

# Estibas Zuliana c.a.

Rif: J-29756556-6



## Catalog

[www.pallets.estibaszuliana.com](http://www.pallets.estibaszuliana.com)



@pallets\_estibas



## About Us



**Pallets Estibas Zuliana**  
Rif: J-29756556-6

We are specialists in the design, manufacture and restoration of pallets, adapting to the client's needs; 100% sustainable and with more than 12 years of experience.

New or recycled, our pallets are built to the highest quality standards and professional workmanship.

Our pallets are characterized by being very resistant. They are able to withstand the heaviest loads and protect your products from potential damage.

We make sure to review each pallet, to ensure they exceed customer and industry expectations.





**Pallets Estibas Zuliana**  
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## Strength

Our strength as a certified timber trading company is to have large inventories of cubic meters of standing commercial timber, which allow us to structure commercial alliances, investment consortiums and sales scheduling to the customer's measures in the short, medium and long term.

## Woods

We commercialize wood from the Altiplanicie de Nuria, which is located in the south of Venezuela, in one of the most conspicuous regions of the country in terms of territory and potential of natural resources, in the Guayana region, which is made up of the Bolívar states. , Amazonas and Delta Amacuro, occupying an area of 458,345 km<sup>2</sup>, which represents 51% of the entire national territory.






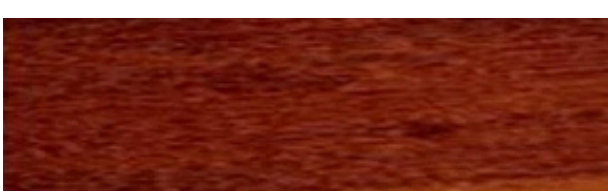
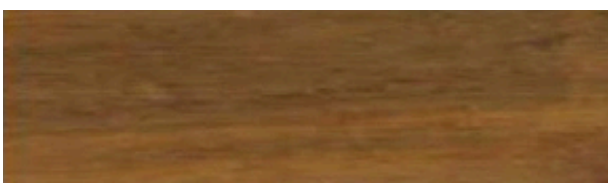
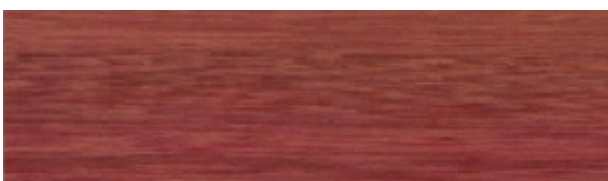


# Commercial tropical hardwood species on the Altiplanicie de Nuria



Pallets Estibas Zuliana  
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HARD TYPE 1

	Common name	Scientific name	Family
	Algarrobo	Hymenaea courbaril	CAESALPINIACEAE
	Congrio	Diploptropis purpurea	PAPILIONACE
	Pilón alcornoque	Pera Schomburgkiana	EUPHORBIACEAE
	Purguo	Manikara bidentata	SAPOTACEAE
	Puy	Tabebuia impetiginosa	BIGNONIACEAE
	Zapatero	Peltogine porphyrocardia	CAESALPINIACEAE





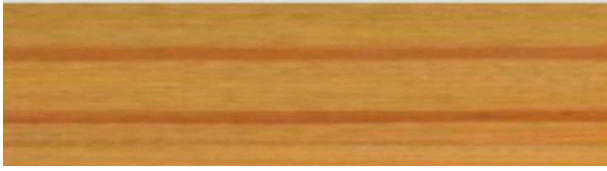
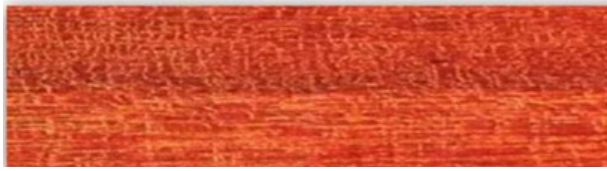



# Commercial tropical hardwood species on the Altiplanicie de Nuria



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HARD TYPE 2

	Common name	Scientific name	Family
	Capture	Chysophyllum gonocarpum	SAPOTACEAE
	Hielillo	Aspidospema megalocarpum	APOCYNACEAE
	Laurel	Nectandra sp.	LAURACEAE
	Mora	Mora gonggrijpii	CAESALPINIACEAE
	Pata de danto	Terminalia guianensis	COMBRETACEAE
	Pilón lombricero	Stryphondendrom polystachyum	MIMOSACEAE
	Tinajito	Lecythis zabucajo	LECYTHIDACEAE



# Commercial tropical hardwood species on the Altiplanicie de Nuria



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SEMI-HARD

	Common name	Scientific name	Family
	Muerillo	Erismia uncinatum	VOCHYSIACEAE
	Pericoco	Ormosia coarctata	FABACEAE
	Picaton	Loxopteryglum sagotii	ANACARDIACEAE
	Pilón Rosado	Andira inermis	MIMOSACEAE
	Carapa	Carapa guianensis	MELIACEAE
	Guacharaco	Eschewelilera chartaceae	COMBRETACEAE









