



Simple. Natural. Hardwoods®

TECHNICAL BULLETIN

ALDER

Part of the birch family, with the scientific name *Alnus, rubra*

Alder, a wood that flourishes in the Pacific Northwest, was pioneered for commercial use by NWH in the late 1960's. Recognizing its vast potential, NWH established a proprietary grading system to unlock Alder's diverse applications. Now a staple in fine woodworking, Alder's consistent color and stability make it the top choice for applications from furniture to cabinetry.

CHARACTERISTICS AND BENEFITS

Alder is prized for its remarkable workability and aesthetic flexibility. With a natural hue that shifts from almost white when freshly cut to a rich light brown with age, Alder presents a uniform texture and straight grain that endears it to woodworkers. Its relatively soft nature makes it excellent for machining, turning, and finishing.

Alder's adaptability allows it to be easily stained, closely resembling more expensive hardwoods like walnut or cherry. This makes it a cost-effective yet attractive choice for a wide range of applications, from furniture frames to heirloom furniture and custom cabinetry. Its availability in various grades offers versatility and options for budget-conscious projects without compromising quality, making Alder a smart choice for both artisan craftsmen and large-scale manufacturers alike.



CLOSE-GRAIN AND FINE TEXTURE

- Has the visual appeal of cherry, eastern maples and birch
- Machines well requiring less re-work

UNIFORM COLOR

- There is little color difference between sapwood and heartwood
- Accepts a wide variety of stains, from natural to light to dark walnut evenly
- Appealing for upholstered furniture components and frames

UNIFORM DENSITY

- Exceptional machining and turning properties
- Excellent fastening, good withdrawal resistance, less splitting

PLENTIFUL, FAST-GROWING

- Regenerates naturally
- Sustainably grown in the Pacific Northwest



© Whittier Wood Furniture



© Pacific Pine Products



© Cal Door & Drawer



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NWH Alder is available as PEFC certified, FSC Mix Credit, FSC Controlled Wood or PEFC Controlled Sources.



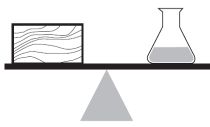
The mark of responsible forestry

PROPERTIES OF COMPARABLE WOODS

The following table is based on the American Hardwood Information Center and tests done by the US Forest Product Laboratory and Weyerhaeuser Technology Center.

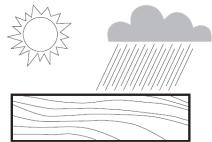
Lumber (12% Moisture Content)	Specific Gravity (Density)	Dimensional Movement (Shrinkage)		Hardness (Janka)	Bending Strength (MOR)	Bending Stiffness (MOE)	Machining	Sanding	Finishing	Gluing	Fastening
		R (%)	T (%)								
Alder, Red	.41	4.4	7.3	590	9800	1380	9.2	10	10	10	6
Ash, White	.60	4.9	7.8	1320	15400	1770	9.4	10	9	8	6
Birch, Yellow	.62	7.3	9.5	1260	16600	2010	9.6	8	10	8	2
Cherry, Black	.50	3.7	7.1	950	12300	1490	9.6	9	10	9	6
Hickory	.66	4.9	8.9	1820	13700	1730	2.0	7	4	2	2
Maple, PC	.48	3.7	7.1	850	10700	1450	9.0	9	10	10	4
Maple, Soft	.47	3.0	7.2	700	8900	1140	8.0	9	9	10	4
Maple, Hard	.63	4.8	9.9	1450	15800	1830	9.2	8	10	9	2
Oak, Red (North)	.63	4.0	8.6	1290	14300	1820	9.2	10	8	9	6
Oak, White	.68	4.4	8.8	1360	15200	1780	8.0	10	8	8	6
Poplar, Yellow	.42	4.6	8.2	540	9200	1500	8.5	8	9	10	6
Walnut, Black	.55	5.5	7.8	1010	14600	1680	8.0	8	8	6	6

PROPERTY DEFINITIONS



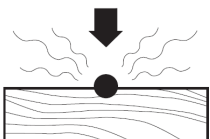
SPECIFIC GRAVITY (DENSITY):

A wood's specific gravity is an indication of its density. The number itself is the ratio of the wood's density compared to that of water (1.0). The larger the value the more dense the wood.



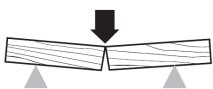
DIMENSIONAL MOVEMENT (SHRINKAGE):

Wood products shrink and swell as they absorb or lose moisture. Dimensional movement is expressed as a percent of that change. *R = thickness, T = width*



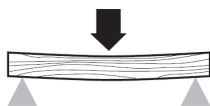
HARDNESS (JANKA BALL TEST):

The value is the force required to embed a 0.444 inch diameter steel ball to one-half its diameter into the radial and tangential surfaces of solid wood. The higher the value the harder the lumber.



BENDING STRENGTH (MODULUS OF RUPTURE):

The maximum load carrying capacity in bending. The larger the number the higher the load the lumber can support before failing.



BENDING STIFFNESS (MODULUS OF ELASTICITY):

Bending stiffness or elasticity is a description of deformation under load or stress. The larger the number the less deformation the lumber will have under load.

A rating of 10 represents the best performance.

MACHINING:

An average of five operations: shaping, turning, mortising, planing and boring.

SANDING:

How it responds to the sanding process.

FINISHING:

Whether a wood is easy, medium, difficult or the most versatile to finishing.

GLUING:

Wood with the least residues (oil, gum, pitch, etc.) glues the best.

FASTENING:

Woods that accept screws, nails and other fasteners with the best holding strength.