

# Yellow Cedar

*A species of  
uncommon beauty*



## *Responsible timber harvesting*

All forest products companies harvesting Yellow cedar in coastal British Columbia recognize that the forest is a precious resource that must be carefully managed and continually renewed. Intensive silvicultural and forest protection operations help renew the Yellow cedar resource. Every company has ISO certification and many are working towards certification under other forest management certification programs.

Yellow cedar, also called Alaskan yellow cedar, but more properly known as Yellow cypress (*Chamaecyparis nootkatensis*), is confined in Canada to British Columbia's coastal region from Alaska southward along the western slopes of the Coast Range and on adjacent islands. It seldom occurs in pure stands and usually grows in association with Amabilis fir and Western hemlock, either scattered or in patches.

A rare and beautiful tree of medium size, the species is tough, solid, extremely durable and noted for its slow growth and longevity. Yellow cedar was named *nootkatensis* in honour of Nootka Sound, a magnificent body of water bordered by mountains on the west coast of Vancouver Island.



## The wood's appearance and properties

The wood from Yellow cedar has always been highly prized because of its many superlative qualities. Its distinctive and uniform yellow color is much admired. The narrow band of sapwood is very similar in color to the heartwood. Exceptionally fine in texture, the wood has unusually straight grain. When freshly cut, the wood is strongly and pleasantly aromatic.

Yellow cedar is one of the world's most durable woods with natural extractives that give it excellent resistance to decay, insect attack and, in salt water applications, to marine borers, a property that contributes to its exceptional longevity.



It is considerably harder than most commercial softwoods and therefore has excellent strength and wear properties as well as good impact resistance.

Yellow cedar seasons well, remains stable and shows little shrinkage. It works easily to a smooth surface finish. It takes and holds nails and screws without splitting and can be glued without difficulty.

A comprehensive tabulation of Yellow cedar's physical properties and working characteristics and comparisons with other British Columbia coastal softwoods is shown on page 3.



## Available in Clear, Factory, Construction and custom grades

Yellow cedar's suitability for widespread use, particularly in the secondary remanufacturing, joinery, architectural millwork and boatbuilding industries derives from its desirable physical properties and the wide

range of grades in which it is available. All Yellow cedar lumber is manufactured, graded and sorted in compliance with the provisions of the relevant domestic or foreign grading rule. Yellow cedar is available in the following Canadian grade classifications:

<b>Clear</b> (Knot free)	No. 2 Clear and Better No. 3 Clear No. 4 Clear
<b>Factory</b> (Remanufactured for Clear recovery)	Factory Flitch Shop Flitch No. 1 Shop and Better No. 2 Shop Moulding Stock A & B
<b>Construction</b>	Light Framing Structural Light Framing Structural Joists and Planks Merchantable

A full description of the above grades and the range of available sizes can be found in the Coast Forest publication *Wood Species and Products from the Coast Region of British Columbia* and on website [www.coastforest.org](http://www.coastforest.org).

## The craftsman's wood supreme

The unique properties and easy working characteristics of Yellow cedar make it suitable for all types of joinery and carpentry where factors such as quality, appearance, natural durability and stability are important. The wood's strength, stability, uniform color and fine finish are appropriate for doors and windows, decorative panelling and custom joinery in both residential and commercial buildings. High grade Yellow cedar is often sought by craftsmen for specialty construction projects such as temples, shrines and carvings. The comparative scarcity of Yellow cedar adds a further element of prestige.

In boat building, Yellow cedar has a long history of use dating back to the native Indian culture of Canada's west coast. Today the durability, structural integrity and impact resistance of the species is valued in the construction of fresh- and salt-water craft from racing shells to pleasure cruisers. The wood's strength, freedom from twist, and ease of machining make it well suited to the manufacture of oars and paddles.



The structural grades of Yellow Cedar are ideal for uses where strength and/or natural durability are important. It is commonly used for exterior applications such as bridges, patio decking, sill plates, stairs and in the landscape. It is often specified for environmentally sensitive purposes such as water reservoirs or railway ties over streams where chemically treated wood is unsuitable. Its strength, hardness, stability, durability and excellent wear resistance allows the wood to stand up to traffic and load impact without forming ridges or splitting. Because of its smooth-wearing properties, weather resistance and long life it is sometimes used for seating in outdoor sports facilities.

Yellow cedar's resistance to decay and corrosion also give it practical applications in industry for the manufacture of tanks, flumes and chemical containers.