# Commercial tropical hardwood species on the Altiplanicie de Nuria



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SOFT

	Common name	Scientific name	Family
	Baraman	Catostemma commune	BOMBACACEAE
	Cedro Blanco	Eriotheca globosa	SIMARUBACEAE
	Cachicamo	Calophyllum brasilienses	GUTTIFERARAE
	Capa de Tabaco	Couratari pulcra	LECYTHIDACEAE
	Ceiba	Ceiba pentandra	BOMBACACEAE
	Cascaron	Parkia pendula	MIMOSACEAE


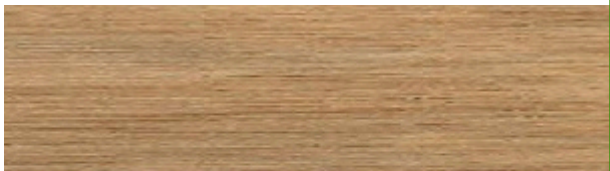



# Commercial tropical hardwood species on the Altiplanicie de Nuria



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SOFT

	Common name	Scientific name	Family
	Peranmacillo	Symphonia globulifera	GUTTIFERARAE
	Cuajo	Virola surianamensis	MYRISTICAEA
	Hueso de Pescado	Pithecellobium pedicellare	MIMOSACEAE



# FOB price of woods altiplanicie de Nuria



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FOB price of woods	Costs Classification	Hard woods Type 1 (\$M3)	Hard woods Type 2 (\$M3)	Semi-hard woods (\$M3)	Soft woods (\$M3)	Observations
	F.O.B. SALE (WOOD IN RUSTIC BASE)					
	F.O.B. SALE (WOOD IN CLEAN BASE)					
	F.O.B. SALE (WOOD SAWNED SIZED)					

# Technical sheet by species (Altiplanicie del Nuria)

## Catalog

### Scientific name

Couratari pulchra

### Family

BIGNONIACEAE

### Trade name

Capa Tabaco, Tauari,  
Guarataro, Coatari



## Capa de tabaco

### Botanical Description

Tree develops a somewhat striated trunk. It reaches a height of approximately 20 to 30 m, commonly 80 in diameter. It has well-developed flat buttresses up to 4 to 8 m high. The sapwood is not clearly differentiated, the heartwood is pale yellow when dry.

### Use of softwood

Used for making boards, panels, furniture, tool handles, lightweight packaging, handicrafts, and musical instruments. General housing, beams, joists, floors, steps, shutters, furniture and cabinets, plywood and veneers, table tennis.

### Physical properties

Basic density	0,56 g/cm3
Air-dry density	12% 62 g/cm3
Tangential shrinkage	6,6 %
Contracción radial	4,1%
Dimensional stability	1,6%

### Mechanical properties

Bending strength	12% 1019 kgf/cm2
Rigidity(Elastic Modulus)	12% 118112 kgf/cm2
Compressive strength parallel to grain	12% 550 kgf/cm2
Compressive strength perpendicular to grain	12% 97 kgf/cm2
Radial shear	12% 104 kgf/cm2



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# Technical sheet by species (Altiplanicie del Nuria)

## Catalog

### Scientific name

Carapa guianensis  
Aubl.

### Family

MELIACEAE

### Trade name

Carapa, Tangare,  
Andiroba.



## Carapa

### Botanical Description

Tree 15 to 20 m tall, with a straight, cylindrical stem; the freshly cut heartwood is light salmon in color, changing to reddish brown when dry and the sapwood is pinkish when freshly cut and pale brown or greyish when drying; straight to slightly crisscrossed grain.

### Use of softwood

Used in interior and exterior construction, furniture, veneer, carpentry, turning, pencils, parquet, plywood, beams and musical instruments

### Physical properties

Basic density	0,49 g/cm <sup>3</sup>
Air-dry density	12% 0,53 g/cm <sup>3</sup>
Tangential shrinkage	4,2%
Radial shrinkage	1,9%

### Mechanical properties

Bending strength	12% 1045 kgf/cm <sup>2</sup>
Rigidity (Elastic Modulus)	12% 12% 127000 kgf/cm <sup>2</sup>
Compressive strength parallel to grain	12% 511 kgf/cm <sup>2</sup>
Compressive strength perpendicular to grain	12% 75 kgf/cm <sup>2</sup>
Radial shear	2% 84 kgf/cm <sup>2</sup>



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# Technical sheet by species (Altiplanicie del Nuria)

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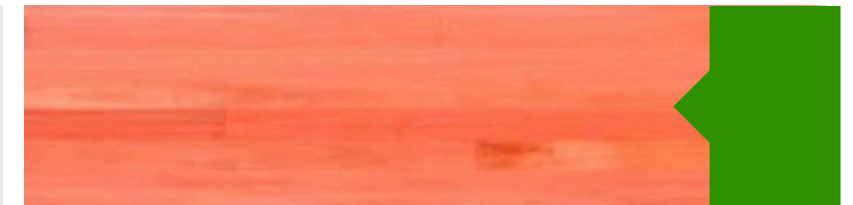
Pentaclethra  
macroloba.

### Family

LEGUMINOSAE

### Trade name

Caracará, Peonia, Tinctoria,  
Peonia, Chocho, Tento.



## Pericoco

### Botanical Description

Tree 30 m high and trunk diameters ranging between 50 and 70 cm. They develop straight and cylindrical trunks up to 20 m long.

