

Douglas-fir



Douglas-fir is a strong, durable, and abrasion-resistant softwood species native to the coastal and interior regions of British Columbia (B.C.), Canada's westernmost province. It is a large tree reaching as high as 85 meters (over 275 feet) and commonly living to be at least 500 years of age. Coastal Douglas-fir is generally lighter in color, more uniform in texture, and slightly more permeable to preservative treatments than Interior Douglas-fir. However, both varieties share the same fundamental properties and benefits.

Common Uses

Furniture & Cabinetry: Douglas-fir's durability and attractive grain make it well-suited for furniture and built-in custom cabinetry. Its excellent finishing properties allow for diverse design possibilities.

Structural Applications: With its high strength-to-weight ratio, Douglas-fir is ideal for heavy structural components such as beams, joists, and columns.

Flooring: Known for its durability and resistance to wear, Douglas-fir provides a timeless, elegant flooring option with its rich color and straight grain.

Trim & Joinery: The wood's strength and ease of workability make it a preferred choice for trim and joinery, including moldings, window casings, baseboards, and stair components.



Physical Properties

STIFFNESS/ MOE (MPa)	Air Dry	13600
STRENGTH/MOR (MPa)	Air Dry	88.6
DENSITY (kg/m³)	Air Dry	487
COMPRESSION PARALLEL (MPa)	Air Dry	50.1
SHEAR (MPa)	Air Dry	9.53
SHRINKAGE (air dried - 12%)	Tangential / Radial ratio	1.5



Working Properties

Workability: Douglas-fir is both strong and relatively easy to work with, allowing for clean cuts and precise shaping. It dries quickly with minimal dimensional movement and little tendency to check.

Finishing: The wood holds paint and stain well, turns smoothly, and shapes easily. It can be sanded to a fine finish, glues effectively, and has excellent nail and screw-holding properties.

Durability: Known for its exceptional strength and stability, Douglas-fir is a reliable choice for structural, interior, and furniture applications that require long-lasting, resilient materials.

	PROCESS	PERFORMANCE	COMMENTS
MACHINING	Planing	Good	Good surface quality.
	Shaping	Excellent	
	Sanding	Good	Very good sanding properties.
FASTENING	Screwing	Excellent	Very good holding. Excellent to splitting.
	Nail Retention	Good	
	Gluing	Good	Bonds well with a fairly wide range of adhesives under a moderately wide range of bonding conditions.
FINISHING	Staining	Excellent	Good results with light stain or clear finish followed by nitrocellulose alkyd clear sealer and finish.
	Painting	Good	
DRYING	Ease of Drying	Good	A relatively easy wood to dry with little trouble occurring from checking, warping, and splitting. Lower grades require more care.
DURABILITY	Natural Decay Resistance	Fair	Should not be used in applications with prolonged ground contact without treatment.
	Treatability	Fair	Can be improved by incising.



For more information on the availability of Douglas-fir, please contact info@canadianwoodbc.com



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