

Hymenolobium excelsum

Para-Angelim

Family: Leguminosae

Other Common Names: Erejoeroe, Lialiadan koleroe, Saandoe (Surinam), Angelim do Pará, Carámate, Sapupira amarella (Brazil).

Distribution: Upland forests of the central and eastern parts of the Brazilian Amazon region and extending northward into the Guianas and southward to Rio de Janeiro.

A medium-sized to very large tree, sometimes 150 ft in height with diameters to 10 ft.

General Characteristics: Heartwood when fresh is light orange tan to orange brown turning to pale brown on exposure with a rather gradual transition to the white or grayish sapwood. Texture rather coarse and uneven; luster rather low; grain straight to interlocked; without distinctive odor or taste. Alternating zones of dark and light tissue give a figure of the Partridge wood type.

Weight: Basic specific gravity (ovendry weight/green volume) 0.63; air-dry density 47 pcf.

Mechanical Properties: (First set of data based on 2-in. standard; second set on the 1-in. standard.)

Moisture content	Bending strength	Modulus of elasticity	Maximum crushing strength
	<i>Psi</i>	<i>1,000 psi</i>	<i>Psi</i>
Green (73)	14,610	1,950	7,460
12%	17,610	2,050	8,990
12% (24)	13,300	2,000	9,050

Janka side hardness 1,720 lb for both dry and green material. Forest Products Laboratory toughness average for green and dry material is 203 in.-lb (5/8-in. specimen).

Drying and Shrinkage: Reported to be moderately difficult to air-season. Rate of drying fast to moderate with moderate warp and slight surface and end checking. No data on kiln schedules available. Shrinkage green to ovendry: radial 4.4%; tangential 7.1%; volumetric 10.2%.

Working Properties: The wood is easy to work in all operations and machines to a smooth surface.

Durability: In laboratory tests heartwood was rated very durable to durable upon exposure to a white-rot and durable in resistance to a brown-rot fungus. Exposure tests indicate the heartwood is only moderately resistant to marine borers.

Preservation: Heartwood and sapwood are both reported to respond well to pressure-vacuum treatments; test specimens, however, had high end-grain exposure.

Uses: Heavy construction, turnery, and furniture.

(24), (56), (73)

The Tree

The Wood

Additional Reading