### Use of semi-hard wood

General exterior, bridges, posts, general housing, beams, joists, boards, floors, frames, steps, furniture and cabinets, common furniture, plywood and sheet metal, gaskets, heavy packaging, pallets, containers, truck bodies, truck floors, others and musical instruments, handicrafts.

### Physical properties

Basic density	0,65 g/cm <sup>3</sup>
Air-dry density	12% 0,72 g/cm <sup>3</sup>
Tangential shrinkage	7,3%
Radial shrinkage	3,8%
Dimensional stability	1,9%

### Mechanical properties

Bending strength	12% 1124 kgf/cm <sup>2</sup>
Rigidity (Elastic Modulus)	12% 152221 kgf/cm <sup>2</sup>
Cut parallel to the fiber	12% 645 kgf/cm <sup>2</sup>
Compressive strength	12% 71 kgf/cm <sup>2</sup>



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# Technical sheet by species (Altiplanicie del Nuria)

## Catalog

### Scientific name

Calophyllum  
brasiliense Cambess.

### Family

CALOPHYLLACEAE.

### Trade name

Capure, María, Santa  
María, Aceite María.



## Capure

### Botanical Description

40 m tall tree; cylindrical trunk 25 m long and 90 cm in diameter; heartwood of deep pink color and light pink sapwood; criss-cross grain, with light and dark stripes; of regular shine with golden reflections.

### Use of semi-hard wood

It is used for the construction of bridges, poles, sleepers, shipbuilding, floors, furniture, doors, stairs, tool handles, boards, veneers, musical instruments and pulp for paper.

### Physical properties

Basic density	0,56 g/cm <sup>3</sup>
Air-dry density	12% 0,69 g/cm <sup>3</sup>
Tangential shrinkage	8,9%
Radial shrinkage	6,07 %
Dimensional stability	1,3%

### Mechanical properties

Bending strength	12% 891 kgf/cm <sup>2</sup>
Rigidity (Elastic Modulus)	12% 107 kgf/cm <sup>2</sup>
Compressive strength parallel to grain	12% 456 kgf/cm <sup>2</sup>
Compressive strength perpendicular to grain	12% 46 kgf/cm <sup>2</sup>
Radial shear	12% 108 kgf/cm <sup>2</sup>



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# Technical sheet by species (Altiplanicie del Nuria)

## Catalog

### Scientific name

Erismia uncinatum  
Warm

### Family

VOCHYSIACEAE

### Trade name

Mureillo, Quarubarana,  
Cedillo, Jaboty, Cambara.



## Mureillo

### Botanical Description

Tree up to 35 m tall, with a straight and cylindrical trunk; the wood is light reddish brown; cross-to-straight grain; and with moderate brightness.

### Use of semi-hard wood

Used for beams, joists, door frames, boards, furniture, plates, sports equipment, packaging and musical instruments.

### Physical properties

Basic density	0,48 g/cm <sup>3</sup>
Air-dry density	12% 0,53 g/cm <sup>3</sup>
Tangential shrinkage	7,7%
Radial shrinkage	3,3%
Dimensional stability	2,3%

### Mechanical properties

Bending strength	12% 897 kgf/cm <sup>2</sup>
Rigidity (Elastic Modulus)	12% 115000 kgf/cm <sup>2</sup>
Cut parallel to the fiber	12 % 548 kgflcm <sup>2</sup>
Compressive strength	12% 72 kgflcm <sup>2</sup>
Radial shear ch	12% 92 kgt/cm <sup>2</sup>



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# Technical sheet by species(Altiplanicie del Nuria)

## Catalog

### Scientific name

Piptadenia  
psylostachy

### Family

FABACEAE

### Trade name

Hueso de Pescado,  
Timborana, Monjolo.



## Hueso de pescado

### Botanical Description

Tree 10 to 25 m high, with diameters of 30 to 40 cm, with a straight or irregular trunk 15 to 20 m long; yellowish brown heartwood; rectum grain; medium to coarse texture and moderate to high gloss.

### Use of semi-hard wood

Used in interior finishes such as ceilings and wood paneling, as well as lightweight frames. Cabinet structure, toys, door core, panels and packaging. It is one of the best woods for firewood and charcoal. General houses, beams, boards, frames and panels.

### Physical properties

Basic density	0,74 g/cm3
Air-dry density	12% 0,86 g/cm3
Dimensional stability	1,4%
Tangential shrinkage	7,3%
Radial shrinkage	5,1%

### Mechanical properties

Bending strength	12% 1250 kgf/cm2
Rigidity (Elastic Modulus)	12% 133956 kgf/cm2
Cut parallel to the fiber	12% 757 kgf/cm2
Compressive strength	12% 150 kgf/cm2
Radial shear ch	12% 153 kgf/cm2



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# Technical sheet by species (Altiplanicie del Nuria)

## Catalog

### Scientific name

Handroanthus  
impectiginosus

### Family

BIGNONIACEAE

### Trade name

Puy, Lapacho rosado,  
Ocobo, Xmaculis.



**Puy**

### Botanical Description

Tree up to 36 m tall and 35 to 55 cm in diameter; heartwood yellowish brown and sapwood yellow; grain from straight to interlocking; fine texture; veined in overlapping arches, narrow stripes of light color; low to moderate brightness.

