

# MASSARANDUBA

Massaranduba is one of the woods with the **highest fiber density in the world**. This means it is one of the hardest woods in the world, ideal for high-traffic areas or harsh climatic conditions.

It has a very fine texture and an almost non-existent grain. Its high resistance to insect and fungal attacks gives it excellent durability.

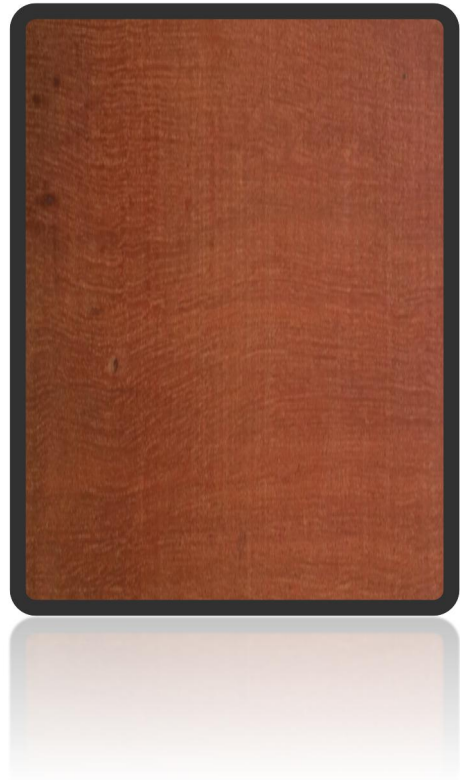
It has a natural lifespan of 25-30 years without chemical treatments. It does not require finishing, but oil is recommended to maintain the original color. A great aesthetic alternative to Ipe but less expensive.

**Colour:** Red-brown.

**Origin:** Central America, Venezuela, Guiana, and the Amazon (Brazil).

**Features of the trunk:** It comes in large logs with a diameter of over 1m and is 30-35m high.

**Use:** Its high mechanical features make it suitable for civil, road, hydraulic construction work, and outdoor applications. pavements. It is excellent in very humid or sunny areas, where it is important for the wood to withstand well without deforming.



BOARD WITH THICKNESS 19 mm x WIDTH 90 mm

BOARD WITH THICKNESS 21 mm x WIDTH 140 mm



## FEATURES:

**Family:** Sapotaceae

**Botanical name:** *Manilkara bidentata*

**Texture:** Fine

**Grain:** Straight

**Density:** From 1000 Kg/m<sup>3</sup> to 1100 Kg/m<sup>3</sup>

**Shrinkage:** Medium/high

**Stability:** Discrete/Good

**Dimension Durability:** Excellent

**Hardness:** High

**Brinell Hardness:** 5.8 Kg/mm<sup>2</sup>

**Monnin Hardness:** Average 12.90

PHYSICAL PROPERTY	Detected Values	Reference Values (UNI 11538-1)
Width Deformation	0.13%	< 1%
Warping	0.48 mm/m	< 2 mm/m
Twisting	0.96 mm/m	< 2 mm/m

Property	Detected Values	Reference Values (UNI 11538-1)
Width Deformation	0.18%	< 1%
Warping	0.32 mm/m	< 2 mm/m
Twisting	1.64 mm/m	< 2 mm/m

## MECHANICAL PROPERTIES

Property	Value
Average bending strength	158 MPa
Bending strength after freeze-thaw cycles	168 MPa
Bending strength after freeze-salt cycles	198 MPa
Bending strength after heat-rain and heat-cold (warm rain) cycles	173 MPa
Average modulus of elasticity	17,891 MPa
Average breaking point	89 MPa

## NATURAL DURABILITY(According to UNI EN 335 and UNI EN 350)

Factor	Classification
Fungal resistance	Durable – Class D
Resistance to wood insects	Durable – Class D
Resistance to termites	Durable – Class D
Impregnability	Non-impregnable – Class 4
Usage class	Class 4 (outdoor use with ground and/or freshwater contact)
Marine environment use	Class 5 (suitable for marine applications)