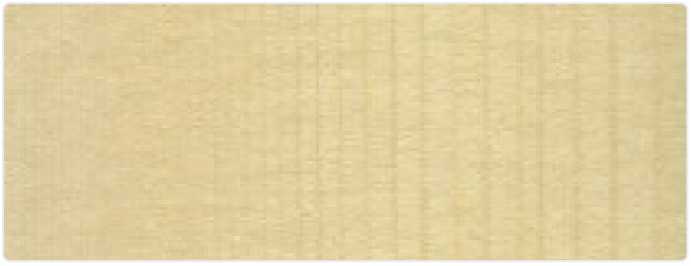
SPRUCE

Technical Wood Sheet (Picea spp.)

Family: Pinaceae | **Continent:** Europe
Botanical Name(s): Picea abies, Picea excelsa (synonymous).
CITES: This species is not listed in the CITES Appendices (Washington Convention 2023). Notes. COMMON SPRUCE comes from cold areas of Europe.Outside of its natural growing area(temperate areas), its growth is quicker when planted.In France, COMMON SPRUCE is often falsely called "SAPIN"(Abies alba) and "Sapin blanc du Nord" is used to speak of COMMON SPRUCE coming from Scandinavia or from Eastern Europe.



DESCRIPTION OF LOGS

Diameter	From 40 to 80 cm
Thickness of sapwood	-
Floats	Pointless
Log durability	Moderate (treatment recommended)

DESCRIPTION OF WOOD

Colour reference	Creamy white
Sapwood	Not demarcated
Texture	Fine
Grain	Straight
Interlocked grain	Absent

Notes: Creamy white wood with sometimes a thin redish coloured heartwood. Narrow and regular rings on woods coming from cold areas but large and irregular rings on planted trees from other areas. Resin pockets are rather common.

PHYSICS AND MECHANICS

Values for mature wood at 12% moisture content. 1 MPa = 1 N/mm²

Property	Avg. value
Specific gravity	0.45
Monnin hardness	2.2
Coef. volumetric shrinkage	0.39 % / %
Total tangential shrinkage (St)	8.2 %
Total radial shrinkage (Sr)	3.9 %
Ratio St/Sr	2.1
Fibre saturation point	33 %
Thermal conductivity (λ)	0.16 W/(m.K)
Lower heating value	19,760 kJ/kg
Crushing strength	46 MPa
Static bending strength	78 MPa
Modulus of elasticity	11,900 MPa

PRESERVATIVE TREATMENT REQUIREMENT

Against dry wood borers	Requires appropriate preservative treatment
Temp. humidification	Requires appropriate preservative treatment
Perm. humidification	Use not recommended

SAWING AND MACHINING

Blunting effect	Normal
Sawteeth recommended	Ordinary or alloy steel
Cutting tools	carbide
Peeling / Slicing	Good / Good

Notes: Presence of hard knots adhering more or less.

ASSEMBLING

Nailing and screwing	Poor

COMMERCIAL GRADING

Appearance grading for sawn timbers. According to European standards EN 1611-1 (October 1999) and EN 1611-1 A1 (March 2003): possible grading on 2 sides G2-0, G2-1, G2-2, G2-3, G2-4, and possible grading on 4 sides G4-0, G4-1, G4-2, G4-3, G4-4.

DRYING

Drying rate	Rapid
Risk of distortion	Slight risk
Risk of casehardening	No known specific risk
Risk of checking	High risk
Risk of collapse	No known specific risk

Notes: For naturally dried woods there can be some resin exudation if the structure is exposed to heat. COMMON SPRUCE artificial drying over 70°C allows to avoid this problem. SPRUCE

FIRE SAFETY

Euroclasses grading	D-s2, d0

MAIN LOCAL NAMES

France (temperate timber)	Épicéa
Germany (temperate timber)	Fichte
Italia (temperate timber) Abete	rosso
United Kingdom (temperate timber) Common	spruce

END-USES

Boxes and crates · Fiber or particle boards · Glued laminated · Heavy carpentry · Interior joinery · Interior panelling · Light carpentry · Moulding · Poles · Pulp · Shingles · Ship building (mast) · Stringed instruments (sounding board) · Veneer for back or face of plywood · Wood frame house