### Hardwood use

Stable, resistant to attack by marine borers; used for the elaboration of decorative plates, posts, beams, joists, boards, floors, frames, furniture, turning, tool handles, heavy packaging, boat building, among others.

### Physical properties

Basic density	0,95 g/cm3
Air-dry density	12% 1,12 g/cm3
Tangential shrinkage	8,4%
Radial shrinkage	6,6 %
Dimensional stability	1,2%

### Mechanical properties

Bending strength	12% 1984 kgf/cm2
Rigidity (Elastic Modulus)	12% 215600 kgf/cm2
Compressive strength parallel to grain	12% 933 kgf/cm2
Compressive strength perpendicular to grain	12% 205 kgf/cm2
Radial shear	12% 157 kgf/cm2



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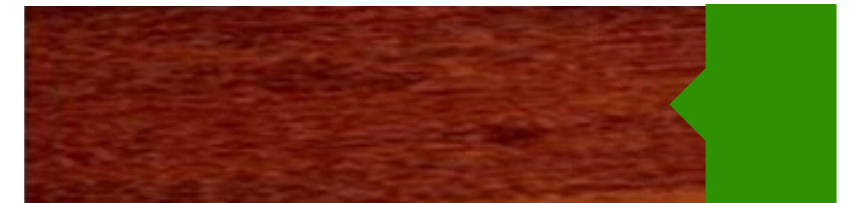
Manilkara bidentata

### Family

SAPOTACEAE

### Trade name

Purgo, Maparajuba,  
Balata, Quinilla.



## Purgo

### Botanical Description

Tree 25 to 40 m tall and diameters 50 to 85 cm, cylindrical stem with circular cross section; Heartwood dark reddish brown to dark red and sapwood pink; straight grain; fine texture; the veining presents figures in irregular dark spots and dull.

### Hardwood use

Stable, has natural durability in contact with the ground and is resistant to termites; It is used the elaboration of furniture, floors, sleepers, heavy constructions, musical instruments and turnery.

### Physical properties

Basic density	0,87 g/cm <sup>3</sup>
Air-dry density	12% 1,10 g/cm <sup>3</sup>
Tangential shrinkage	10,1%
Radial shrinkage	6,6 %
Dimensional stability	1,5%

### Mechanical properties

Bending strength	12% 1918 kgf/cm <sup>2</sup>
Rigidity (Elastic Modulus)	12 % 242500 kgf/cm <sup>2</sup>
Compressive strength parallel to grain	12 %: 818 kgf/cm <sup>2</sup>
Compressive strength perpendicular to grain	12%163 kgf/cm <sup>2</sup>
Radial shear	12% 176 kgf/cm <sup>2</sup>



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# Technical sheet by species (Altiplanicie del Nuria)

## Catalog

### Scientific name

Mora gonggripii

### Family

FABACEA

### Trade name

Mora de Guayana,  
Pracuuba, Nato rojo.



## Mora

### Botanical Description

Tall tree from 35 to 45 m; conical trunk and 60 to 90 cm in diameter; heartwood reddish brown and sapwood pink; straight grain; medium texture; veined in superimposed arches, with wide bands found and with golden reflections; medium to high brightness.

### Hardwood use

Stable, used for general constructions, beams, columns, parquet, furniture, joinery and railway sleepers.

### Physical properties

Basic density	0,85 g/cm <sup>3</sup>
Air-dry density	12% MC 0,98 g/cm <sup>3</sup>
Tangential shrinkage	10,5%
Radial shrinkage	7,5%
Dimensional stability	1,4%

### Mechanical properties

Flexural strength	12% 1878 kgf/cm <sup>2</sup>
Rigidity (Elastic Modulus)	12% 229500 kgf/cm <sup>2</sup>
Compressive strength parallel to grain	12% 995 kgf/cm <sup>2</sup>
Compressive strength perpendicular to grain	12% 187 kgf/cm <sup>2</sup>
Radial shear ch	12% MC 1497 kgf/cm <sup>2</sup>



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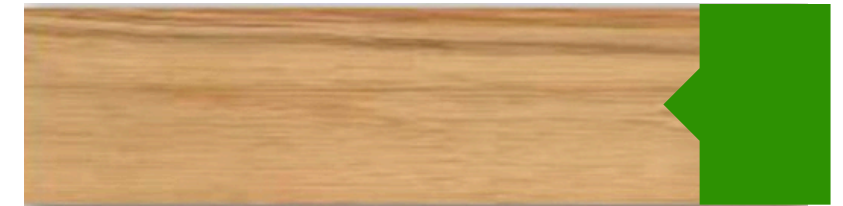
Lecythis davisii

### Family

LECYTHIDACEAE

### Trade name

Tinajito



## Tinajito

### Botanical Description

Tree that reaches 30 to 40 meters in height and 100 to 130 cm in diameter, straight, cylindrical, rarely inclined or crooked. It is very resistant to the attack of fungi and insects that attack the wood.

### Use of very hard wood

Heavy construction, shipbuilding, sheds, sleepers, decking, wagon bottoms.

