| | |
|---|---|
| Common name: | PINUS MERKUSII |
| Family: | PINACEAE |
| Scientific name(s): | Pinus merkusii |
| Note: | This species can be found at altitudes between 150 m and 650 m. |

## LOG DESCRIPTION

| | |
|---|---|
| Diameter: | from 60 to 80 cm |
| Thickness of sapwood: | from 2 to 5 cm |
| Floats: | yes |
| Durability in forest : | Low (must be treated) |
| Note: | Wood light brown with dark red veins. Numerous resin canals. |

## WOOD DESCRIPTION

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

## 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 *: | 0.73 g/cm3 | |
| Monnin hardness*: | 3.2 | |
| Coef of volumetric shrinkage: | 0.45 % | |
| Total tangential shrinkage: | 8.0 % | |
| Total radial shrinkage: | 5.0 % | |
| Fibre saturation point: | 32 % | |
| Stability: | Moderately stable | |
| Note: | Hardness varies from fairly hard to hard. Physical and mechanical properties vary according to age and origin. | |

## MECHANICAL PROPERTIES

| | mean | standard deviation |
|---|---|---|
| Crushing strength *: | 51 MPa | |
| Static bending strength *: | 90 MPa | |
| Modulus of elasticity *: | 16370 MPa | |

( * : 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 4 - poorly durable |
| Dry wood borers: | Susceptible |
| Termites: | Class S - Susceptible |
| Treatability: | 2 - moderately permeable |
| Use class*: | 1 - inside (no dampness) |
| Note: | Often very important sapwood; end-uses under use class 4 possible with an adequate preservative treatment. |

* ensured by natural durability (according EN standards).

## MAIN LOCAL NAMES

| Countries | Local names |
|---|---|
| Cambodia | SRAL |
| Indonesia | TUSAM |
| Laos | MAY PEK |
| Myanmar | TENASSERIM-PINE |
| Myanmar | TINYU |
| Philippines | MINDORO-PINE |
| Philippines | TAPULAU |
| Vietnam | KIA |
| Vietnam | THONG |
| United Kingdom | MERKUS-PINE |
| U.S.A. | MERKUS-PINE |

PINUS MERKUSII

## REQUIREMENT OF A PRESERVATIVE TREATMENT

| | |
|---|---|
| Against dry wood borer attacks: | Requires appropriate preservative treatment |
| In case of temporary humidification risk: | Requires appropriate preservative treatment |
| In case of permanent humidification risk: | Requires appropriate preservative treatment |

## DRYING

| | |
|---|---|
| Drying rate: | Rapid |
| Risk of distortion: | No risk or very slight risk |
| Risk of casehardening: | No |
| Risk of checking: | Slight risk |
| Risk of collapse: | No |

Possible drying schedule

| M.C. (%) | Temperature (°C) dry-bulb | wet-bulb | Air humidity (%) |
|---|---|---|---|
| Green | 42 | 39 | 82 |
| 50 | 48 | 43 | 74 |
| 40 | 48 | 43 | 74 |
| 30 | 48 | 43 | 74 |
| 15 | 54 | 46 | 63 |

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: Risks of blue stain and resin exudation. Wood must be sawn quickly. For air drying: storage under cover and piling in "V".

## SAWING AND MACHINING

| | |
|---|---|
| Blunting effect: | Normal |
| Sawteeth recommended: | Ordinary or alloy steel |
| Cutting tools: | Ordinary |
| Peeling: | Good |
| Slicing: | Not recommended or without interest |
| Note: | Risks of clogging of tools due to resin. |

## ASSEMBLING

| | |
|---|---|
| Nailing / Screwing: | Good |
| Gluing: | Correct |

## 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: Can be used for wooden house construction.

Light carpentry
Glued laminated
Interior joinery
Posts
Flooring
Matches
Boxes and crates
Current furniture or furniture components
Interior panelling
Formwork
Veneer for interior of plywood
Veneer for back or face of plywood
Pulp
Exterior joinery