YELLOW - CEDAR (YELLOW CYPRESS) Botanical Name:

Botanical Name: *Chamaecyparis nootkatensis* (D. Don) Spach

Yellow-cedar grows along British Columbia's coastal region. It is a medium-sized tree growing up to 24 metres tall and 90 cm in diameter when mature. It often grows singly or in small clumps in a mixture with conifers such as amabilis fir and western hemlock. It is a beautiful tree that is tough, solid and extremely durable.

Common Uses

Yellow-cedar is one of the world's most durable woods with exceptional longevity. Due to this attribute it is used for shingles, posts, poles, marine pilings, small boat hulls, oars and paddles, water and chemical tanks, exterior doors, and window boxes. Structural grades are commonly used for exterior applications such as bridges, decking, stairs and for landscaping. It is sometimes used in specialty construction projects such as temples and shrines.

Unlike most softwoods, density across single growth rings is quite uniform making this a very good carving and woodworking species. This effect also accounts for the lack of visual grain. This wood is incredibly easy to work and, therefore, is prized for applications such as joinery and carpentry, decorative panelling, furniture, mouldings and cabinetwork. Its fine, even texture makes it a top choice for carvings and turnings. Signal and the survey

YELLOW-CEDAR

Yellow-cedar lumber is often sold green due to its unique properties. When dried, lumber is dried according to end-use and customer specifications. Kiln drying inhibits natural staining of the wood, improves its strength and stiffness, enhances its appearance, and increases its resistance to decay and attack by insects.

DENSITY (kg/m ³)	Green	419
	Air Dry	431
SPECIFIC GRAVITY (12% M.C.)	Standard	0.42
HARDNESS (N)	Side	2510
	End	3960
MOE (Mpa)	Green	9240
	Air Dry	11000
MOR (Mpa)	Green	45.8
	Air Dry	79.7
COMPRESSION PARALLEL (Mpa)	Air Dry	45.9
COMPRESSION PERPENDICULAR (Mpa)	Air Dry	4.74
SHEAR (Mpa)	Air Dry	9.21
CLEAVAGE (N/mm Width)	Air Dry	45.4
SHRINKAGE	Radial (OD)	3.7%
OD = oven dry	Tangential (OD)	6.0%
air = air dry 12%	Volumetric (OD)	9.4%
	Volumetric (air)	5.0%
	Tang / Rad ratio	1.6

VISUAL PROPERTIES			
COLOUR			
Heartwood	Pale yellow to dark yellow.		
Sapwood	Pale yellow in fresh wood to greyish-yellow in older wood.		
Heartwood / Sapwood Contrast	The sapwood is narrow and there is little contrast between the heartwood and sapwood.		
Latewood / Earlywood Contrast	The annual growth rings are very narrow and there is a gradual transition from earlywood to latewood.		
GRAIN			
The wood is generally straight-grained and has a fine, even texture.			
FIGURE			
Plainsawn lumber or rotary-cut veneer: Faint growth ring. Quartersawn lumber or quarter-sliced veneer: None.			
KNOTS			
Tight knots.			
OTHER			
Wood of yellow-cedar is aromatic, especially when freshly cut. Free from pitch and resin.			

Wood of yellow-cedar is aromatic, especially when freshly cut. Free from pitch and resin. Wood tends to develop brown discoloration when it is in contact with iron or iron compounds under damp conditions.



WORKING PROPERTIES

Yellow-cedar is considerably harder when dry than most commercial softwoods so it is strong. It is known for its exceptional working properties and can be easily machined and finished. It turns, planes and shapes well and can be sanded to a smooth finish. The wood glues satisfactorily, has moderate nail and screw holding ability, and takes a good finish.

MACHINING Planing Excellent planing quality Recommended planer settings: 20° hook and 8, 12, 16, or 20 kmpi (knife marks per inch). No major defects. Slight dulling effect on cutting tools. Turning Medium to high surface quality Good surface quality when turned using a rotary knife lathe. Sawing Easy to work with tools Known for its exceptionally good working qualities. Boring Moderate Much better boring quality with brad point bits than with single twist bits. Mortising Good to moderate Excellent mortise. Shaping Good shaping quality Recommended: The use of a counter piece for end-grain shaping. Veneering N/A Sanding Excellent Screwing Moderate Average screw retention: 476 lb. Lateral Nail N/A Holding Nail Good Equivalent to Douglas-fir. Retention Retartion Staisfactorily Staisfactorily Bonds satisfactorily with good-quality adhesives under a moderately wide range of bonding conditions. FINISHING Staining Moderately easy Staining Moderately easy Natural finish looks best. As stain gets darker, uneven colour is pronounced. A wa	PROCESS I	PERFORMANCE	COMMENTS
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	Treatability	Impermeable	Can be improved by incising.



Commercial Availability

In North America structural grades are in accordance with the National Lumber Grades Authority (NLGA) rules for dimension lumber. Yellow-cedar is currently marketed under the Northern Species group making its official structural design value lower than SPF, Hem-Fir, or DFir-Larch. However, yellow-cedar is used structurally for its appearance and for its decay resistance.

Yellow-cedar is commonly produced in appearance grades according to NLGA rules. Clears, shop lumber and moulding stock are most common. Yellow-cedar is also offered in export grades for Japan and other markets.



Data for this factsheet has been compiled by Forintek Canada Corp. from internal and external scientific sources. Forintek is a not-for-profit technical research institute serving the Canadian forest sector.