Western Red Cedar

{Thuja plicata Donn}

Western Red Cedar, the official tree of the Province of British Columbia (B.C.), grows at low to mid elevations along the coast and in the wet belt of the province's interior where the climate is cool and mild. This large tree can reach up to 60 metres in height and 2.5 metres in diameter when mature—the largest living tree in Canada is a Western Red Cedar with a 5.9 metre diameter. It's usually found alongside Douglas Fir, Sitka Spruce, Black Cottonwood and Red Alder, rather than in a pure stand. This unique species is one of the country's most commercially valuable.

COMMON USE

Exterior: Western Red Cedar provides excellent durability and dimensional stability for outdoor use in roofing shingles, exterior siding, exterior cladding, weather boarding, greenhouses, portable buildings, poles, posts, fences, and ship/boat building. Because it splinters less frequently than other types of wood, it's also popular for decking and outdoor furniture. While lumber is often sold unseasoned, kiln drying greatly increases product stability. **Interior:** This attractive wood is popular for millwork and for sash, ceiling, and wall panelling. Its dimensional stability suits it to sauna panelling, moldings, and window blinds, and its superb acoustic resonance properties make it a good choice for musical instruments.

WORKING PROPERTIES

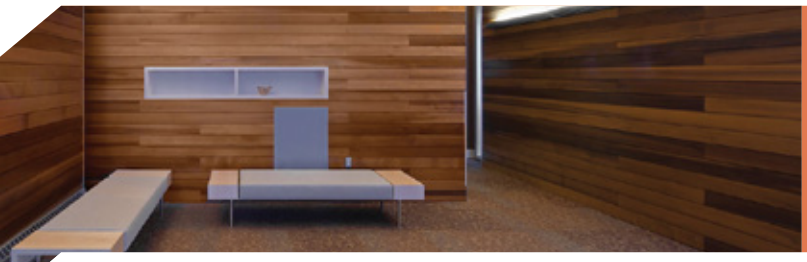
This fairly lightweight wood is moderately soft and low-strength, has good machining qualities, planes and shapes well, and can be sanded to a smooth, satiny finish. Western Red Cedar glues easily, has moderate nail and screw holding ability, and polishes well. Hot-dipped galvanized or stainless-steel nails are essential for use with this wood, as its natural acidity can accelerate metal corrosion and leave a black stain when the wood is wet. Stainless steel, brass, aluminium, copper, or metals with a protective coating can be used when applying fittings, fixtures, or fasteners.

PHYSICAL PROPERTIES

STIFFNESS/ MOE (MPa)	Air Dry	8200
STRENGTH/MOR (MPa)	Air Dry	54
DENSITY (kg/m^3)	Air Dry	339
COMPRESSION PARALLEL (MPa)	Air Dry	33.9
SHEAR (MPa)	Air Dry	5.58
SHRINKAGE (air dried - 12%)	Tangential / Radial ratio	2.1

WORKING PROPERTIES

	PROCESS	PERFORMANCE	COMMENTS
MACHINING	Planing	Good to average	Recommended planer settings: 20° hook 20 KMPI (knife marks per inch).
	Shaping	Good	Splintering on the end grain may sometimes be an issue. Recommended: the use of a counter piece for end grain shaping.
	Sanding	Excellent	
FASTENING	Screwing	Average	Average screw retention: 308 lb.
	Nail Retention	Average	
	Gluing	Good	Bonds very easily with adhesives of a wide range of properties and under a wide range of bonding conditions.
FINISHING	Staining	Good	Very smooth texture achieved, but sometimes difficult to hide natural texture of wood. Very soft wood that loses some grain design as stain becomes darker.
	Painting	Good	
DRYING	Ease of Drying	Good	The drying of thin boards is generally easy with very little degradation occurring.
DURABILITY	Natural Decay Resistance	Good	Appropriate for outdoor usage.



For more information on the availability of Western Red Cedar, please contact
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