



Cumaru

Scientific Name(s)

Dipteryx spp.
Coumarouna spp. (synonymous)

Family

FABACEAE (angiosperm)

Commercial Restriction

No commercial restriction

Cumaru decking showcases a rich brown colour that ranges from golden brown to reddish-brown, offering a timeless and elegant look to any outdoor space. The wood's natural colour variations and intricate grain patterns add depth and character to the deck, creating a visually appealing atmosphere.

One of the standout features of Cumaru decking is its outstanding durability. The wood is highly resistant to rot, decay, insects, and even fire, making it ideal for outdoor use and ensuring its longevity. It can withstand heavy foot traffic, furniture, and various weather conditions without compromising its structural integrity.

Cumaru decking also possesses excellent dimensional stability, meaning it resists warping, cupping, and twisting caused by changes in temperature and humidity. This stability ensures a level and even deck surface, providing long-term structural integrity and aesthetic appeal. Additionally, Cumaru wood is known for its hardness and resistance to scratches, dents, and wear. It is a dense and sturdy material that can withstand the rigors of outdoor use, maintaining its beauty and integrity over time.

With its durability, natural beauty, and warm brown colour, Cumaru decking offers a luxurious and long-lasting outdoor deck solution.

Wood Description

Color: red brown
Sapwood: clearly demarcated
Texture: medium
Grain: interlocked
Interlocked grain: marked

Note: Unpleasant odour when green. Heartwood varies from yellow brown to reddish brown with darker thin veins.

Log Description

Diameter: from 50 to 90cm
Thickness of sapwood: from 2 to 3cm
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: moderately stable to stable

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

	Mean	Std dev.
Specific gravity *:	1,07	0,05
Monnin hardness *:	13,1	2,5
Coeff. of volumetric shrinkage:	0,73%	0,09%
Total tangential shrinkage (TS):	7,70%	1,20%
Total radial shrinkage (RS):	5,50%	0,90%
TS/RS ratio:	1,4	-
Fiber saturation point:	22%	-
Crushing strength *:	103MPa	8MPa
Static bending strength *:	170MPa	23MPa
Modulus of elasticity *:	26610MPa	3224MPa

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: no

Note: 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: slight risk

Risk of casehardening: no

Risk of checking: high risk

Risk of collapse: no

Possible drying schedule: 1

Note: Drying must be done with care and slowly.

Risks of casehardening for thick boards.

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.

Temperature (°C)			
M.C. (%)	Dry-bulb	Wet-bulb	Air humidity (%)
Green	40	37	82
40	44	38	68
30	44	36	59
20	46	36	52
15	49	37	46

Sawing And Machining

Blunting effect: fairly high

Sawteeth recommended: stellite-tipped

Cutting tools: tungsten carbide

Peeling: not recommended or without interest

Slicing: good

Note: Sawing and machining are difficult due to hardness and interlocked grain. 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 "GAIAC DE CAYENNE". Grading is done according to local rules "Bois guyanais classés".
- **Possible grading:** Choix 1, choix 2, choix 3, choix 4

End-uses

- Sleepers
- Bridges (parts not in contact with water or ground)
- Industrial or heavy flooring
- Poles
- Ship building (planking and deck)
- Heavy carpentry
- Tool handles (resilient woods)
- Hydraulic works (seawater)
- Bridges (parts in contact with water or ground)
- Hydraulic works (fresh water)
- Wood frame house
- Stakes
- Cooperage
- Sliced veneer
- Turned goods

Note: Slicing: only for decorative veneer.

Commercial Grading

Nailing / screwing: good but pre-boring necessary

Gluing: poor

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
Bolivia	Almendrillo
Brazil	Cumarú
Brazil	Cumarurana
Guyana	Kumarú
French Guiana	Gaiac de Cayenne
Honduras	Ebo
Peru	Shihuahuaco Amarillo
Suriname	Tonka
Brazil	Champanha
Brazil	Cumarú Ferro
Colombia	Sarrapia
Guyana	Tonka Bean
French Guiana	Tonka
Peru	Charapilla
Suriname	Koemaroe
Venezuela	Sarrapia