| Common name:                       | PADOUK   |                     |                           |  |
|------------------------------------|--|---------------------|---------------------------|--|
| Family:<br>Scientific name(s):     | FABACEAE<br>Pterocarpus soyauxii<br>Pterocarpus osun |                     |                           |  |
| LOG DESCRIPTION                    |  | WOOD DESCRIF        | PTION                     |  |
| Diameter:<br>Thickness of sapwood: | from 60 to 100 cm<br>from 6 to 10 cm                 | Colour:<br>Sapwood: | Red<br>Clearly demarcated |  |

Texture:

| Durability in forest : | Moderate (treatment      | Grain:                     | Straight or interlocked |
|------------------------|--------------------------|----------------------------|-------------------------|
|                        | recommended)             | Interlocked grain:         | Slight                  |
| Note:                  | Variable buoyancy.       | •                          |                         |
|                        | Wood bright red becoming | purplish brown with light. |                         |

### PHYSICAL PROPERTIES

Floats:

# MECHANICAL PROPERTIES

Coarse

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

|                               | mean       | standard deviation |                              | mean                | standard  |
|-------------------------------|------------|--------------------|------------------------------|---------------------|-----------|
| Density *:                    | 0.79 g/cm. | 3 0.09             |                              |                     | deviation |
| Monnin hardness*:             | 8.3        | 1.9                | Crushing strength *:         | 65 MPa              | 8         |
| Coef of volumetric shrinkage: | 0.44 %     | 0.10               | Static handing strongth *    | 116 MD <sub>0</sub> | 24        |
| Total tangential shrinkage:   | 5.0 %      | 0.5                | Static bending strength *.   | 110 Ivir a          | 24        |
| Total radial shrinkage:       | 3.2 %      | 0.3                | Modulus of elasticity *:     | 15870 MPa           | 1885      |
| Fibre saturation point:       | 21 %       |                    |                              |                     |           |
| Stability:                    | stable     |                    | (*: at 12 % moisture content | ; 1 MPa = 1 N/mn    | n2)       |

# NATURAL DURABILITY AND TREATABILITY

Fungi and termite resistance refers to end-uses under temperate climate.

no

Except for special comments on sapwood, natural durability is based on mature heartwood.

| C            | 1      |      | 1        | 1     | . 1 1      |    |        | 1 11     | •       | 1    | 1 1'     |           |
|--------------|--------|------|----------|-------|------------|----|--------|----------|---------|------|----------|-----------|
| N 01         | nuond  | muct | 9 111910 | c ha  | conciderad | 90 | non    | durahla  | against | wood | doorodin | a grante  |
| <b>v</b> ) a | JWUUUU | must | arway    | 5 1.0 | CONSIDERED | 45 | IIOII- | ·uuranic | against | woou | ucgraum  | e aecins. |
| ~~ ~~        |        |      |          |       |            |    |        |          |         |      |          | 0         |

| Fungi:                    | Class 1 - very durable   | * ensured by natural  |  |
|---------------------------|--|-----------------------|--|
| Dry wood borers:          | Durable; sapwood demarcated (risk limited to sapwood)  | durability (according |  |
| Termites:                 | Class D - Durable  | EN standards).        |  |
| Treatability:             | 2 - moderately permeable   |                       |  |
| Biological hazard class*: | 4 - in ground or fresh water contact or hight dampness   |                       |  |
| Note:                     | This species is listed in the European standard NF EN 350-2.                                     |                       |  |
|                           | It naturally covers the biological hazard class 5 (end-uses in marine environment or in brackish |                       |  |
|                           | water) only for end-uses under temperate and cold environment.                                   |                       |  |

| COUNTRIES - LOCAL NAMES |               |  |                |             |
|-------------------------|---------------|--|----------------|-------------|
| Countries               | Local names   |  | Countries      | Local names |
| Angola                  | TACULA        |  | United Kingdom | CAMWOOD     |
| Cameroon                | MBEL          |  | United Kingdom | PADAUK      |
| Central African Rep     | PADOUK        |  |                |             |
| Congo                   | KISESE        |  |                |             |
| Dem Rep of Congo        | MONGOLA       |  |                |             |
| Dem Rep of Congo        | MUKULA        |  |                |             |
| Dem Rep of Congo        | N'GULA        |  |                |             |
| Equatorial Guinea       | PALO ROJO     |  |                |             |
| Gabon                   | MBEL          |  |                |             |
| Nigeria                 | OSUN          |  |                |             |
| Belgium                 | CORAIL        |  |                |             |
| Germany                 | PADAUK        |  |                |             |
| Italia                  | PADUK         |  |                |             |
| Netherlands             | PADOEK        |  |                |             |
| United Kingdom          | AFRICANPADAUK |  |                |             |
| United Kingdom          | BARWOOD       |  |                |             |

# PADOUK

### REQUIREMENT OF A PRESERVATIVE TREATMENT

Against dry wood borer attacks: In case of temporary humidification risk: In case of permanent humidification risk: Does not require any preservative treatment Does not require any preservative treatment Does not require any preservative treatment

| DRYING  | Possible dryin                                | Possible drying schedule   |                            |                            |                     |  |
|---|---|----------------------------|----------------------------|----------------------------|---------------------|--|
| Drying rate:<br>Risk of distortion:   | Normal to slow<br>No risk or very slight risk | M.C. (%)                   | Tempera<br>dry-bulb        | ture (°C)<br>wet-bulb      | Air<br>humidity (%) |  |
| Risk of casehardening:NoRisk of checking:No risk or very slight riskRisk of collapse:No | Green<br>40<br>30<br>20                       | 50<br>50<br>55<br>70<br>75 | 47<br>45<br>47<br>55<br>58 | 84<br>75<br>67<br>47<br>44 |                     |  |

This shedule 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.

#### SAWING AND MACHINING

| Blunting effect:      | Fairly high  |
|-----------------------|--|
| Sawteeth recommended: | Stellite-tipped  |
| Cutting tools:        | Tungsten carbide   |
| Peeling:              | Not recommended or without interest  |
| Slicing:              | Good   |
| Note:                 | Sometimes, irritant sawdust. Requires power. Sometimes, difficulties due to interlocked grain. |
| ASSEMBLING            |  |
|                       |  |

| Nailing / Screwing: | Good but pre-boring necessary  |
|---------------------|--|
| Gluing:             | Correct  |
| Note:               | Pre-boring necessary: risks of splits especially with thin boards. Gluing requires care (dense |
|                     | wood).   |

## 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).

Hydraulic works (seawater) Industrial or heavy flooring Flooring Sliced veneer Cabinetwork (high class furniture) Sleepers Bridges (parts in contact with water or ground) Bridges (parts not in contact with water or ground) Vehicle or container flooring Heavy carpentry Ship building (ribs) Ship building (planking and deck) Turned goods Seats Exterior joinery Stairs (inside) Interior joinery Sculpture