

Timber Introduction

Trees are man's oldest natural resource. They have provided him with fuel, tools, food, timber and shelter ever since he has started his journey. Yet the properties of wood – its unique range of qualities and capabilities are still secrets of today. It is easy to appreciate wood for its natural beauty and for its usefulness but far from easy to learn its secrets. We hope to bring some of the hidden body of knowledge to life and share with you its secrets, as we are foolish to treat it so casually when it comes to protecting it.

Hardwoods and Softwoods

The terms hardwood and softwood refer to the botanical origins of woods and not to their density or physical hardness. Softwoods come from cone-bearing trees, often with evergreen needle-like leaves, belonging to the botanical group gymnosperm – (plants with naked seeds). Hardwoods come from broad-leaved trees, either evergreen or deciduous, belonging to the angiosperm group.

Low Density and High Density Wood

(Below is a selection of timbers used in New Zealand. By no means is this a complete guide to all timbers)

Low density wood:

Under 540 kg/m³. Timber will feel light. Will easily dent when depressed. Examples of low-density timbers are: Cedar (Western Red), Douglas Fir, Hemlock, Kauri-Fijian, Kavula, Lawson's Cypress, Macrocarpa, Pinus Radiata, Redwood, Salu Salu, Totara.

High density wood:

Over 540 kg/m³. Timber will feel heavy. Will not easily dent when depressed. Examples of high-density timbers are: Anegre, Ash, Australian Ash, Balau, Blackbutt, Brush Box, Bubinga, Calophyllum, Cherry, European Beech, Iroko, Jarrah, Kauri New Zealand, Kwila, Maple, Matai, Mahogany, Meranti, Oak, Rimu, Rosewood, Sapele, Saligna, Taun, Teak, Vitex, Walnut, Yaka.

Timber Grading

Timber grading does not take into account whether the original log was quarter sawn or flat cut. Therefore when selecting and utilising timber, you must take this into account as the flat cut timber has a much higher tendency to distort than quarter-sawn timber and this will lead to a significantly shorter life span of transparent coatings on flat cut timber in high sun areas. Western Red Cedar is a particularly good example of this as the problem is more severe on low-density timbers like cedar compared to high-density timbers. For this reason we do not recommend the use of flat cut timber in high sun areas, (e.g north and west elevations). The sorting of your timber prior to fixing can avoid this particular problem, as this will allow you to utilise the quarter-sawn boards on the high sun areas first.

Coating Coverage Rates

The coverage obtained from coatings varies considerably depending on the following: density, moisture content, temperature, dressed, band sawn, rough sawn, solid timber or plywood. Band sawn plywood or solid timber of the same variety will have a different coverage rates. The reason the coverage rate varies is that the characteristics of the timber will determine the soakage into the timber and the practical spreading rate. Band sawn solid timber has a higher soakage rate than dressed solid timber and band-sawn plywood has the highest soakage rate of the lot within the same species. Practical spreading rates per litre are given below for stain type products. Please note there are so many variables, the spreading rates are an indication only. Spreading rates are typical of most brands of stain type products. Rates will vary for film forming and migrating products.

Coating Coverage Rates (continued)

Practical spreading rates per litre for stain type products. Approximate guide only:

Low-density solid dressed:	10 - 14 m ² /ltr
Low-density band sawn solid:	05 - 08m ² /ltr
High-density solid dressed:	14 - 18 m ² /ltr
High-density band sawn:	08 - 12 m ² /ltr
Smooth plywood:	05 - 07 m ² /ltr
Band sawn plywood:	03 - 05 m ² /ltr

Timber Information

Trade Name: **Anegre**

Botanical Specie: Aningeria spp.

Other Names: English Tawa, African Birch.

Country of Origin: Ivory Coast, Ghana.

Air Dried Density: 550Kgs/M³

Characteristics: Similar to European Birch. No clear distinction between heartwood and sapwood. Colour varies from whitish, to pale shade of brown often with pinkish tint. Fairly plain in appearance although quarter-sawn surfaces sometimes show a growth-ring figure, and where wavy grain is present, there is sometimes a mottle figure. The grain varies from straight to wavy, and the texture from medium to coarse.

