

Common name:	PINUS PATULA
Family:	PINACEAE
Scientific name(s):	Pinus patula

LOG DESCRIPTION		WOOD DESCRIPTION	
Diameter:	from 40 to 90 cm	Colour:	Creamy white
Thickness of sapwood:	from to cm	Sapwood:	Not clearly demarcated
Floats:	yes	Texture:	Fine
Durability in forest :	Low (must be treated)	Grain:	Straight
		Interlocked grain:	Absent
Note:	Mainly plantation wood. More or less numerous knots' and resin canals.		

PHYSICAL PROPERTIES		MECHANICAL 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	mean
Density *:	0.49 g/cm ³		standard deviation
Monnin hardness*:	2.2	Crushing strength *:	39 MPa
Coef of volumetric shrinkage:	0.47 %	Static bending strength *:	69 MPa
Total tangential shrinkage:	8.3 %	Modulus of elasticity *:	11350 MPa
Total radial shrinkage:	3.4 %		
Fibre saturation point:	31 %		
Stability:	Moderately stable to stable (* : at 12 % moisture content ; 1 MPa = 1 N/mm ²)		
Note:	Physical and mechanical properties vary according to the age and origin.		

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 5 - not durable	* ensured by natural durability (according EN standards).
Dry wood borers:	Susceptible; sapwood not or slightly demarcated (risk in all the wood)	
Termites:	Class S - Susceptible	
Treatability:	1 - easily permeable	
Biological hazard class*:	1 - not in ground contact, under cover (no dampness)	
Note:	Often very important sapwood; end-uses under biological hazard class 4 possible with an adequate preservative treatment.	

COUNTRIES - LOCAL NAMES

Countries	Local names
Mexico	OCOTE
Mexico	PINO

PINUS PATULA

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

Possible drying schedule

		Temperature (°C)			Air humidity (%)
		M.C. (%)	dry-bulb	wet-bulb	
Drying rate:	Rapid				
Risk of distortion:	Slight risk				
Risk of casehardening:	No				
Risk of checking:	Slight risk	Green	42	39	82
Risk of collapse:	No	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: Prone to blue stain.

SAWING AND MACHINING

Blunting effect:	Normal
Sawteeth recommended:	Ordinary or alloy steel
Cutting tools:	Ordinary
Peeling:	Good
Slicing:	Not recommended or without interest

ASSEMBLING

Nailing / Screwing:	Poor
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 mentioned for information (traditional, regional or ancient end-uses).

Note: Light construction and shingle with treatment. Above mentioned end-uses depend on the wood quality (knots more or less numerous).

Boxes and crates
Fiber or particle boards
Pulp
Posts
Veneer for interior of plywood
Glued laminated
Exterior joinery
Interior joinery
Interior panelling
Current furniture or furniture components
Formwork
Light carpentry
