



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]. There are two recognized varieties of this species, the typical Subalpine Fir [*Abies lasiocarpa* (Hook.) Nutt. var. *lasiocarpa*] and Corkbark Fir [*Abies lasiocarpa* var. *arizonica* (Merriam) Lemm.]. *Abies* is the classical Latin name of silver fir (*Abies alba* Mill.) of Europe. The word *lasiocarpa* means with woolly or hairy fruits.

Other Common Names: Abete bianco americano, abete sughero, abeto blanco americano, abeto corcho, alpen-den, alpine fir, amerikansk vit-gran, Arizona cork fir, Arizona corkbark fir, Arizona fir, balsam, balsam fir, berg-gran, black balsam, caribou fir, cork fir, corkbark, corkbark fir, downey-cone fir, downy-cone subalpine fir, kork-gran, kurkschors-den, mountain balsam, mountain fir, Oregon balsam fir, Oregon balsam-tree, pino real blanco, pino real blanco de las, pumpkin-tree, Rocky Mountain fir, Rocky Mountains fir, sapin blanc d'Amerique, sapin concolore, sapin d'Arizona, sapin liege, subalfir, **subalpine fir**, western balsam, western balsam fir, white balsam, white fir.

Distribution: Subalpine Fir grows naturally in mountains from central Yukon and the eastern parts of southeast Alaska south through Alberta and British Columbia. Also, from Washington, Oregon, Idaho and western Montana south to central Colorado southern New Mexico and southeast Arizona. It also grows locally in northeast Nevada and northwest California.

The Tree: Subalpine Fir attains heights of 130 feet, with diameters of 3 feet. It grows from near sea level in the northern limits of its range to 12,000 feet in the south.

General Wood Characteristics: The wood ranges from tan to brown with shades of red or pink. The sapwood is not clearly differentiated from the heartwood. It has a medium luster and has no distinctive odor or taste. It varies from very light, soft and weak to moderately heavy, hard and strong. It is easy to work, but poorly resistant to decay,

Mechanical Properties (2-inch standard)

	Specific gravity	MOE x10 ⁶ lbf/in ²	MOR lbf/in ²	Compression		WML ^a in-lbf/in ³	Hardness lbf	Shear lbf/in ²
				Parallel lbf/in ²	Perpendicular lbf/in ²			
Green	0.36	1.17	5800	2760	330	6.4	360	770
Dry	0.42	1.50	10500	5460	610	8.9	500	2220

^aWML = Work to maximum load.
Reference (56, 192).

Drying and Shrinkage

Type of shrinkage	Percentage of shrinkage (green to final moisture content)		
	0% MC	6% MC	20% MC
Tangential	7.9	5.8	2.4
Radial	4.5	3.2	1.3
Volumetric	11.4	9.8	4.1

References: (56, 185).

Kiln Drying Schedules^a

Conventional temperature/moisture content-controlled schedules^a

Condition	4/4, 5/4 stock	6/4 stock	8/4 stock	10/4 stock	12/4 stock	British schedule 4/4 stock
Standard	T12-E5	NA	T10-E4	T8-A3	T8-A3	NA

^aReference (28, 185).

Conventional temperature/time-controlled schedules^a

Condition	Lower grades			Upper grades			
	4/4, 5/4 stock	6/4 stock	8/4 stock	4/4, 5/4 stock	6/4 stock	8/4 stock	12/4, 16/4 stock
Standard	291	291	291	294	294	294	288

^aReferences (28, 185).

High temperature^a

Condition	4/4, 5/4 stock	6/4 stock	8/4 stock	Other products
Standard	400	400	400	NA

^aReferences (28, 185).

Working Properties: It is reported to work well.

Durability: Heartwood rated as slightly or nonresistant to decay.

Preservation: No information available at this time.

Uses: Building construction, boxes, crates, planing mill products, sashes, doors, frames, food containers and pulpwood.

Toxicity: May cause dermatitis or eczema (3,7&12).

Additional Reading and References Cited (in parentheses)

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