Durability: Non-Durable

Coating Qualities: No known coating difficulties. Takes varnishes and stains well. Follow all good coating practices.

Uses: A utility timber for interior joinery and finishing. Produces good veneer.

Trade Name: **Ash**

Botanical Specie: Fraxinus Americana.

Other Names: White Ash, American Ash.

Country of Origin: U.S.A.

Air Dried Density: 670Kgs/M³

Characteristics: The sapwood and heartwood are almost white to beige with the heartwood having incidences of dark beige to brown features on occasions. Well figured with good strength, elasticity, toughness, stiffness and hardness allied to its lightweight.

Durability: Non durable.

Coating Qualities: No known coating difficulties. Takes varnishes and stains well. Follow all good coating practices.

Ash (continued)

Uses: High-class joinery, boat interiors, musical instruments and striking tool handles.

Trade Name: **Australian Ash**

Botanical Specie: Eucalyptus Delegatensis & Eucalyptus Regnans

Other Names: Victorian Ash, Alpine Ash, Mountain Ash
Tasmanian Oak (this includes other species of eucalyptus as well)

Country of Origin: Australia

Air Dried Density: 620Kgs/M³

Characteristics: These timbers are quarter sawn to facilitate drying. The colour ranges from light beige to light brown with sometimes a pink tint. The grain is usually straight, but sometimes interlocked or wavy. Such material often produces an attractive fiddle-back figure.

Durability: Durable.

Coating Qualities: No known coating difficulties. Takes varnishes and stains. Due to the hardness of these timbers, when used in an exterior situation some weathering will assist with the adhesion of the coating being used. If left to weather surface preparation will be required prior to coating. Leaving timber to weather is not always a practical option particularly when used in a joinery application. Follow all good coating practices.

Uses: Cabinet making, joinery and flooring.

Trade Name: **Beech -European**

Botanical Specie: Fagus sylvatica.

Other Names: English, Danish, German etc. Beech according to origin.

Country of Origin: European countries.

Air Dried Density: 690Kgs/M³

Characteristics: No clear distinction between heartwood and sapwood by colour which varies from cream to pink/red depending on the amount of steaming the timber is given. The wood is typically straight grained, with a fine, even texture, but varying in density according to the locality of growth.

Durability: Non-Durable.

Coating Qualities: No known coating difficulties. Takes varnishes and stains well. Follow all good coating practices.

Uses: General utility timber for interior joinery, finishing and cabinet making. Used extensively in Europe for domestic woodenware, tool handles and flooring. Produces good veneer.

Trade Name:	Bubinga
Botanical Specie:	Guibourtia demeusei.
Other Names:	Kevazingo, African Rosewood.
Country of Origin:	Gabon and Cameroons.
Air Dried Density:	900Kgs/M ³
Characteristics:	The heartwood is light red-brown attractively veined with pink or red stripes. The sapwood is light cream in colour. The wood is hard and heavy with a fine texture, generally straight grained.
Durability:	Durable.
Coating Qualities:	No known coating difficulties. Takes varnishes and stains well. Follow all good coating practices.
Uses:	Fine furniture, joinery and flooring. Produces good quality veneer.

Trade Name:	Calophyllum
Botanical Specie:	Calophyllum Spp.
Other Names:	Damanu (Fiji), Koilo (Solomon Islands).
Country of Origin:	Papua New Guinea, Solomon Islands, Fiji Islands.
Air Dried Density:	600Kgs/M ³
Characteristics:	The heartwood is pinkish-brown to pale reddish brown. The sapwood may be pale yellow-brown. The grain is variable from straight to deeply interlocked. The timber is lustrous and non-siliceous and has neither taste nor odour. Some gum pockets may occur.
Durability:	Moderately durable.
Coating Qualities:	No known coating difficulties. Takes varnishes and stains well. Due to the hardness of this timber, when used in an exterior situation some weathering will assist with the adhesion of the coating being used. If left to weather surface preparation will be required prior to coating. Leaving timber to weather is not always a practical option particularly when used in a joinery application. Follow all good coating practices.
Uses:	Fine furniture, joinery and flooring. Produces good quality veneer.

