



***Abies amabilis***  
**Family: Pinaceae**  
**Pacific Silver Fir**

The genus *Abies* (True Firs) is composed of about 40 species native to North America [9], Central America [7], Africa [2], Europe [1] and Eurasia [25]. *Abies* is the classical Latin name of silver fir (*Abies alba* Mill.) of Europe. The word *amabilis* means lovely.

**Other Common Names**

abete amabilis, abeto amabilis, alpine fir, amabilis den, amabilis fir, amerikansk silver-gran, Cascade fir, lovely silver fir, lovely fir, lovely red fir, purpur-gran, purpurtanne, red fir, red silver fir, sapin amabilis, sapin gracieux, silver fir, tannub el gamil, western fir, western balsam fir, white fir.

**Distribution**

Pacific Silver Fir is native to the Pacific Coast region from Alaska south to western Oregon and locally in northwestern California (Siskiyou County).

**The Tree**

Pacific Silver Fir commonly grows to heights of 200 feet with a diameter of 2 feet. The record is 245 feet tall with a diameter of 8 feet. The maximum age reported is 590 years. It grows from about sea level, in the western limits of its range, to 6,000 feet in the Cascades.

**The Wood**

**General**

The wood of Pacific Silver Fir ranges from nearly white to reddish brown. The sapwood is indistinguishable from the heartwood. It has a medium to coarse texture and is generally straight grained. It is easy to work and is dimensionally stable when dried. It is moderate to moderately low in strength, stiffness, shock resistance and in nail withdrawal resistance. It dries easily, but may have problems with wetwood, a bacterial infection. It has good paint holding ability and is easily glued. The heartwood is not durable and is considered difficult to penetrate with preservatives.

**Mechanical Properties (2-inch standard)**

	Specific gravity	MOE x10 <sup>6</sup> lbf/in <sup>2</sup>	MOR lbf/in <sup>2</sup>	Compression		WML <sup>a</sup> in-lbf/in <sup>3</sup>	Hardness lbf	Shear lbf/in <sup>2</sup>
				Parallel lbf/in <sup>2</sup>	Perpendicular lbf/in <sup>2</sup>			
Green	.40	1.42	6400	3140	220	6.0	310	750
Dry	.42	1.76	11000	6410	450	9.3	430	1220

<sup>a</sup>WML = Work to maximum load.  
Reference (59).

**Drying and Shrinkage**

Type of shrinkage	Percentage of shrinkage (green to final moisture content)

	0% MC	6% MC	20% MC
Tangential	9.2	7.8	3.3
Radial	4.4	3.7	1.5
Volumetric	13.0	11.0	4.6
References: 0% MC (98), 6% and 20% MC (90).			

### Kiln Drying Schedules<sup>a</sup>

Condition	Stock				
	4/4, 5/4, 6/4	8/4	10/4	12/4	16/4
Standard	T12-B5	T10-B3	–	–	–
1-in. squares	--	–	–	–	–
Whiter 1-in.squares	--	–	–	–	–
2-in. squares	T8-C4	–	–	–	–
Whiter 2-in. squares	T5-C4	–	–	–	–
<sup>a</sup> References (6, 86).					

**Working Properties:** Pacific Silver Fir is easy to work, is moderately low in nail withdrawal resistance, is good in paint holding properties and is easily glued.

**Durability:** It is rated as slightly or nonresistant to heartwood decay.

**Preservation:** Penetration by preservatives is difficult.

**Uses:** Lumber, plywood, pulp for paper, framing, sheathing, subflooring, concrete forms, decking, planking, beams, posts, siding, paneling, millwork, prefabricated buildings and structural members, industrial crating and shook, furniture parts, mobile homes, fresh fruit and vegetable containers.

**Toxicity:** No information available at this time.

### Additional Reading and References Cited (in parentheses)

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10. USDA. *Wood handbook: wood as an engineering material.* Madison, WI: USDA Forest Service, FPL Ag. Handbook No. 72; 1974.