### Physical properties

Basic density	0,86 g/cm3
Volumetric mass	12% (Kg/m3)
	Muy pesada= 1020
Tangential shrinkage	7,9%
Radial shrinkage	5,1%

### Mechanical properties

Bending strength	12% 1562kgf/cm2
Rigidity (Elastic Modulus)	12% 151000 kgf/cm2
Compressive strength parallel to grain	12% 716 kgf/cm2
Compressive strength perpendicular to grain	12%152 kgf/cm2



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# Technical sheet by species (Altiplanicie del Nuria)

## Catalog

### Scientific name

Echweilera chartace

### Family

LECHYTHIDACEAE

### Trade name

Guacharaco; Jarana.



## Guacharaco

### Botanical Description

Tree from 30 to 45 m high up to 70 m; Color: Pale yellow sapwood and reddish brown heartwood, abrupt sapwood-heartwood transition; Smell and flavor: Non-distinctive, Luster: Medium; Grain: Straight; Texture: Medium; Weight and hardness: Hard and heavy.

### Physical properties

Basic density	0,81 g/cm3
Air-dry density	12% 0,93 g/cm3
Tangential shrinkage	12,6%
Radial shrinkage	6,7%
Dimensional stability	1,9%

### Hardwood use

General exterior, stable, used for sleepers, beams, joists, boards, veneers, parquet and tool handles. wood and veneer furniture and lumber, tournaments, tools, containers, car bodies, truck floors, shipbuilding.

### Mechanical properties

Bending strength	12% 1656 kgf/cm2
Compressive strength parallel to grain	12% 772 kgf/cm2



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# Technical sheet by species (Altiplanicie del Nuria)

## Catalog

### Scientific name

Hymenaea courbaril

### Family

CAESALPINIACEAE

### Trade name

Algarrobo, Jatoba



## Algarrobo

### Botanical Description

Color / Appearance: Heartwood ranges from a light orange brown to a darker reddish brown, sometimes with contrasting darker gray-brown streaks. Color tends to darken when exposed to light. The sapwood is a light grayish yellow, clearly demarcated from the wood. Grain / Texture: Grain is usually interlocking, with a medium to coarse texture. Good natural shine. Veins: diffuse-porous; large pores, very few; lone and radial multiples of 2-3; mineral deposits (dark brown) occasionally present; central, confluent and marginal vessel parenchyma; narrow to medium stripes, normal spacing. Weather Resistance: Algarrobo is classified as very durable in terms of resistance to rot, and it is also resistant to termites and most other insects. (Although it has been reported to be susceptible to attack by marine drillers.)

Workability: Algarrobo is considered difficult to work due to its density and hardness, and has a moderate blunt effect on tool burs. The Algarrobo also tends to be difficult to brush due to its interlocking grain. However, the Algarrobo hits, dyes, turns and finishes well. Responds well to steam flex. Odor: No characteristic odor. Allergies / Toxicity: Although serious reactions are quite rare, Algarrobo has been reported to cause skin irritation. Pricing / Availability: Available in satisfactory sizes and widths such as lumber, and also available as floor planks. The Algarrobo is moderately priced for an imported wood.



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## Physical properties

Average Dried Weight:	57 lbs/ft3 (910 kg/m3)
Specific gravity	(Basic, 12% MC: .77, .91
Janka hardness:	2,690 lbf (11,950 N)
Modulus of Rupture:	22,510 lbf/in2 (155.2 MPa)
Elastic Modulus:	2,745,000 lbf/in2 (18.93 GPa)
Compressive strength:	11,780 lbf/in2 (81.2 MPa)
Shrinkage: Radial:	4.2%, Tangential: 8.0%, Volumetric: 12.1%,
Relation T/R:	1.9



**Algarrobo**

## Common uses

Flooring, furniture, cabinets, tool handles, shipbuilding, rail ties, converted objects and other small specialty items Comments: Although widely called "Brazilian cherry", (mainly among flooring sellers), it has little relation to domestic cherry (*Prunus serotina*) found in the US, except perhaps that its natural color closely matches the common color of domestic cherry that has been aged / stained a reddish brown as seen in some interior furnishings. Algarrobo is exceptionally directed, strong and hard, representing great value to woodworkers looking for high-strength wood.



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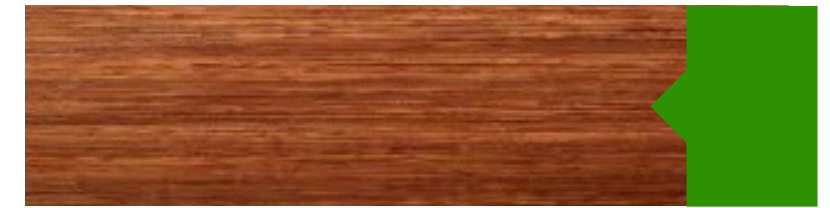
Andira spp

### Family

MIMOSACEAE

### Trade name

Pilón Alcornoque, Sucupira  
Vermelha, Rode Kabbes



## Pilón Alcornoque

### Botanical Description

**Color / Appearance:** Heartwood ranges from golden yellow to darker reddish brown. Parenchyma bands of varying thickness give a subtle, patchy, and striped appearance. (Since the parenchyma is lighter in color, the wider the bands, the lighter the overall color of the wood, in general.) The narrow sapwood is grayish-yellow in color and is clearly demarcated from the heartwood. **Grain / Texture:** The grain is straight or slightly interlaced. The texture is very thick and porous, with little natural shine. **Rot resistance:** Rated durable to very durable; moderate resistance to insects. **Workability:** Generally easy to work with, although interlocking grain can cause anti-streaking during planning operations.