Trade Name:	Cherry
Botanical Specie:	Prunus serotina.
Other Names:	Black cherry, American cherry.
Country of Origin:	U.S.A.
Air Dried Density:	580Kgs/M ³

Cherry (continued)

Characteristics:	The timber is hard with fine straight close grain. The heartwood varying in colour from reddish-brown to rich red. The sapwood is yellow. Fine, narrow, brown - coloured pith flecks and small gum pockets are a common feature. Sawn timber is graded on a one face heart basis.
Durability:	Moderately durable.
Coating Qualities:	No known coating difficulties. Takes varnishes and stains well. Follow all good coating practices.
Uses:	Fine furniture, high-class joinery, boat interiors, musical instruments.

Trade Name: **Iroko**

Botanical Specie: Chlorophora Excelsa.

Other Names: Odum.

Country of Origin: West Africa.

Air Dry Density: 655 kg/m³

Characteristics: The wood is hard and of medium weight. It is variable in colour from yellow to fairly dark brown. Grain is typically interlocked. Texture is medium to coarse and even. It has neither taste nor odour. Darkens with age.

Durability: Durable.

Coating Qualities: Iroko is an oily resinous timber. Due to the high levels of oils and the variable nature of the levels in the timber, coating problems can arise. The timber must not have a moisture content higher than 16% and must be strip wiped prior to coating with a strong solvent such as white spirits. Better still, timber can be left to season for a period of time and the oils will bleed from the timber improving the adhesion. If left to weather timber restoration process will be required prior to coating. Leaving timber to weather is not always a practical option particularly when used in a joinery application. Iroko will stain and polish reasonably well, however, patches of oil may affect the finish. Follow all good coating practices.

Uses: In the United Kingdom it is used for many purposes and is suitable for high grade joinery, interior fittings, window frames, doors, staircases, heavy furniture and laboratory benches, bank and shop fittings, boat and vehicle building, wagon work and flooring. It is also suitable for piling, dock and other construction work. In the U K Iroko is often used as a substitute for Teak.

Trade Name: **Jarrah**

Botanical Specie: Eucalyptus Marginata.

Other Names:

Country of Origin: Australia (Western).

Air Dry Density: 820Kgs/M³

Jarrah (Continued)

- Characteristics:** A large tree producing a light to dark red timber darkening to a uniform red brown mahogany. It can have a straight or interlocked grain with an even medium coarse texture.
- Durability:** Very durable.
- Coating Qualities:** No known coating difficulties. Takes varnishes and stains. Due to the hardness of this timber a strip wipe with a strong solvent like white spirits will improve adhesion. When used in an exterior situation some weathering will assist with the adhesion of the coating being used. If left to weather a timber restoration process will be required prior to coating. Leaving timber to weather is not always a practical option particularly when used in a joinery application. Follow all good coating practices.
- Uses:** One of the world's most durable timbers and highly resistant to fire, termite and marine borer attack and impervious to acids. Jarrah has a very wide range of uses but principally as a heavy construction timber for bridges and wharves. It is widely used for sleepers and is prized as an interior finishing timber including flooring, furniture, panelling, etc.

Trade Name: **Kauri – Fijian**

Botanical Specie: Agathis Vitiensis.

Other Names: Dakua Makadre.

Country of Origin: Fiji Islands.

Air Dry Density: 540Kgs/M³

Characteristics: Heartwood is pale cream to golden brown in colour, the sapwood is straw to pale brown. Texture is fine and the grain is mainly straight. It is non-tainting.

Durability: Moderately durable and responds well to pressure treatment.

Coating Qualities: No major coating difficulties. Takes varnishes well. Stains may at times take on a grey look or have an inconsistent appearance due to the variable nature of the timber. Follow all good coating practices.

Uses: Kauri has a traditionally worldwide reputation in boat building, planks, masts, spars and oars, because of its excellent working properties and high degree of stability. It is used for exterior/interior joinery, furniture, Weatherboards, panelling, sarking, mouldings, picture framing, turnery. It is also widely used for decorative and utilitarian purposes such as kitchen and laboratory bench tops.

Trade Name: **Kauri - New Zealand**

Botanical Specie: Agathis Australis Salisb.

