

## PROPERTIES OF TIMBERS FOR PALLETS AND PACKAGING

### Eastern White Pine - *pinus strobus*

**Common names** - Eastern Canadian white pine, Canadian white pine, yellow pine, northern pine, northern white pine, white soft pine, Weymouth pine. When grown in Europe *pinus strobus* is called yellow pine.

**Native to the USA and Canada** - Eastern white pine is distributed from Newfoundland west to extreme south eastern Manitoba and south to the Great Lake States. In the USA *pinus strobus* is found from the Atlantic seaboard to New Jersey, Appalachian Mountains to northern Georgia.

**General properties** - Easily machined and extensively grown in eastern Canada and the eastern United States. For commercial pallet and packaging usage in Europe, Eastern white pine ranks as a *medium* strength softwood. The visual quality of *pinus strobus* exported to Europe is normally good. When *pinus strobus* is grown in the UK it has been shown in tests to have a lower density and strength than when grown in the USA and Canada. It is not grown commercially in the UK.

**Do not confuse with** - Southern Yellow Pine, a group name for four pine species marketed in the USA as a single species, which are of greater strength than Eastern White Pine (see PalletLink Datasheet 71q).

**Comparisons** - North American grown Eastern White Pine is almost identical in bending strength to UK grown Sitka spruce. Density is slightly higher than Sitka, as are flexural stiffness and resistance to splitting.

**Table 1 - Eastern White Pine** – mean values when grown in Canada

Condition	Density kg/m <sup>3</sup>	MOR N/mm <sup>2</sup>	MOE N/mm <sup>2</sup>	Impact resistance	Compression parallel	Resistance to splitting N/mm	Hardness	Drying shrinkage
Green	-	35.6	6390	0.61	-	-	-	-
Air-dry*	435	61.7	7990	0.57	-	8.5	-	Small

In this table \*air-dry is 15% mc and not the kilned 12% level widely used in European standards.

For information on the relevance of properties given in Table 1 and an explanation of bending strength (MOR) and bending stiffness (MOE) with reference to wood packaging, see PalletLink Datasheet 71a.

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