Glues, turns and produces good finishes. **Odor:** No characteristic odor. **Allergies / Toxicity:** Although serious reactions are quite rare, Pilón Alcornoque oak wood has been reported to cause skin irritation, as well as hives and coughing. See the articles Wood Allergies and Toxicity and Wood Dust Safety for more information. **Price / Availability:** Moderate availability. Prices are in the mid-range for imported hardwood. **Sustainability:** This wood species is not included in the CITES Appendices and the IUCN reports that it is a species of least concern.



**Pallets Estibas Zuliana**  
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## Physical properties

Tree size: 65-115 ft (20-35 m) tall, 2 ft (.6 m) in trunk diameter

Average Dried Weight: 52 lbs/ft<sup>3</sup> (835 kg/m<sup>3</sup>)

Specific gravity (Basic, 12% MC): 0,64, 0.83

Janka hardness: 1,790 lbf (7,960 N)

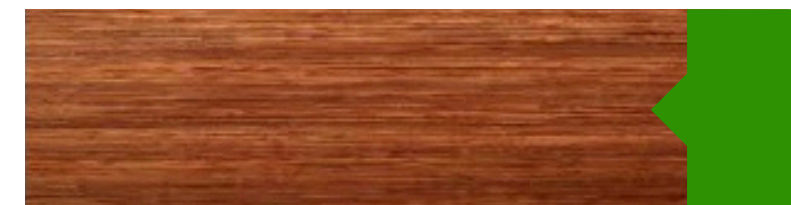
Modulus of Rupture: 18,490 lbf/in<sup>2</sup> (127.5 MPa)

Elastic Modulus: 2,634,000 lbf/in<sup>2</sup> (18.17 GPa)

Compressive strength: 9,290 lbs/ft<sup>3</sup> (64.1 MPa)

Shrinkage: Radial: 4.6%, Tangential: 8.6%, Volumetric: 12.3%,

Relation T/R: 1.9



## Pilón Alcornoque

## Common uses

Furniture, joinery, carvings and turned objects; beams, wooden structures, floors, decking.

Comments: Pilon Alcornoque wood receives its name from its resemblance to similar species called "Pilon", and the name "Alcornoque" due to its hardness.



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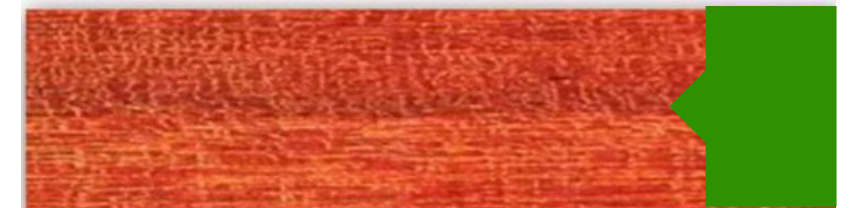
Stryphondendrom  
polystachyum

### Family

MIMOSACEAE

### Trade name

Pilón Lombricero, Cupiuba,  
Kabukalli.



## Pilón lombricero

### Botanical Description

Color / Appearance: The heartwood is a uniform reddish brown. The sapwood is not very demarcated, taking a light pink color. Grain / Texture: Grain is usually interlocking, with a medium to coarse texture. Natural dull surface. Veins: sparse axial parenchyma, diffuse apotracheal, with a tendency to form short tangential thin lines, from radius to radius, and very sparse paratracheal parenchyma. Pores / vessels barely visible to the naked eye, exclusively solitary, diffuse in distribution; few, 5 to 1 mm<sup>2</sup>, small, 150 to 200μ tangential diameter, oil resin present. Thick walled fibers, low heat, score.

Weather Resistance: Pilón lombricero is rated very durable for rot resistance, and is also resistant to termites and most insects. Workability: The Pilón lombricero is considered easy to work with hand tools or machinery. Has a moderate effect on the cutting edge of tool cutters. Pilón lombricero also tends to be easy to brush and glues, dyes, turns and finishes well. Odor: Characteristic unpleasant odor when the wood is fresh. Allergies / Toxicity: Although serious reactions are quite rare, Pilón lombricero has been reported to cause skin irritation. Pricing / Availability: Available in satisfactory sizes and widths such as lumber, and also available as floor planks. The Pilón lombricero is moderately priced for an imported wood. Sustainability: This wood species is not listed in the CITES Appendices, and is reported by the IUCN as a species of least concern.



