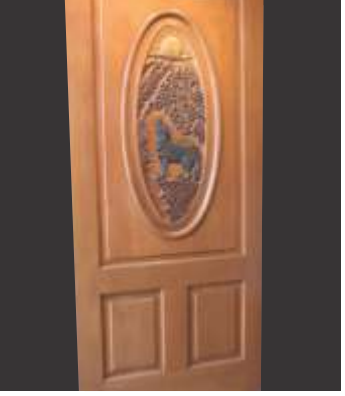

BRITISH COLUMBIA WOOD SPECIES

SUITABILITY FOR INDIAN DOOR AND WINDOW MANUFACTURING

Canadian Wood
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Manufacturers of doors and windows require products that perform in terms of both high quality appearance and stable long term performance. High quality wood products like those sourced from British Columbia (B.C.), are ideal for use in flush doors, and solid wood doors.

Wood species used for window and exterior door applications need to meet very demanding conditions as opposed to woods that are used in interior applications. Woods used for exterior products have to be moderately to very durable and must provide excellent dimensional stability as expressed by having a low tangential to radial shrinkage (T/R) ratio. A low T/R value makes these wood species less prone to shrinking and swelling when in service.

Western red cedar, Yellow cedar, Douglas fir and Western hemlock from B.C. Canada, are all able to meet the demands of discerning customers in India and are suited to a variety of interior and exterior door and window applications. These wood species produce stable lumber with consistent straight grain with a high occurrence of vertical or edge grain present on the wide face of the lumber.

Western hemlock is noted for its tight grain and as a result it is an especially stable species. This attribute reduces the chance of warp developing and allows for superior coating adherence and ultimately better performance over the longer term.

As all four species have low to moderate density values they are easy to face laminate, edge glue and/or finger-joint thereby permitting the manufacturing of warp free engineered, large or small cross-sectional window and door elements. Finally, these species are capable of being painted and coated with clear finishes that will adhere well to the wood surface.

Western red cedar, Yellow cedar are especially durable species and are well suited for external applications. Western Hemlock is very well suited for interior doors, though for exterior doors, this species would have to be treated with a preservative treatment such as borate. As with all wood species, the application of an appropriate coating will increase the lifespan of the wood product and enhance its natural beauty.

COMPARATIVE PHYSICAL, WORKING AND OTHER PROPERTIES OF WOOD SPECIES FOR USE IN DOOR AND WINDOW MANUFACTURING

	BRITISH COLUMBIA WOOD SPECIES				TROPICAL WOOD SPECIES
TRADE NAME	Douglas fir	Western red cedar	Yellow cedar	Western hemlock	Teak
BOTANICAL NAME	Pseudotsuga menziesii	Thuja plicata	Chamaecyparis nootkatensis	Tsuga heterophylla	Tectona grandis

PHYSICAL PROPERTIES						
STIFFNESS / MOE[1] (AIR DRY)	Mpa	13600	8200	10200	12300	10700
STRENGTH / MOR[2] (AIR DRY)	Mpa	88	54	80	81	100.7
DENSITY (AIR DRY)	kg/m^3	487	339	431	429	650
HARDNESS (SIDE GRAIN)	N	2990	1470	2510	2740	4600
STABILITY (SHRINKAGE-OVEN DRY)	Tang. % (T)	7.4	4.5	6.0	8.5	5.8
	Radial % (R)	4.8	2.1	3.7	5.4	2.5
	T/R ratio	1.5	2.1	1.6	1.6	2.3

WORKING PROPERTIES Ratings are based on a scale from 10 (excellent) to 1 (poor)					
PLANING	8	7	10	7	8
SCREW HOLDING	9	5	7	7	8
STAINING	10	9	7	8	9

OTHER PROPERTIES					
DURABILITY	Fair	Good	Good	Poor	Good
TREATABILITY	Fair	Difficult	Difficult	Good	Difficult

[1] MOE refers to the Modulus of Elasticity which is commonly used to measure the relative stiffness and degree of deflection of the material when force is applied and then released.

[2] MOR refers to the Modulus of Rupture which is commonly used to measure the relative strength of the material under pressure. This is often referred to as bending strength, as it measures how much the material will bend before it breaks from the force applied.

For more information please contact: info@canadianwood.in

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