Other Names: Kauri Pine (UK).

Country of Origin: New Zealand.

Air Dried Density: 580Kgs/M³

Kauri - New Zealand (continued)

- Characteristics:** The colour of wood varies from a pale greyish-brown colour to dark reddish-brown or yellowish-brown, the darker coloured wood contains the most resin. The resin contains little or no essential oil and is therefore not fluid in dry timber.
- Durability:** Moderately durable.
- Coating Qualities:** No known coating difficulties as long as timber is dry, as damp timber may cause resin bleed. Takes varnishes and stains well. Follow all good coating practices.
- Uses:** According to grade it has a wide range of uses joinery, flooring, boat building etc.

Trade Name: **Kwila**

Botanical Specie: Intsia Spp.

Other Names: Merbau (Malaysia), Vesi (Fiji).

Country or Origin: Papua New Guinea.

Air Dry Density: 870Kgs/M³

Characteristics: The heartwood is yellowish-brown, brown or dark red, red-brown, turning to a dark red-brown with age. The wood is hard and heavy, the texture is moderately coarse but even and the grain may be straight or interlocked and is often wavy. Sulphur-Yellow and dark coloured deposits are characteristic of the species and can be commonly seen in the vessel cavities.

Durability: Very durable.

Coating Qualities: Kwila contains natural resins. Due to the high levels of these resins and the variable nature of the levels in the timber coating problems can arise. The timber must not have a moisture content higher than 16% and must be strip wiped prior to coating with a strong solvent such as white spirits. Better still, timber can be left to season for a period of time and the resin will bleed from the timber improving the adhesion (resin bleed will be of a red brown colour). If left to weather timber restoration process will be required prior to coating. Leaving timber to weather is not always a practical option particularly when used in a joinery capacity. Kwila will stain and polish reasonably well, however, patches of resin exudation may affect the finish. The yellow deposits are soluble in water and the dye produced does stain. If, however, early attention is given to any staining it can generally be removed by scrubbing with milk or latic acid. Follow all good coating practices.

Uses: A very good heavy construction timber. Ideally suited for decking and outdoor furniture. It is also used in internal joinery and flooring, striking tool handles and carving.

Trade Name: **Lawson's Cypress**

Botanical Specie: Cupressus Lawsoniana.

Other names: Port Orford Cedar

Country of Origin: Canada / USA

Lawson's Cypress (continued)

Air Dried Density:	500Kgs/M ³
Characteristics:	The heartwood is pale pinkish–brown in colour, barely distinct from the light-colour sapwood. Has a fine even texture with a high spicy scent.
Durability:	Durable.
Coating Qualities:	When used as a joinery timber takes stains and varnishes well and can be painted. When used as weatherboards an open stain system is best as resin bleed may be a problem at times.
Uses:	Cladding boat and shipbuilding, organ pipes, shingles. Also suitable for construction such as posts and piling.

Trade Name:	Macrocarpa
--------------------	-------------------

Botanical Specie:	Cupressaceae.
Country of Origin:	New Zealand.
Air Dried Density:	485Kgs/M ³
Characteristics:	The heartwood is of a golden brown colour and it has a speckled appearance, which is rare in timber. It has a fine, even texture. The timber machines well. When freshly cut it has a fragrant spicy odour.
Durability:	Durable.
Coating Qualities:	Takes stains and varnish well. Timber must be dry as it can suffer blue staining under your coating. Macrocarpa is known at times to have drying difficulties.
Uses:	General framing, Weatherboards, exterior joinery, gates, fencing, firewood, doors, furniture etc.

Trade Name:	Maple
--------------------	--------------

Botanical Specie:	Acer Sassharum.
Other Names:	Hard or Rock Maple.
Country of Origin:	U.S.A. & Canada.
Air Dried Density:	740Kgs/M ³
Characteristics:	Hard maple is strong, heavy, hard, and straight grained with a fine texture. The colour is cream with fine red/brown bands.
Durability:	Non durable.
Coating Qualities:	No known coating difficulties. Takes varnishes and stains well. It finishes well and takes an excellent polish. Follow all good coating practices.
Uses:	Flooring, high-class joinery, boat interiors, musical instruments and sporting goods.