**Pallets Estibas Zuliana**  
Rif: J-29756556-6

## Physical properties

Tree size: 30-100 ft (10-35 m) height, 2-4 ft (.6-1.2 m) trunk diameter

Average Dried Weight: 54 lbs/ft<sup>3</sup> (870 kg/m<sup>3</sup>)

Specific gravity (Basic, 12% CH): .71, .87

Janka hardness 987 Kgf

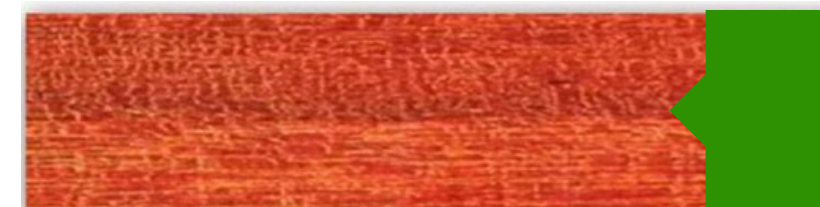
Modulus of Rupture: 1,226 Kgf/cm<sup>2</sup>

Elastic Modulus: 151,000 Kgf/cm<sup>2</sup>

Compressive strength: 664 Kgf/cm<sup>2</sup>

Shrinkage: Radial: 2.4%, Tangential: 4.4%, Volumetric: 6.9%,

Relation T/R: 1.8



## Pilón lombricero

## Common uses

Bridges, posts, fences, beams, columns, floors, furniture, cabinets, tool handles, shipbuilding, railway junctions, truck beds, container floors. Comments: Pilon lombricero is a high quality multipurpose wood, preferably to be used outdoors, due to the persistence of its characteristic odor, which gradually decreases, although it can be accelerated with the appropriate surface treatment and used in applications where resistance is important, a wood for both form and function



**Pallets Estibas Zuliana**

Rif: J-29756556-6

# Technical sheet by species (Altiplanicie del Nuria)

## Catalog

### Scientific name

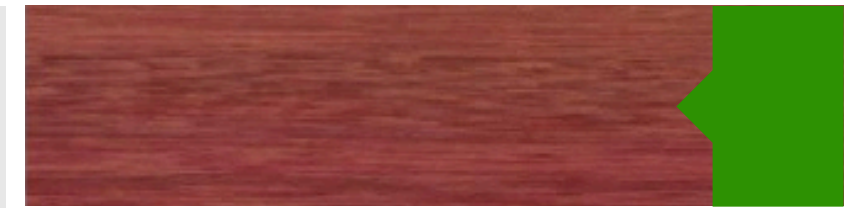
Peltogine  
porphyrocardia

### Family

CAESALPINIACEAE

### Trade name

Zapatero, amarante



## Zapatero

### Botanical Description

**Color / Appearance:** When freshly cut, Zapatero wood is a dull grayish brown. Upon exposure, the wood turns into a deeper eggplant purple. With aging and exposure to UV light, the wood turns a dark brown with a hint of purple. This color change can be slowed down and minimized by using a UV inhibitor finish on the wood. **Grain / Texture:** The grain is generally straight, but can also be wavy or uneven. It has a medium texture with good natural shine. **Veins:** diffuse-porous; medium to large pores, few; solitary and radial multiples; mineral deposits occasionally present, growth rings may be distinct or indistinct depending on species and growth conditions; mid-rays barely visible without lens, normal spacing; winged parenchyma, pastilla, confluent, unilateral and occasionally marginal. **Weather Resistance:** Cobbler is rated as very durable, resisting both decay and most insect attack, although it has been reported to be susceptible to attack by marine borers.

**Workability:** Working with Zapatero can present some unique challenges: If the wood is heated with dull tools, or if cutting speeds are too high, Zapatero Cobbler exudes a rubbery resin that can clog the tools and complicate the sawing process. Depending on the grain orientation, it can be difficult to brush. The Zapatero also has a moderate wear effect on the burs. **Allergies / Toxicity:** Although serious reactions are quite rare, Zapatero has been reported as a sensitizer. Generally, the most common reactions simply include irritation of the eyes and skin. Zapatero has also been reported to cause nausea.



**Pallets Estibas Zuliana**  
Rif: J-29756556-6



## Physical properties

Tree size: 100-170 feet (30-50 m) tall, 3-5 feet (1-1.5 m) in trunk diameter

Average Dried Weight: 56 lbs/ft<sup>3</sup> (905 kg/m<sup>3</sup>)

Specific gravity (Basic, 12% MC): .76, .90

Janka hardness: 2,520 lbf (11,190 N)

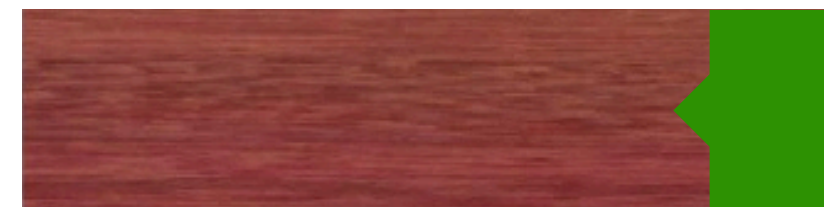
Modulus of Rupture: 22,000 lbf/in<sup>2</sup> (151.7 MPa)

Elastic Modulus: 2.937.000 lbf/in<sup>2</sup> (20,26 GPa)

Compressive strength: 12,140 lbf/in<sup>2</sup> (83.7 MPa)

Shrinkage: Radial: 3,8%, Tangential: 6,4%, Volume: 10,6%,

Ratio TIR: 1,7



## Zapatero

## Common uses

Flooring, furniture, boat building, heavy construction, and a variety of specialty wood items. Comments: Sometimes called Amaranth, this colorful Latin American hardwood is wildly popular for furniture and other designs that require a unique touch of color. In addition to its coloring, Zapatero has excellent strength properties, and can be used in applications where strength is importantly, a wood for both form and function.



