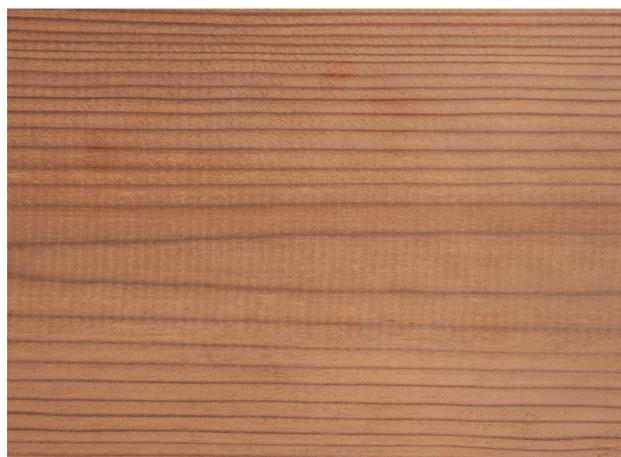


Thermo-treated Pine

After complete drying, the wood is subjected to a heat treatment at a temperature of about 180°C. Following the treatment, the material acquires a deep brown color, higher biological durability in terms of fungi attacks and improved dimensional stability.

Characterized by a significant presence of knots and crown-cuts, the wood can also be used as cladding for buildings, panelling and alternative applications.

Being a resinous type of wood, the material can have some cracks typical of the species due to physical characteristics such as the presence of wide veins and a less compact texture. Furthermore, it is not advisable to use it for pool decks due to its tendency to chip on the surface.



physical properties

botanical name	Pinus sylvestris		
average mass density	413 Kg/m ³		
average dimensional stability	1.07%		
damp climate deformations	type deformation	values detected	out-come
	bow	0.20%	Green
	spring	0.20 mm/m	Green
	twist	2.84 mm/m	Red
dry climate deformations	type deformation	values detected	out-come
	bow	0.79%	Green
	spring	0.48 mm/m	Green
	twist	6.12 mm/m	Red
moisture	type of climate	values detected	out-come
	ambient climate	7.9%	Green
	damp climate	11.10%	Green
	dry climate	4.40%	Green



mechanical properties

average bending strength	52 MPa
average bending strength after freeze/thaw cycles	31 MPa
average bending strength after freeze-icing cycles	56 MPa
average bending strength after heat-rain and heat-cold cycles	33 MPa
average modulus of elasticity	8,023 MPa
stiletto heel impression (UNI 4712)	value
	- 2.4 mm

natural durability (UNI EN 350)

fungi (*)	very durable - class 1
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properties by conditions of use

	conditions	direction	values detected	reference values	out-come
BCRA slipperiness (Min.Decree 236/89, Pres. Decree 503/96)	rubber pad wet surface	parallel	0.85	> 0.40	
		perpendicular	0.88		
	rubber pad dry surface	parallel	0.82		
		perpendicular	0.86		
	leather pad dry surface	parallel	0.40		
		perpendicular	0.44		
UVA exposure (^)	untreated wood photo		photo at 1,000 hours		
					
solar reflective index (DM 11/10/2017)	value			out-come	
	>29				
average solar reflectance	0.38				
average thermal emissivity	0.78				

Data source: Ravaioli Legnami, except for items marked with an asterisk (*). Values obtained from technical laboratory tests carried out directly on samples.

(*) Data source: manufacturer.

Thermo-treated Pine is not included in the product category regulated by the UNI 11538-1 as it is a wood subjected to heat treatment.

Tolerance: the dimensions of the boards indicated by Ravaioli Legnami are nominal, with variations up to a maximum of 5% in case of milling.

Color changes and the greying process are natural effects on wood when it is exposed to atmospheric agents: in order to avoid this, a regular maintenance with specific products is recommended.

(^*) Images provided for illustration purposes only. Prolonged exposure to artificial UVA rays can be demonstrative of how the product will tend to turn grey, but wood oxidation is a natural process influenced by various factors such as exposure to sunlight and atmospheric agents and frequency of maintenance.