Trade Name:	Matai
Botanical Specie:	Podocarps.
Country of Origin:	New Zealand.
Air Dried Density:	630Kgs/M ³
Characteristics:	The wood varies in colour from yellow to brown, generally being a warm yellowish-brown. It has a straight grain, fine even texture.
Durability:	Moderately durable.
Coating Qualities:	No major coating difficulties but needs to be degreased. Takes varnishes and stains effectively. Follow all good coating practices.
Uses:	Flooring, high-class furniture.

Trade Name:	Meranti Dark Red
Botanical Specie:	Shorea curtisii Dyer ex King.
Other Names:	Red Meranti, Nemesu.
Country of Origin:	Malaysia, Indonesia.
Air Dried Density:	710Kgs/M ³
Characteristics:	Heartwood is red-brown darkening to a dark red. Sapwood is lighter in colour and moderately distinct from the heartwood. Fairly lustrous with a striped figure on radial surfaces. Grey coloured narrow streaks are often present on longitudinal surfaces, caused by concentric layers of resin canals. The texture is rather coarse but even. The grain is interlocked and wavy.
Durability:	Durable.
Coating Qualities:	Due to the course grain care needs to be taken to ensure coating is worked into the grain cavities. It is common that tiny pinholes will exist in your coating due to the coarse nature of the grain and these will lead in an exterior situation to almost immediate breakdown of the coating. It is also difficult to get an even finish. Takes varnishes and stains well. Follow all good coating practices.
Uses:	Joinery, furniture, plywood.

Trade Name:	Oak – American White
Botanical Species:	QuercusSpp.
Country of Origin:	USA.
Air Dry Density:	735kg/m ³
Characteristics:	American White Oak resembles European Oak, being a mixture of species. However it is more variable in colour, pale yellowish-brown to mid-brown, sometimes with a pinkish tint. It varies also in quality according to locality; thus Oak from Canada and the Northern USA is generally harder and heavier than that from the Southern States. The characteristic silver grain figure due to the broad rays is shown to advantage on Quarter cut material.

Oak – American White (continued)

Characteristics:	The grain is generally straight and the texture varies from coarse to medium coarse.
Durability:	Durable.
Coating Qualities:	No known coating difficulties when solvent-borne coatings are used. Water-borne coatings may react with the timber and cause discolouring, sometimes a blackness may occur. Takes varnishes and stains well. When filling the open nature of the grain will hold filler residue and this will look unsightly. The filler is difficult to remove therefore two coats of varnish prior to filling will help to reduce this problem. Follow all good coating practices.
Uses:	Because of its good all-round strength and resistance to decay, White Oak is used for a wide range of construction work, including ship and boat building. It is traditional for high-grade furniture, interior woodworking and flooring. Because of its impermeability, the timber is suitable for vats and casks for holding liquids such as wine and spirits.

Trade Name: **Pine**

Botanical Specie:	Pinus Radiata.
Other names:	New Zealand Pine, Radiata.
Country of Origin:	New Zealand.
Air Dried Density:	490Kgs/M ³
Characteristics:	A pale white timber with a fine even texture and highly figured grain. The timber at times can have a high resin content that may bleed.
Durability:	Non-Durable (when untreated).
Coating Qualities:	Pine contains natural resins. Due to the high levels at times and the variable nature of the resin in the timber, coating problems can arise. The timber must be dry to reduce this problem. LOSP treated timber must not be coated until the chemicals used in the treatment process have evaporated from the timber. Fillet stack all LOSP treated timber for approximately 6 – 12 weeks. Tanalised treated timber must be considered to be wet and therefore be fillet stacked for approximately 6 –12 weeks. Periods of time will vary depending on timber thickness and air flow. The timber moisture content must not be higher than 16%. Takes varnishes and stains well.
Uses:	Joinery, Fascia, Cladding, Decks, Pergolas, Fencing, etc.

Trade Name: **Rimu**

Botanical Specie:	Dacrydium Cupressinum Soland.
Other names:	Red Pine.
Country of Origin:	New Zealand.
Air Dried Density:	610Kgs/M ³
Characteristics:	The sap wood is pale yellowish in colour, gradually darkening through an intermediate zone to the heartwood which is pale brownish-straw colour when freshly cut.