*Comparative Physical Properties  
of Coast Species*

		High Range ♦	Low Range ○	Hem-Fir		Douglas Fir <i>Pseudotsuga menziesii</i>	Sitka Spruce <i>Picea sitchensis</i>	Western Red Cedar <i>Thuja plicata</i>	Yellow Cedar <i>Chamaecyparis nootkatensis</i>	
				Amabilis Fir <i>Abies Amabilis</i>	Pacific Coast Hemlock <i>Tsuga heterophylla</i>					
Physical Properties	Density (12%-kg/m <sup>3</sup> )			445	480	545	430	385	480	
	Specific Gravity (12% m.c.)			0.39	0.43	0.49	0.39	0.34	0.43	
	Bending Strength (MOR) (MPa)			68.9	81.1	88.6	69.5	53.8	79.7	
	Stiffness (MOE) (x10 <sup>3</sup> MPa)			11.4	12.3	13.5	11.2	8.3	11.0	
	Compression parallel to grain (MPa)			40.8	46.7	50.1	37.8	33.9	45.9	
	Compression perpendicular to grain (MPa)			3.6	4.5	6.0	4.1	3.4	4.7	
	Shear (MPa)			7.5	6.5	9.5	9.2	5.6	9.2	
	Cleavage (N/mm)			36.8	37.5	38.9	38.0	25.4	45.4	
	Dimensional stability (Shrinkage % green to O.D.)	Tangential			9.2	7.8	7.4	7.8	4.5	6.0
		Radial			4.4	4.2	4.8	4.6	2.1	3.7
Hardness (N)			1820	2740	2990	2200	1470	2510		
Durability	Natural durability (approx. life in contact with ground)	>10 yrs	≤ 10 yrs	○	○	♦	○	♦	♦	
	Treatability (preservatives or fire)	permeable – moderately resistant	resistant – extremely resistant	♦	♦	○	○	○	○	
Drying	Drying rate	rapid-moderate	fairly slow-very slow	♦	♦	♦	♦	○	○	
	Tendency to check during drying	absent or easily controllable	controllable with some care	♦	♦	♦	♦	♦	♦	
	Tendency to distortion during drying	absent-slight	moderate	♦	○	♦	♦	♦	♦	
Workability	Machining (planing/turning/moulding/mortising/boring, etc.)	good-excellent	fair	♦	♦	♦	♦	♦	♦	
	Blunting	very little/slight-little/slight	moderate	♦	♦	○	♦	♦	♦	
	Nailing/resistance to splitting	well-excellent	poor-satisfactory	♦	♦	♦	♦	♦	♦	
	Screw/nail holding	good-excellent	satisfactory	♦	♦	♦	♦	○	♦	
	Gluing	w/out difficulty exceptional	difficult satisfactory	♦	♦	♦	♦	♦	♦	
Finishing	Natural colour - whitsh <sup>1</sup> , creamy wht <sup>2</sup> , lt. buff <sup>3</sup> , pale/lt. yellw <sup>4</sup> , yellwsh <sup>5</sup> , yellwsh-brn <sup>6</sup> , pnksh <sup>7</sup> , redsh wht <sup>8</sup> , salmon <sup>9</sup> , pnkshyellow <sup>10</sup> , red <sup>11</sup> , cherry rd <sup>12</sup> , dp rd <sup>13</sup> , mahogany <sup>14</sup> , pnk-brn <sup>15</sup> , orng <sup>16</sup> , dk chocolate brn <sup>17</sup> , lt. brn <sup>18</sup> , pale rdsh brn <sup>19</sup> , orng-wht <sup>20</sup>			1, 3, 6	1, 6	4, 8, 11, 13	2, 4, 7, 10, 16	9, 17, 15	1, 5	
	Paint finishing	good-excellent	poor-satisfactory	♦	♦	○	○?	♦	♦	
	Stain finishing	good-excellent	poor-satisfactory	♦	♦	○	♦	♦	♦	
	Tendency to resin exudation	Absent or infrequent after drying	Acceptability depends on finish to be used and visual standards required	♦	♦	○	♦	♦	♦	
Misc. Properties	Tendency to corrode ferrous metals	Likely	Unlikely	○	○	○	○	♦	♦	
	Becomes stained in contact with ferrous metals	Likely	Unlikely	○	○	○	○	♦	♦	

# Commercial enquiries and requests for information

Quality assured Yellow cedar is available in domestic and export markets. The Coast Forest Products Association (Coast Forest) is committed to prompt customer referral. Upon receipt, bona fide commercial enquiries and requests for other information are immediately forwarded to manufacturing members who will then respond with relevant product literature and/or information regarding pricing, terms, documentation and shipping. Enquiries may be sent to Coast Forest by mail, fax, telephone, e-mail, or by referring to the website.

## Product literature

The Coast Forest Products Association (Coast Forest) publishes a library of descriptive, application, and technical literature about Yellow cedar and other coastal wood products, single copies of which are available free of charge from the office listed below.



### Coast Forest Products Association

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*Glulam Yellow cedar beams and trusses frame roof over 5.3 hectare water reservoir.*

Beams manufactured by American Laminators. Photos by David Lloyd Photography