

Family: MORACEAE (angiosperm)

Scientific name(s): Bagassa guianensis

Bagassa tillaefolia (synonymous)

Commercial restriction: no commercial restriction

WOOD DESCRIPTION

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

LOG DESCRIPTION

Diameter: from 50 to 90 cm
Thickness of sapwood: from 2 to 4 cm
Floats: no
Log durability: good

Note: When freshly cut, the heartwood is yellow. It becomes yellow brown to dark brown with age.

PHYSICAL PROPERTIES

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

| | <u>Mean</u> | <u>Std dev.</u> |
|----------------------------------|-------------|-----------------|
| Specific gravity *: | 0,80 | 0,07 |
| Monnin hardness *: | 6,4 | 1,3 |
| Coeff. of volumetric shrinkage: | 0,53 % | 0,05 % |
| Total tangential shrinkage (TS): | 5,2 % | 0,3 % |
| Total radial shrinkage (RS): | 3,7 % | 0,4 % |
| TS/RS ratio: | 1,4 | |
| Fiber saturation point: | 20 % | |
| Stability: | stable | |

MECHANICAL AND ACOUSTIC PROPERTIES

| | <u>Mean</u> | <u>Std dev.</u> |
|----------------------------|-------------|-----------------|
| Crushing strength *: | 78 MPa | 9 MPa |
| Static bending strength *: | 109 MPa | 21 MPa |
| Modulus of elasticity *: | 21490 MPa | 2150 MPa |

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

Musical quality factor: 121 measured at 2773 Hz

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 3 - poorly 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 silica content.

According to the European standard NF EN 335, performance length might be modified by the intensity of end-use exposition.

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

DRYING

Drying rate: normal to slow
 Risk of distortion: high risk
 Risk of casehardening: no
 Risk of checking: slight risk
 Risk of collapse: no

Possible drying schedule: 6

| | M.C. (%) | Temperature (°C) | | Air humidity (%) |
|-------|----------|------------------|----------|------------------|
| | | dry-bulb | wet-bulb | |
| Green | 42 | 41 | 94 | |
| 50 | 48 | 43 | 74 | |
| 30 | 54 | 46 | 63 | |
| 20 | 60 | 51 | 62 | |
| 15 | 60 | 51 | 62 | |

Note: High risks of distortion in presence of highly interlocked grain. During drying, spacer sticks may stain the wood.

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.

SAWING AND MACHINING

Blunting effect: normal
 Sawteeth recommended: ordinary or alloy steel
 Cutting tools: ordinary
 Peeling: no information available
 Slicing: nood
 Note: Sawdust sometimes irritant. Presence of internal stresses.

ASSEMBLING

Nailing / screwing: good but pre-boring necessary
 Gluing: correct

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 "BAGASSE". Grading is done according to local rules "Bois guyanais classés".
 Possible grading: Choix 1, choix 2, choix 3, choix 4

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.

END-USES

| | |
|---|---|
| Flooring | Current furniture or furniture components |
| Ship building (planking and deck) | Ship building (ribs) |
| Cabinetwork (high class furniture) | Wood frame house |
| Interior joinery | Interior panelling |
| Sliced veneer | Sleepers |
| Hydraulic works (fresh water) | Exterior joinery |
| Exterior panelling | Bridges (parts in contact with water or ground) |
| Bridges (parts not in contact with water or ground) | Heavy carpentry |
| Turned goods | Stairs (inside) |
| Vehicle or container flooring | Moulding |

Note: Interlocked grain may be troublesome in the use of this wood.

MAIN LOCAL NAMES

| <u>Country</u> | <u>Local name</u> | <u>Country</u> | <u>Local name</u> |
|----------------|-------------------|----------------|-------------------|
| Brazil | AMARELAO | Brazil | BAGACEIRA |
| Brazil | TATAJUBA | Guyana | COW-WOOD |
| French Guiana | BAGASSE | French Guiana | KAW OUDOU |
| French Guiana | ODOUN | French Guiana | TATAJUBA |
| Suriname | JAWAHEDAN | Suriname | KAW-OEDOE |

