



Araucaria angustifolia

Family: Araucariaceae

Parana-Pine

Other Common Names: Pinheiro do Parana, Pinho brasileiro (Brazil), Pinheiro do Brasil, Pino blanco (Paraguay), Curiy, Pino Parana (Argentina).

Distribution: Botanical distribution covers parts of Paraguay and Argentina and the Brazilian plateau region of Rio Grande do Sul, Santa Catharina, and Parana. Commercial exploitation has been centered in the State of Parana.

The Tree: The mature trees are from 80 to 120 ft tall, with long clear boles. Diameters up to 60 in. are reported. Crown is flat with upturned limbs.

The Wood: General Characteristics: Sapwood is yellowish; the heartwood of various shades of brown, often with bright red streaks. Mostly straight grained and of uniform texture without prominent alternating bands of early- and latewood. The wood has no distinctive odor.

Weight: Basic specific gravity (ovendry weight/green volume) averages about 0.45. Air-dry density commonly 30 to 40 pcf, averaging 34.

Mechanical Properties: (2-in. standard)

Moisture content (%)	Bending strength (Psi)	Modulus of elasticity (1,000 psi)	Maximum crushing strength (Psi)
Green (42)	7,540	1,280	4,180
12%	14,210	1,510	7,980
Green (30)	8,650	1,550	3,810
15%	12,400	NA	5,990

Janka side hardness reported to be 560 lb green and 780 lb at 12% moisture content. Amsler toughness 130 in.-lb at 15% moisture content (2-cm specimen).

Drying and Shrinkage: Parana pine is reported to be more difficult to season than most softwoods, darker colored material is prone to distortion and splitting and dries more slowly. Piles should be weighted to minimize warp. Kiln schedule T3- D is suggested for 4/4 stock and T3-01 for 8/4 stock. Movement of seasoned wood is rated as medium. Shrinkage green to ovendry: radial 3.8%; tangential 7.3%; volumetric 11.6%.

Working Properties: The wood can be worked easily by hand and machine tools and dresses to a smooth finish. If compression wood is present, there can be considerable distortion when boards are planed, ripped, or resawn. Glues satisfactorily and holds paint well.

Durability: Heartwood is classified as nondurable.

Preservation: Heartwood is moderately resistant; the sapwood is permeable. Reported to absorb water-repellent preservatives readily during 3-minute dipping treatments for millwork. There were practically no differences in the amounts absorbed by light-colored sapwood or dark-colored heartwood.

Uses: Principal uses include framing lumber, interior trim, sash and door stock, furniture, case goods, and veneer. In Brazil the timber is made into plywood and is also considered suitable for pulp and paper products.

Additional Reading: (30), (42), (53), (69)

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42. Lavers, G. M. 1969. The strength properties of timbers. For. Prod. Res. Bull. No. 50. H. M. Stationery Office. London.
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69. Tortorelli, L. A. 1956. Maderas y bosques argentinos. Editorial Acme S.A.C.I. Maipu 92, Buenos Aires.

From: Chudnoff, Martin. 1984. Tropical Timbers of the World. USDA Forest Service. Ag. Handbook No. 607.