

Jatoba

Scientific name: *Hymenaea* spp., Leguminosae.

Note: the genus *Hymenaea*, with several species (*Hymenaea courbaril* L., *Hymenaea intermedia* Ducke, *Hymenaea oblongifolia* Huber, *Hymenaea parvifolia* Huber, *Hymenaea stilbocarpa* Hayne), is found in almost all native forests of the country. The species *Hymenaea stilbocarpa* Hayne occurs from the state of Piauí to Paraná and the species *Hymenaea courbaril* L. is more common in the Amazon. Because these Woods are similar in mass density and anatomical characters, they have virtually the same value in commerce. Thus in this sheet these Woods are treated together, being mentioned the species, when relevant.

Other popular names: copal, courbaril, jataí, jataíba, jatobá-curuba, jatobazinho, jutaí, jutaí-açu, jutaí-do-igapó, juteí-mirim, jutaí-red, judoí ax.

International names: algarrobo (Colombia; Venezuela), courbaril (ATIBT, 1982) (Cuba; Guyana; French Guiana; Peru; England), loksi, lokus (Suriname), rode locus.

Occurrence:

- Brazil: Amazon, Atlantic Forest, Acre, Amapá, Amazonas, Bahia, Espírito Santo, Mato Grosso, Mato Grosso do Sul, Minas Gerais, Pará, Paraná, Rio Grande do Sul, Rondônia, São Paulo.
- Other countries: Central America, Argentina, Bolivia, Colombia, Guyana, French Guiana, Paraguay, Peru, Suriname.

GENERAL FEATURES

Sensory characteristics: heartwood and sapwood distinguished by color, heartwood ranging from yellowish-brown to reddish-brown, yellowish-white sapwood; imperceptible smell and taste; high density; hard to cut; regular to irregular grain; medium texture; surface not glossy.

Macroscopic Anatomical Description:

- Axial parenchyma: visible to the naked eye, in marginal bands associated with the vasicentric or aliform paratracheal.
- Rays: visible to the naked eye on top and visible under lens on tangential face, few.
- Vessels: visible to the naked eye, medium; very few; diffuse porosity; solitary and multiple; clogged with oil-resin.

- Growth layers: distinct, individualized by marginal parenchyma.

Source: (IPT, 1983; IPT, 1989a)

DURABILITY / TREATMENT

Natural durability: The species *Hymenaea courbaril* L. is considered to be highly resistant to white and brown rot termites and fungi, but susceptible to marine borers. (Berni et al., 1979) In contact with the soil *Hymenaea stilbocarpa* Hayne had an average life of less than 9 years and was considered moderately durable (Fosco Mucci et al., 1992). xylophagous organisms. (IPT, 1989a) In marine environment Madeira de *Hymenaea* sp. rehearsed was intensely attacked by perforating organisms. (Lopez, 1982)

Treatability: The jatoba heartwood, when subjected to pressure impregnation, proved to be impervious to preservative solutions. (IPT 1989a)

PROCESSING CHARACTERISTICS

Workability: Jatoba wood is moderately easy to work, can be planed, glued, screwed and nailed smoothly. Features resistance to turning and cutting. The finish is good. I accept painting, varnish and buff. (Jankowsky, 1990)

Drying: Wood dries in the air with little deformation. Cracks and warping are observed when drying is too fast. (Jankowsky, 1990) Air drying should be performed in a place protected from direct sunlight, with good ventilation, to avoid radial cracking. (CTFT / INPA, s.d.)

Drying programs can be obtained (CTFT / INPA, s.d. ; IBAMA, 1997a; Jankowsky, 1990)

PHYSICAL PROPERTIES

Mass Density (r):

- Apparent at 15% humidity (rap, 15): 960 kg / m³
- Basic (basic): 800 kg / m³

Contraction:

- Radial: 3.1%
- Tangential: 7.2%
- Volumetric: 10.7%

Results were obtained according to ABNT Standard MB26 / 53 (NBR 6230/85).

Source: (IPT, 1989a)

Note: information for species *Hymenaea stilbocarpa* Hayne.

MECHANICAL PROPERTIES

Flexion:

- Resistance (fM):
 - Green wood: 131.6 MPa
 - Wood at 15% humidity: 151.8 MPa
- Proportionality Limit - Green Wood: 55.8 MPa
- Elasticity Module - Green Wood: 14837 MPa

Results were obtained according to ABNT Standard MB26 / 53 (NBR 6230/85).

Source: (IPT, 1989a)

Note: information for species *Hymenaea stilbocarpa* Hayne.

Parallel Fiber Compression:

- Resistance (fc0):
 - Green wood: 67.0 MPa
 - Wood at 15% humidity: 82.2 MPa
- Moisture influence coefficient: 3.2%
- Proportionality Limit - Green Wood: 46.3 MPa
- Elasticity Module - Green Wood: 17691 MPa

Results were obtained according to ABNT Standard MB26 / 53 (NBR 6230/85).

Source: (IPT, 1989a)

Note: information for species *Hymenaea stilbocarpa* Hayne.

Other properties:

- Flexural impact strength - 15% wood (shock): 33.7
- Shear - Green Wood: 17.5 MPa
- Parallel janka hardness - Green wood: 11180 N
- Normal fiber traction - Green wood: 13.1 MPa
- Cracking - Green Wood: 1.5 MPa

Results were obtained according to ABNT Standard MB26 / 53 (NBR 6230/85).

Source: (IPT, 1989a)

Note: information for species *Hymenaea stilbocarpa* Hayne.

USES

Construction:

- External heavy:
 - railway sleepers
 - crosspieces
- Internal Heavy:
 - rafters
 - rafters
 - scissors
- Lightweight:
 - doors
 - windows
 - jamb
- Light internal, decorative:
 - garnishes
 - baseboards
 - panels
 - liners
 - wainscoting

Floors:

- boards
- treads
- parquet
- stair steps

Furniture:

- High quality:
 - fine furniture

Other Uses:

- sporting goods and toys
- tool handles
- agricultural implements
- turned parts
- transport