



**Pinus pungens Lamb.**

**Family: Pinaceae**

**Table Mountain Pine**

The genus *Pinus* is composed of about 100 species native to temperate and tropical regions of the world. Wood of pine can be separated microscopically into the white, red and yellow pine groups. The word *pinus* is the classical Latin name. The word *pungens* means sharp point, from the peculiar, stout, hooked spines on the cones. Table mountain pine is one of the southern pines.

**Other Common Names:** Black pine, hickory pine, mountain pine, pin pungens, pino pungens, poverty pine, prickly pine, pungens tall, pungens-pijn, ridge pine, southern mountain pine, table mountain pine, Table Mountain pine, yellow pine.

**Distribution:** Table mountain pine is native to the Appalachian Mountain region from Pennsylvania southwest to eastern West Virginia, Virginia, northwestern South Carolina, northeastern Georgia and eastern Tennessee. Also locally in New Jersey and Delaware.

**The Tree:** In the Great Smoky Mountains, table mountain pine trees reach heights of 95 feet, with diameters of 3 feet. In other areas, trees may grow to heights of 66 feet, with a diameter of over 1 foot.

**General Wood Characteristics:** The sapwood of table mountain pine is a yellowish white, while the heartwood is a reddish brown. The wood is soft, weak and brittle, very coarse grained and knotty with conspicuous resin ducts. It is moderately heavy (but lighter than other southern pines). It can be straight grained, has a medium texture and is difficult to work with hand tools. It hold nails well, but is not easy to glue. It is rated as slightly or nonresistant to heartwood decay. The sapwood is easily impregnated 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	0.49	1.27	7500	3540	560	8.1	490	960
Dry	0.55	1.55	11600	6830	1210	8.7	660	1200

<sup>a</sup>WML = Work to maximum load.  
Reference (153).

Drying and Shrinkage

Type of shrinkage	Percentage of shrinkage (green to final moisture content)		
	0% MC	6% MC	20% MC
Tangential	6.8	NA	NA

Radial	3.4	NA	NA
Volumetric	10.9	NA	NA
References: (153).			

### 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
Standard	T13-C6	T12-C5	T12-C5	T10-C4	T10-C4	L
Highest Quality	279	279	279	T10-C4	T10-C4	NA

<sup>a</sup>Reference (28, 92, 185).

#### 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	281	NA	282	281	NA	282	284

<sup>a</sup>References (28, 92, 185).

#### High temperature<sup>a</sup>

Condition	4/4, 5/4 stock	6/4 stock	8/4 stock	Other products
Standard	401/402	NA	NA	2 by 4's 403 2 by 10's 403 4 by 4's 404

<sup>a</sup>References (28, 92, 185).

**Working Properties:** It can be straight grained, has a medium texture and is difficult to work with hand tools. It hold nails well, but is not easy to glue.

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

**Preservation:** The sapwood is easily impregnated with preservatives

**Uses:** With respect to the southern pines, lumber of lower density and strength finds many uses for building material, such as interior finish, sheathing, subflooring, and joists and for boxes, pallets, and crates. Table mountain pine is used for pulpwood, low grade saw timber and firewood.

**Toxicity:** In general, working with pine wood may cause dermatitis, allergic bronchial asthma or rhinitis in some individuals (6, 10 & 13).

Additional Reading and References Cited (in parentheses)

1. Boone, R. S.; Kozlik, C. J.; Bois, P. J., and Wengert, E. M. Dry kiln schedules for commercial woods - temperate and tropical. Madison, WI: USDA Forest Service, FPL-GTR-57; 1988.
2. Dallimore, W.; Jackson, A. B., and Harrison, S. G. A handbook of Coniferae and Ginkgoaceae. London, UK: Edward Arnold Ltd.; 1966.
3. Della-Bianca, L. *Pinus pungens* Lamb. Table Mountain Pine. in: Burns, R. M. and Honkala, B. H., tech. coords. Silvics of North America. Volume 1, Conifers. Washington, DC: USDA Forest Service; 1990; pp. 425-432.
4. Elias, T. S. The complete trees of North America, field guide and natural history. New York, NY: van Nostrand Reinhold Co.; 1980.
5. Gaby, L. I. The southern pines, an American wood. Washington, DC, USA: USDA Forest Service, FS-256; 1985.
6. Hausen, B. M. Woods injurious to human health. A manual. New York, NY: Walter de Gruyter; 1981.
7. Koch, P. Utilization of the southern pines. I. The raw material. II. Processing. Washington, DC, USA.: USDA Forest Service, Ag. Handbook No. 420.; 1972.
8. Little, jr. E. L. Checklist of United States trees (native and naturalized). Washington, DC: USGPO, USDA Forest Service, Ag. Handbook No. 541; 1979.
9. Markwardt, L. J. and Wilson, T. R. C. Strength and related properties of woods grown in the United States. Washington, DC: USGPO, USDA Forest Service, Tech. Bull. No. 479; 1935.
10. Mitchell, J. and Rook, A. Botanical dermatology: plants and plant products injurious to the skin. Vancouver, BC: Greenglass Ltd.; 1979.
11. Simpson, W. T. Dry kiln operator's manual. Madison, WI: USDA Forest Service, FPL Ag. Handbook No. 188; 1991.
12. Sternitzke, H. S. and Nelson, T. C. The southern pines of the United States. Economic Botany. 1970; 24(2):142-150.
13. Woods, B. and Calnan, C. D. Toxic woods. British Journal of Dermatology. 1976; 95(13):1-97.