Rimu (continued)

Characteristics:	Often streaked with greyish-brown, and turning a light brown colour after exposure. The intermediate zone is said to have the same properties as the heartwood. It is straight grain and has a fine even texture.
Durability:	Moderately durable.
Coating Qualities:	No known coating difficulties. Takes varnishes and stains well. Follow all good coating practices.
Uses:	Over the years Rimu has been a important timber to New Zealand being used for flooring, furniture, interior trim, plywood, cladding, decorative veneer and panelling.
Trade Name:	Saligna
Botanical Specie:	Eucalyptus Saligna
Other names:	Sydney Blue Gum
Country of Origin:	Australia, New Zealand

Air Dried Density: 920Kgs/M³

Characteristics:	The colour ranges from light to dark pink. The grain is usually interlocked, occasionally straight. The texture is coarse. To facilitate drying the timber is always quarter sawn.
Durability:	Moderately durable
Coating Qualities:	No known coating difficulties. Takes varnishes and stains well. When filling the open nature of the grain will hold filler residue.
Uses:	Joinery and construction.

Trade Name: **Sapele**

Botanical Specie:	Entandrophragma Cylindricum
Other Names:	Sapepe Mahogany
Country of Origin:	West Africa
Air Dry Density:	640Kgs/M ³
Characteristics:	The wood is medium hard and medium weight. Planed surfaces are mildly lustrous. The heartwood is pinkish-red when freshly cut darkening to a rich red-brown. The most striking feature is the double spiral grain which produces a very regular stripe or roe figures in quarter sawn material. The texture is fine and even and there is a pronounced cedar-like scent when freshly cut.
Durability:	Durable
Coating Qualities:	No known coating difficulties. Takes varnishes and stains well. Follow all good coating practices

Sapele (continued)

Uses: Gifted with both strength and appearance, the timber has a wide range of uses. It is used for furniture, panelling, shop and window fittings, high class interior joinery and all general cabinet working purposes, including boatbuilding. Widely used for decorative veneering, it is often sliced to show the narrow 'pencil' stripe which is a characteristic of the specie. It is also used for rotary cut plywood.

Trade Name: **Teak**

Botanical Specie: Tectona Grandis. totara / P. hallii

Other Names:

Country of Origin: Burma, Thailand, India.

Air Dry Density: 660Kgs/M³

Characteristics: The Heartwood wood is dark golden-yellow darkening with exposure to brown or dark brown. Some times figured with dark markings. Can have a greenish tinge when freshly cut. The timber is dull with an oily feel and has a unique scent when freshly cut. The grain varies from straight to wavy depending on origin. The best teak comes from Burma being uniformly golden. The texture is coarse and uneven.

Durability: Very Durable.

Coating Qualities: Teak is an oily resinous timber. Due to the high levels of oils and the variable nature of the levels in the timber coating problems can arise. The timber must not have a moisture content higher than 16% and must be strip wiped prior to coating with a strong solvent such as white spirits. Better still timber can be left to season for a period of time and some oils will leach from the timber improving the adhesion. If left to weather a timber restoration process will required prior to coating. Leaving timber to weather is not always a practical option particularly when used in a joinery application. Teak will stain and polish giving fair results; however, patches of oil may affect the finish. Follow all good coating practices.

Uses: Boat building, joinery, furniture and decking.

Trade Name: **Totara**

Botanical Specie: P. totara/P. hallii.

Other Names:

Country of Origin: New Zealand.

Air Dry Density: 480Kgs/M³

Characteristics: The wood is medium to reddish-brown in colour with a straight grain and very fine texture. Dries well and holds its place well after drying. Has a high resistance to decay and marine borers.

Durability: Durable.

Totara (continued)

Coating Qualities: Totara is an oily resinous timber. Due to the high levels of oils and the variable nature of the levels in the timber coating problems can arise. The timber must not have a moisture content higher than 16% and must be strip wiped prior to coating with a strong solvent such as white spirits. Better still timber can be left to season for a period of time and some oils will leach from the timber improving the adhesion. If left to weather a timber restoration process will be required prior to coating. Leaving timber to weather is not always a practical option particularly when used in a joinery application. Totara will stain and polish giving fair results; however, patches of oil may affect the finish. Follow all good coating practices.