**Pallets Estibas Zuliana**  
Rif: J-29756556-6

# Technical sheet by species (Altiplanicie del Nuria)

## Catalog

### Scientific name

Tectona grandis

### Family

LAMIACEAE

### Trade name

Teca



## Teca

### Botanical Description

Teca wood, with the scientific name tectona grandis, is one of the most highly valued, both by professionals and consumers. It is because of many of its characteristics: beautiful appearance, easy workability, great durability. Color: The sapwood is light yellow and the heartwood has brown and gold tones. It is a wood that ages really well, since its coloring improves.

### Physical properties

Fiber: Generally straight. Sometimes wavy. Coarse-grained. Density: It has an approximate density of 690 Kg / m<sup>3</sup>. Semi-heavy wood. Hardness: 4.2 according to the Monnin test. It is a semi-hard wood. High durability. Very good resistance to humidity and attack by fungi and insects. It is even possible to leave it outdoors without treatment thanks to its natural oils. It is difficult to find woods that offer similar durability being so light, they are usually much denser.

Dimensional Stability: It is a dimensionally stable wood.

Dimensional stability coefficient: 0.34%.

Teca wood is little edgy.

Impregnation: Sapwood slightly impregnable, heartwood not impregnable.



**Pallets Estibas Zuliana**  
Rif: J-29756556-6

## Workability

Sawn: No problems. It can accelerate tool wear due to its high silica content.

Drying: Slow, practically without risk of deformation or cracks.

Brushing: No problem. After being cut or brushed it has the smell of leather.

Gluing: Some problems may be encountered due to its resins or natural oils. In these cases it will be necessary to clean the surface.

Nailing and screwing: Pre-drilling should be no problem.

Finish: None beyond the presence of resins or oils typical of wood.



# Teca

## Mechanical properties

Compressive strength: 570 kg/cm<sup>2</sup>

Static flexural strength: 1.000 kg/cm<sup>2</sup>

Elastic Modulus: 140.000 kg/cm<sup>2</sup>

## Common uses

Decks for airplanes, ships and other large vessels. Manufacturing, joinery, piles, cars and railway sleepers, interior constructions, heavy constructions subjected to the elements. Housing door and window frames, stations, house frames, parquet, furniture, floors. Containers for tanks, tubs, bathtubs, kitchens, for laboratory benches and chemical plants and decorative plates, springs, poles for electrical transmission lines. Turning, musical instruments.



**Pallets Estibas Zuliana**  
Rif: J-29756556-6



# Technical sheet by species (Altiplanicie del Nuria)

## Catalog

### Scientific name

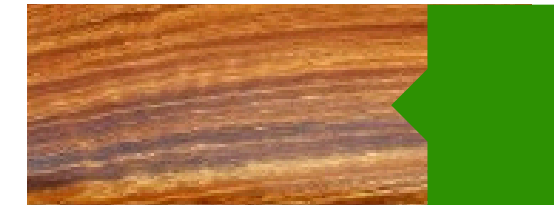
Samanea Saman

### Family

LEQUMINOSAE

### Trade name

Samán



## Samán

### Botanical Description

The wood shows a light or dark brown heartwood, while the sapwood is pale yellow. The specific gravity of the wood is 0.48 and it is a moderately heavy wood. The wood is also semi-resistant to fungal attack and resistant to termite attack. Color: Heartwood is glossy pale brown to pinkish brown with dark brown stripes. The sapwood is distinct, straw-colored, 60 mm or more wide. Grain - Grain is often quite severely intertwined. Texture is intermediate, although the vessels are conspicuous due to the surrounding soft tissue. Luster: Lustrous. The durability rating variable is reported to be durable underwater. Heartwood has been reported to be termite resistant, susceptible to blue staining.

### Physical properties

Natural durability index: 6

Basic density 4.60 g/cm<sup>3</sup>

Air-dry density (12% mc) (g /cm<sup>3</sup>) 0,53

Total tangential shrinkage (Saturated at 0% mc) (%) 1.8

Total radial shrinkage (Saturated at 0% mc) (%) 1.0

### Common uses

General housing, beams, boards, frames, panels, furniture and cabinets luxury furniture, cabinets, plywood and veneer, faces, cores, sports, bowling polo balls, musical instruments, handicrafts.



**Pallets Estibas Zuliana**  
Rif: J-29756556-6

# ¡Contact Us!

## Address:

Venezuela, Maracaibo, Zulia State, San Francisco Municipality,  
Ring road N ° 1, Manzanillo, Warehouse 25B-1-05, 800 meters  
from the bridge over the lake. Zip code 4004.


## Web Site:

[www.pallets.estibaszuliana.com](http://www.pallets.estibaszuliana.com)

## Email:

[ventas.estibaszuliana@gmail.com](mailto:ventas.estibaszuliana@gmail.com)

## Venezuela:

 +584246624682



[@pallets\\_estibas](https://www.instagram.com/pallets_estibas)

