	13.4
		35 - 30	55	77.0	12.9
		30 - 27	57	73.0	11.9
		27 - 24	58	68.0	10.7
		24 - 21	60	61.0	9.3
		21 - 18	62	52.0	7.9
		18 - 15	64	43.0	6.6
		15 - 12	65	39.0	6.0
		12 - 9	65	31.0	5.0
		9 - 6	65	28.0	4.5
Conditioning	8		58	(3)	(2)
Cooling	(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. Good

Assembling

Nailing and screwing. Good

Notes. Pre-boring sometimes necessary for the heaviest woods.

Commercial grading

Appearance grading for sawn timbers.

According to ATIBT grading rules, possible grade: FAS (First And Second), n°1 Common and select, n°2 Common

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. D-s2, d0

Default grading for solid wood, according to requirements of European standard EN 14081-1+A1 (August 2019). It concerns structural graded timber in vertical uses and ceiling with mean density upper 0.35 and thickness upper 22 mm.

End-uses

- Blockboard
- Boxes and crates
- Bridges (parts not in contact with water or ground)
- Current furniture or furniture components
- Exterior panelling
- Flooring
- Heavy carpentry
- Indoor staircases
- Interior joinery
- Sliced veneer
- Vehicle or container flooring
- Wood frame house

Notes. Drying problems restrict the use of this wood.

Main local names

Country	Local name
Brazil	Fava bolochoa
Brazil	Melancieira