Uses: Joinery, finishing trim, farm fencing, flooring, carving, Maori canoes.

Trade Name: **Walnut – American**

Botanical Specie: Juglans nigra

Other Names: Black walnut

Country of Origin: U.S.A. & Canada
Air Dried Density: 660Kgs/M³

Characteristics: The wood has a fine even texture but rather a coarse grain. The colour is rich chocolate-brown to purplish-black. The sapwood is pale brown however with conditioning through steaming the sapwood is coloured to the heartwood shade.

Durability: Moderately durable

Coating Qualities: No known coating difficulties. Takes varnishes and stains well. When filling the open nature of the grain will hold filler residue and this will look unsightly. The filler is difficult to remove therefore two coats of varnish prior to filling will help to reduce this problem. It finishes well and takes an excellent polish. Follow all good coating practices.

Uses: Fine furniture, high-class joinery, gun stocks, musical instruments.

Trade Name: **Western Red Cedar**

Botanical Specie: Thuja plicata D. Don.

Other names: Canadian Red Cedar, Red Cedar.

Country of Origin: Canada (British Columbia)
Air Dried Density: 385Kgs/M³

Characteristics: A very large tree producing a pale pinkish red to deep brown low-density timber with a characteristic odour. It has a narrow much paler sapwood.

Durability: Very durable

Coating Qualities: Takes varnishes and stains well. Cedar will react to cements and limes that are used in the construction process causing blackness to the timber; therefore timber should be coated prior to exposure to these. Pre-coating prior to exposure on all sides and end grains will assist with reducing the movement of the timber due to moisture.

Western Red Cedar (continued)

is a must for cedar due to its low density (low-density timbers take up and release moisture at a faster rate than high-density timbers). The pre-coating will also reduce the “water marking/staining” that occurs when cedar gets wet. The “water marking/staining” is due to cedar containing natural tannins, which are water-soluble. Flat cut timber (crown/arrowhead grain pattern) should not be used in high sun areas as this will lead to a much shorter life span of your transparent coating. Because flat cut timber has a much higher tendency to distort than quarter sawn timber, sorting your cedar first can avoid this problem as you can give priority to using the quarter-sawn timber first in high sun areas. Do not use steel wool, iron or steel on cedar as this will react with the timber producing black marks. Cedar has natural acids that may react with some coatings, it is important to ensure coatings are suitable for use on cedar. Sikkens is suitable on cedar and has a proven track record. Follow all good coating practices.

Uses: It is widely used as a general interior and exterior finishing timber for such purposes as exterior joinery and Weatherboards and interior panelling. It has a particular application in respect of shingles and shakes for which it is the most renowned timber in the world.

Trade Name: **Vitex**

Botanical Specie: Vitex cofassus

Other names:

Country of Origin: Solomon Islands and Papua New Guinea

Air Dried Density: 750Kgs/M³

Characteristics: Creamy grey heartwood, with a fine even texture. Freshly sawn boards have leathery odour, and the timber is greasy to the touch.

Durability: Durable

Coating Qualities: Vitex contains natural resins. Due to the high levels of these resin and the variable nature of the levels in the timber coating problems can arise. The timber must not have a moisture content higher than 16% and must be strip wiped prior to coating with a strong solvent such as white spirits. Better still timber can be left to season for a period of time and the resin will bleed from the timber improving the adhesion (resin bleed will be of a yellowish green colour). If left to weather a timber restoration process will be required prior to coating. Leaving timber to weather is not always a practical option particularly when used in a joinery capacity. Follow all good coating practices.

Uses: Decks, rails, crossarms, bridge and wharf decking, boat building.

Please Note

Every care is taken to ensure that the information provided in this data sheet is accurate. Jac Jay Limited is unable to guarantee the information, as it has no control over the supply. The information supplied is intended as a guide only and further information should be sought prior to making any decisions on timber type. The customer has to determine the suitability of any timber used for its intended purpose.