



***Larix occidentalis* Nutt.**

**Family: Pinaceae**

**Western Larch**

The genus *Larix* contains about ten species, native to North America [3] and Eurasia [7]. *Larix* is the classical name of *Larix decidua* Mill., or European larch. The word **occidentalism** means western.

**Other Common Names:** Alerce americano occidental, British Columbia tamarack, hackmatack, larice americano occidentale, larice occidentale, meleze occidental, Montana larch, mountain larch, Oregon larch, red American larch, roughbarked larch, tamarack, vastamerikansk lark, Westamerikaanse lariks, Westamerikaanse lork, Westamerikanische larche, western larch, western tamarack.

**Distribution**

Western larch is native to the high mountains of the upper Columbia River Basin in southeastern British Columbia, northwestern Montana, northern and central Idaho, Washington and northern and northeastern Oregon..

**The Tree**

Western larch trees reach heights of 180 feet, with diameters of 4 feet at an age of 400 years. Older trees, of 700 years, may reach heights of 200 feet, with diameters of 8 feet. About two-thirds of the lumber of this species is produced in Idaho and Montana and one- third in Oregon and Washington.

**General Wood Characteristics:** The heartwood of western larch is yellowish brown and the sapwood yellowish white. The sapwood is generally not more than 1 inch thick. The wood is stiff, moderately strong and hard, moderately high in shock resistance, and moderately heavy. It has moderately large shrinkage. The wood is usually straight grained, splits easily, and is subject to ring shake. Knots are common but generally small and tight. The properties of western larch are similar to those of Douglas-fir and sometimes they are sold mixed.

**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	0.48	1.46	7700	3760	400	10.3	510	870
Dry	0.59	1.87	13000	7620	930	12.6	830	1360

<sup>a</sup>WML = Work to maximum load.  
Reference (56)

**Drying and Shrinkage**

Type of shrinkage	Percentage of shrinkage (green to final moisture content)		
	0% MC	6% MC	20% MC

Tangential	9.1	6.3	2.6
Radial	4.5	3.4	1.4
Volumetric	14.0	9.5	4.0
References: 0% (185) 6% (56) 20% (192)			

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

Conventional temperature/moisture content-controlled schedules<sup>a</sup>

Condition	4/4, 5/4 stock	6/4 stock	8/4 stock	10/4 stock	12/4 stock	British schedule 4/4 stock
Lower grades	T7-C5	NA	T7-C5	NA	NA	NA
Upper grades	T9-B4	T7-C4	T7-C3	T7-A3	T7-A2	K

<sup>a</sup>Reference (28, 185).

Reference (74)

Conventional temperature/time-controlled schedules<sup>a</sup>

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

<sup>a</sup>References (28, 185).

High temperature<sup>a</sup>

Condition	4/4, 5/4 stock	6/4 stock	8/4 stock	Other products
Standard	400	400	400/ 414	NA

<sup>a</sup>References (28, 186)

**Working Properties:** The wood is stiff, moderately strong and hard, moderately high in shock resistance, and moderately heavy. It has moderately large shrinkage. The wood is usually straight grained, splits easily, and is subject to ring shake. Knots are common but generally small and tight.

**Durability:** Western larch is rated as moderately resistant to heartwood decay (12).

**Preservation:** It is rated as resistant to preservative treatment (4).

**Uses:** Western larch is used mainly in building construction for rough dimension, small timbers, planks and boards, and for railroad crossties and mine timbers. It is used also for piles, poles, and posts. Some high-grade material is manufactured into interior finish, flooring, sash, and doors.

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

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

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