| | |
|---|---|
| Common name: | NAGA |
| Family: | CAESALPINIACEAE |
| Scientific name(s): | Brachystegia cynometroides<br>Brachystegia leonensis<br>Brachystegia eurycoma |

## LOG DESCRIPTION

| | |
|---|---|
| Diameter: | from 70 to 120 cm |
| Thickness of sapwood: | from 6 to 15 cm |
| Floats: | no |
| Durability in forest : | Low (must be treated) |
| Note: | Heartwood light brown to red brown with purplish glints. Grain sometimes irregular. |

## WOOD DESCRIPTION

| | |
|---|---|
| Colour: | Light brown |
| Sapwood: | Clearly demarcated |
| Texture: | Medium |
| Grain: | Interlocked |
| Interlocked grain: | Slight |

## PHYSICAL PROPERTIES

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

| | mean | standard deviation |
|---|---|---|
| Density *: | 0.62 g/cm3 | 0.08 |
| Monnin hardness*: | 3.2 | 0.8 |
| Coef of volumetric shrinkage: | 0.44 % | 0.05 |
| Total tangential shrinkage: | 6.8 % | 0.4 |
| Total radial shrinkage: | 4.6 % | 0.4 |
| Fibre saturation point: | 30 % | |
| Stability: | stable | |

## MECHANICAL PROPERTIES

| | mean | standard deviation |
|---|---|---|
| Crushing strength *: | 55 MPa | 8 |
| Static bending strength *: | 93 MPa | 13 |
| Modulus of elasticity *: | 12880 MPa | 1488 |

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

## 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.

| | |
|---|---|
| Fungi: | Class 3 moderately durable |
| Dry wood borers: | Durable; sapwood demarcated (risk limited to sapwood) |
| Termites: | Class M - Moderately durable |
| Treatability: | 3 - poorly permeable |
| Use class*: | 2 - inside or under cover (dampness possible) |

* ensured by natural durability (according EN standards).

## MAIN LOCAL NAMES

| Countries | Local names |
|---|---|
| Cameroon | EKOP-NAGA |
| Côte d'Ivoire | MEBLO |
| Gabon | MENDOU |
| Liberia | TEBAKO |
| Nigeria | OKWEN |
| Sierra Leone | BOGDEI |
| United Kingdom | OKWEN |

NAGA

## REQUIREMENT OF A PRESERVATIVE TREATMENT

| | |
|---|---|
| Against dry wood borer attacks: | Does not require any preservative treatment |
| In case of temporary humidification risk: | Requires appropriate preservative treatment |
| In case of permanent humidification risk: | Use not recommended |

## DRYING

| | |
|---|---|
| Drying rate: | Normal to slow |
| Risk of distortion: | High risk |
| Risk of casehardening: | No |
| Risk of checking: | High risk |
| Risk of collapse: | Yes |

Possible drying schedule

| M.C. (%) | Temperature (°C) dry-bulb | wet-bulb | Air humidity (%) |
|---|---|---|---|
| Green | 50 | 47 | 84 |
| 40 | 50 | 45 | 75 |
| 30 | 55 | 47 | 67 |
| 20 | 70 | 55 | 47 |
| 15 | 75 | 58 | 44 |

This schedule is given for information only and is applicable to thickness < 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.

Note: Drying must be handled slowly and carefully to avoid defects.

## SAWING AND MACHINING

| | |
|---|---|
| Blunting effect: | Fairly high |
| Sawteeth recommended: | Stellite-tipped |
| Cutting tools: | Tungsten carbide |
| Peeling: | Good |
| Slicing: | Good |
| Note: | Difficult to obtain a good finish due to irregular grain. |

## ASSEMBLING

| | |
|---|---|
| Nailing / Screwing: | Good but pre-boring necessary |
| Gluing: | Correct |
| Note: | Tends to split when nailing. |

## END-USES

Main known end-uses; they must to be implemented according to the code of practice.
Important remark: some end-uses are mentionned for information (traditional, regional or ancient end-uses).

Note: A careful sanding and a filling are necessary to obtain a good finish.

Interior joinery
Sliced veneer
Interior panelling
Current furniture or furniture components
Veneer for back or face of plywood
Stairs (inside)
Flooring
Light carpentry
Wood frame house
Glued laminated
Wood-ware
Cabinetwork (high class furniture)