

WESTERN HEMLOCK

{*Tsuga heterophylla*}

Western hemlock is the single most plentiful tree species on the coast of British Columbia (B.C.). It grows along both the east and west sides of the Coastal Mountain Ranges, from sea level to mid elevations, as well as in the Interior of the province.

On average it typically grows 30 to 50 metres tall and 1 to 1.5 metres in diameter. It seldom grows in pure stands, usually mixed stands with Douglas fir, Amabilis fir, Sitka spruce and western red cedar. Of B.C.'s total growing stock, hemlock makes up 17.7% of the volume and close to 60% of the coastal volume.

COMMON USES

Hemlock is firmly established as an outstanding wood for mouldings and interior woodworking. Other uses include doors, windows, floors suspended ceilings, ladders and utility purposes where a high grade is needed.

Hemlock is recommended in India for furniture, solid doors, finger joint door frame and other internal uses.

Hemlock lumber is seasoned uniformly in dry kilns. Kiln drying improves its strength and stiffness and increases resistance to decay and insect attack.

PHYSICAL PROPERTIES

| | | |
|------------------------------|---------------------------|-------|
| STIFFNESS / MOE (MPa) | Air Dry | 12300 |
| STRENGTH / MOR (MPa) | Air Dry | 81 |
| DENSITY (kg/m ³) | Air Dry | 429 |
| COMPRESSION PARALLEL (Mpa) | Air Dry | 46.7 |
| SHEAR (Mpa) | Air Dry | 6.48 |
| SHRINKAGE (air dried - 12%) | Tangential / Radial ratio | 1.6 |

Hemlock is also used for general construction, roof decking and plywood. It is popular for laminating stock and the production of glue laminated beams sold into the Japanese market.

OF INTEREST:

- Western hemlock is known for its even density which provides for excellent machining properties.



WORKING PROPERTIES

Hemlock has a relatively good strength-to-weight ratio and is known for its excellent working properties. The wood requires special care when drying but yields quality product. It is relatively easy to work with good machining qualities.

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 polishes beautifully.

| | PROCESS | PERFORMANCE | COMMENTS |
|------------|--------------------------|-----------------|---|
| MACHINING | Planing | Good to average | Silky smooth finish easy to achieve. |
| | Shaping | Average | Easy, with good surface quality. |
| | Sanding | Good | Good sanding finish. |
| FASTENING | Screwing | Good | |
| | Nail Retention | Good | |
| | Gluing | Average | |
| FINISHING | Staining | Good | Best finish is with light stain or clear finish followed by nitrocellulose alkyd clear sealer and finish. |
| | Painting | Good | |
| DRYING | Ease of Drying | Fair | Due to the high moisture content of this wood longer kiln drying times are required. When dried at high temperatures the exterior 2-3mm can turn a brownish colour. |
| DURABILITY | Natural Decay Resistance | Poor | Not appropriate for prolonged outdoor exposure. |
| | Treatability | Good | Can be improved by incising. |



For more information
on the availability of
hemlock, please contact:
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