

Family: FABACEAE-CAESALPINIOIDEAE (angiosperm)

Scientific name(s): Microberlinia brazzavillensis

Microberlinia bisulcata

Commercial restriction: no commercial restriction

WOOD DESCRIPTION

Color: light brown
Sapwood: clearly demarcated
Texture: coarse
Grain: interlocked
Interlocked grain: slight

Note: Wood yellow brown to light brown, with dark brown veins. Sometimes highly interlocked grain.

LOG DESCRIPTION

Diameter: from 60 to 100 cm
Thickness of sapwood: from 6 to 10 cm
Floats: no
Log durability: moderate (treatment recommended)

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 *: | 0,79 | 0,03 |
| Monnin hardness *: | 5,0 | 0,9 |
| Coeff. of volumetric shrinkage: | 0,56 % | 0,07 % |
| Total tangential shrinkage (TS): | 11,0 % | |
| Total radial shrinkage (RS): | 8,8 % | |
| TS/RS ratio: | 1,3 | |
| Fiber saturation point: | 30 % | |
| Stability: | moderately stable | |

MECHANICAL AND ACOUSTIC PROPERTIES

| | <u>Mean</u> | <u>Std dev.</u> |
|----------------------------|-------------|-----------------|
| Crushing strength *: | 62 MPa | 11 MPa |
| Static bending strength *: | 110 MPa | 37 MPa |
| Modulus of elasticity *: | 17520 MPa | |

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

Musical quality factor: 82,6 measured at 2623 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 3 - moderately durable

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

Termites (according to E.N. standards): class M - moderately durable

Treatability (according to E.N. standards): class 3 - poorly permeable

Use class ensured by natural durability: class 2 - inside or under cover (dampness possible)

Species covering the use class 5: No

REQUIREMENT OF A PRESERVATIVE TREATMENT

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

In case of risk of temporary humidification: requires appropriate preservative treatment

In case of risk of permanent humidification: use not recommended

DRYING

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

Possible drying schedule: 5

Note: Sawnwoods must be properly stacked, dried slowly and preferably on quartersawn in order to reduce distortions.

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

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: tungsten carbide
 Peeling: not recommended or without interest
 Slicing: nood
 Note: Risk of tearing in presence of highly interlocked grain.

ASSEMBLING

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

COMMERCIAL GRADING

Appearance grading for sawn timbers: According to SATA grading rules (1996)
 For the "General Purpose Market":
 Possible grading for square edged timbers: choix I, choix II, choix III, choix IV
 Possible grading for short length lumbers: choix I, choix II
 Possible grading for short length rafters: choix I, choix II, choix III
 For the "Special Market":
 Possible grading for strips and small boards (ou battens): choix I, choix II, choix III
 Possible grading for rafters: choix I, choix II, choix III

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

| | |
|---|------------------------------------|
| Sliced veneer | Cabinetwork (high class furniture) |
| Current furniture or furniture components | Interior panelling |
| Turned goods | Wood-ware |
| Tool handles (resilient woods) | Wood frame house |

MAIN LOCAL NAMES

| <u>Country</u> | <u>Local name</u> | <u>Country</u> | <u>Local name</u> |
|----------------|-------------------|----------------|-------------------|
| Cameroon | ALLEN ELE | Gabon | ZINGANA |
| Germany | ZEBRANO | United Kingdom | ZEBRANO |
| United Kingdom | ZEBRAWOOD | | |

