

PORT ORFORD CEDAR



Port Orford Cedar
(*Chamaecyparis lawsoniana*)

Common Name(s): Port Orford Cedar, Lawson's Cypress

Scientific Name: *Chamaecyparis lawsoniana*

Distribution: Pacific northwest United States

Tree Size: 150-200 ft (45-60 m) tall, 4-6 ft (1.2-1.8 m) trunk diameter

Average Dried Weight: 29 lbs/ft³ (465 kg/m³)

Specific Gravity (Basic, 12% MC): .39, .47

Janka Hardness: 590 lb_f (2,620 N)

Modulus of Rupture: 12,290 lb_f/in² (84.8 MPa)

Elastic Modulus: 1,646,000 lb_f/in² (11.35 GPa)

Crushing Strength: 6,080 lb_f/in² (41.9 MPa)

Shrinkage: Radial: 4.6%, Tangential: 6.9%, Volumetric: 10.1%, T/R Ratio: 1.5

Color/Appearance: Heartwood is a light yellowish brown. Sapwood is pale yellow-brown to almost white and isn't clearly distinguished from the heartwood. Color tends to darken with age upon exposure to light, (though when left exposed outdoors it weathers to a uniform gray).

Grain/Texture: Port Orford Cedar is sometimes used for making arrow shafts, and the grain is "straight as an arrow," with a uniform medium to fine texture.

Endgrain: Resin canals absent; earlywood to latewood transition gradual, color contrast medium; tracheid diameter medium-large; zonate parenchyma.

Rot Resistance: Reported to be durable to very durable regarding decay resistance, and also resistant to most insect attacks. (Also reported to have good resistance to acid corrosion—Port Orford Cedar was used for storage battery separators during and prior to World War II.)

Workability: Easy to work with both hand and machine tools. Holds paint well. Stains, glues, and finishes well.

Odor: Port Orford Cedar has a pungent, ginger-like scent.

Allergies/Toxicity: Although severe reactions are quite uncommon, Port Orford Cedar has been reported to cause skin irritation, runny nose, and asthma-like symptoms in some individuals. Because prolonged and continual inhalation of the sawdust is known to cause kidney problems, many occupational workers wear face masks when working with Port Orford Cedar. See the articles [Wood Allergies and Toxicity](#) and [Wood Dust Safety](#) for more information.

Pricing/Availability: Due to the limited growing range, Port Orford Cedar's demand usually exceeds its supply. Expect availability to be limited, and prices to very high for a domestic softwood wood species. Many logs are exported to Japan for use in woodenware, toys, and other small novelties, as well as for repair and construction in houses, shrines, and temples.

Sustainability: This wood species is not listed in the CITES Appendices, but is on the IUCN Red List. It is listed as vulnerable due to a population reduction of over 20% in the past three generations, caused by exploitation, and the fungal root infection *Phytophthora lateralis*.

Common Uses: Arrow shafts, musical instruments (soundboards on guitars), boatbuilding, boxes and chests, decking, and various interior millwork applications.

Comments: So named because it was first discovered near Port Orford in Oregon. Port Orford Cedar is perhaps a hidden gem in the realm of strong, lightweight timber, possessing superb strength-to-weight ratios in both modulus of elasticity and modulus of rupture, as well as crushing strength.

Related Species:

Alaskan Yellow Cedar (*Chamaecyparis nootkatensis*)

Atlantic White Cedar (*Chamaecyparis thyoides*)