

Massaranduba



Scientific Name(s)

Manilkara bidentata
Manilkara huberi

Family

SAPOTACEAE (angiosperm)

Commercial Restriction

No commercial restriction

Massaranduba decking is a premium outdoor decking material renowned for its exceptional durability, natural beauty, and rich reddish-brown colour.

With its dense grain and high density, Massaranduba decking exhibits remarkable resistance to rot, decay, insects, and even fire. This makes it an excellent choice for outdoor applications, as it can withstand the elements and heavy use without compromising its structural integrity.

The wood's deep reddish-brown colour gives Massaranduba decking a warm and inviting appearance. Over time, it develops a beautiful natural patina that enhances its visual appeal. While the wood naturally weathers to a silver-grey colour when left untreated, applying a protective finish can help maintain its original hue and prevent fading caused by UV rays.

Massaranduba decking combines durability, natural beauty, and longevity, making it a popular choice for those seeking a high-quality and visually appealing outdoor decking.

Wood Description

Color: red brown
Sapwood: clearly demarcated
Texture: fine
Grain: straight
Interlocked grain: absent

Note: Dark red brown with purplish shades.

Log Description

Diameter: from 60 to 120cm
Thickness of sapwood: from 4 to 6cm
Floats: no
Log durability: good



Physical, Mechanical and Acoustic Properties

Physical and mechanical properties are based on mature heartwood specimens. These properties can vary greatly depending on origin and growth conditions.

Stability: poorly stable

Musical quality factor: 107,7 measured at 2842 Hz

(*: at 12% moisture content, with 1 MPa = 1 N/mm²)

	Mean	Std dev.
Specific gravity *:	1,1	0,05
Monnin hardness *:	12,9	2,1
Coeff. of volumetric shrinkage:	0,75%	0,06%
Total tangential shrinkage (TS):	9,40%	0,80%
Total radial shrinkage (RS):	7,10%	0,80%
TS/RS ratio:	1,30%	-
Fiber saturation point:	27%	-
Crushing strength *:	89MPa	8MPa
Static bending strength *:	170MPa	18MPa
Modulus of elasticity *:	24410MPa	3274MPa

Requirement of a Preservative Treatment

Against dry wood borer attacks: does not require any preservative treatment

In case of risk of temporary humidification: does not require any preservative treatment

In case of risk of permanent humidification: does not require any preservative treatment

Natural Durability and Treatability

Fungi and termite resistance refers to end-uses under temperate climate. Except for special comments on sapwood, natural durability is based on mature heartwood. Sapwood must always be considered as non-durable against wood degrading agents.

E.N. = Euro Norm

Funghi (according to E.N. standards): class 1

- very durable

Dry wood borers: durable - sapwood demarcated (risk limited to sapwood)

Termites (according to E.N. standards): class D

- durable

Treatability (according to E.N. standards): class 4

- not permeable

Use class ensured by natural durability: class 4

- in ground or fresh water contact

Species covering the use class 5: yes

Note: This species naturally covers the use class 5 (end-uses in marine environment or in brackish water) due to its high specific gravity and hardness. According to the European standard NF EN 335, performance length might be modified by the intensity of end-use exposition.

Drying

Drying rate: slow

Risk of distortion: high risk

Risk of casehardening: yes

Risk of checking: high risk

Risk of collapse: no

Possible drying schedule: 5

Note: Surface drying prior to kiln drying is recommended.

This schedule is given for information only and is applicable to thickness lower or equal to 38 mm. It must be used in compliance with the code of practice. For thickness from 38 to 75 mm, the air relative humidity should be increased by 5 % at each step. For thickness over 75 mm, a 10 % increase should be considered.

M.C. (%)	Temperature (°C)		
	Dry-bulb	Wet-bulb	Air humidity (%)
30	42	41	94
25	42	39	82
20	48	43	74
15	48	43	74

Sawing And Machining

Blunting effect: fairly high

Sawteeth recommended: stellite-tipped

Cutting tools: tungsten carbide

Peeling: not recommended or without interest

Slicing: nood

Note: Requires power.

Commercial Grading

Appearance grading for sawn timbers:

- According to NHLA grading rules (January 2007)
- **Possible grading:** FAS, Select, Common 1, Common 2, Common 4
- In French Guiana, the local name of this species is "BALATA FRANC". Grading is done according to local rules "Bois guyanais classés".
- **Possible grading:** Choix 1, choix 2, choix 3, choix 4

End-uses

- Hydraulic works (fresh water)
- Sleepers
- Stakes
- Sliced veneer
- Ship building (planking and deck)
- Sculpture
- Turned goods
- Industrial or heavy flooring
- Stairs (inside)
- Bridges (parts not in contact with water or ground)
- Bridges (parts in contact with water or ground)
- Poles
- Wood frame house
- Stringed instruments (bow)
- Arched goods
- Tool handles (resilient woods)
- Shingles
- Heavy carpentry
- Current furniture or furniture components

Note: In Brazil, *M. elata* and *M. longifolia* are used for pulpwood.

Assembling

Nailing / screwing: good but pre-boring necessary

Gluing: correct (for interior only)

Note: Gluing requires care (very dense wood).

Fire Safety

Conventional French grading:

- **Thickness > 14 mm:** M.3 (moderately inflammable)

- **Thickness < 14 mm:** M.4 (easily inflammable)

Euroclasses grading: D s2 d0

Default grading for solid wood, according to requirements of European standard EN 14081-1 annex C (April 2009). It concerns structural graded timber in vertical uses with mean density upper 0.35 and thickness upper 22 mm.

Main Local Names

Country	Local Name
Brazil	Massaranduba
Brazil	Paraju
Colombia	Nispero
Guyana	Beefwood
French Guiana	Balata Franc
French Guiana	Balata Rouge
Panama	Nispero
Peru	Quinilla Colorada
Venezuela	Balata
United Kingdom	Bullet Wood
United States of America	Bullet Wood
Brazil	Maparajuba
Colombia	Balata
Guyana	Balata
Guyana	Bullet Wood
French Guiana	Balata Gomme
French Guiana	Bois Abeille
Peru	Pamashto
Suriname	Bolletrie
Venezuela	Massarandu
United States of America	Beefwood

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