



Imported Hardwood Decking Specifications



Timber is regularly used for external decking and can be selected from a wide range of species, grades and colours depending on the application and the consumers requirements.

For timber to perform satisfactorily in this application it must fall within certain grading parameters. This Guide has therefore been compiled to provide the correct grading specifications for imported hardwood decking.

While there is seemingly an endless variety of overseas hardwoods suitable for timber decking there would be less than twelve that are normally imported for this use. Pre-milled decking is usually imported for domestic applications where the most common size is 90 x 19 mm.

Species Selection

Prior to considering the physical grading the first criterion must be durability. Current building regulations require that timber for exposed applications should be of Durability Class 1 or 2, and so Table 1 below sets out the names of some imported species regularly available.

Table 1 – In-ground Durability

Class 1		Class 2
Belian	Balau	Kwila
Northern Box	Bangkirai	Merbau
Pelawan	Hopea	Selangan Batu

Note 1 Not all species are regularly stocked in all areas of Australia and are subject to availability.

Note 2 For further information on timber durability obtain a copy of the ATIF Timber Users' Guide No 1 Timber, Durability & External Applications

Note 3 For more information on these species, such as Timber Properties or Heartwood Colour, obtain a copy of the ATIF Timber Users' Guide 3.5 Imported Timber Species

Moisture Content

Timber decking, is by its use, exposed to the variance of weather conditions and subjected to regular changes in moisture content, therefore the seasoning

requirements are different to other milled products and common usage as well as standards reflect this understood difference.

The Australian Standard AS2796.1 Timber – Hardwood – Sawn and milled products Part 1; Product Specification lays down General Requirements in which moisture content is prescribed. For Light Decking, that is for decking of a minimum thickness of 19mm, the moisture content shall not be more than 18% and not less than 10% or as otherwise specified as suitable for application.

In Australia many decking species have commonly been used unseasoned, that is with a moisture content above 18% and this is considered suitable for application particularly where the timber exhibits low shrinkage characteristics. Two regularly imported species, Belian and Merbau (which is also called Kwila) are normally supplied in this manner. Both timbers are very dense, slow to dry, with low shrinkage rates, suffer little degrade and are normally sold as "Air Stabilized" (AS), this term referring to a moisture content of below 25%.

Both timbers perform well and are accepted in this form, it must be noted that under state regulations imposed in NSW and Queensland the consumer should be aware that the material, although called air stabilized, and suitable for application, is unseasoned.

Installation

After selecting the appropriate species, grade and possibly colour of decking numerous other points need to be considered before or during the installation process.

- Two different profiles are normally available, plain faced and reed faced (ribbed). Reed faced is used to enhance grip on the walking surface, its use is a matter of consumer choice.
- When laying seasoned decking, boards should be spaced with a 4 mm gap,

unseasoned with a 2 mm gap to allow for shrinkage.

- 19mm thickness decking, boards are to be laid on joists or continuous supports that are spaced no further than 500mm apart.
- Each board should be fixed at each joist with two nails, staggered to avoid joist splitting, and left flush with the surface of the board.
- At the ends of boards, nail holes should be predrilled to avoid splitting and be a minimum of 12 mm from the edges and ends.
- All fasteners and connectors need to be a minimum of hot dipped galvanised or suitably corrosion resistant for the intended environment.
- A coating of water repellent or oil based primer should be applied to all surfaces of the decking prior to installation, paying particular attention to any cut ends, notches or holes at the time of laying.

This guide is not intended to provide installation instructions, for further details regarding pre installation guidelines, span information, fixing instructions and finishing and maintenance refer to the following publications.

- Residential Timber Decks, Technical data sheet No 4 – Timber Research and Development Advisory Council, Brisbane
- Residential Timber Decks, Close to or on the ground. Technical data sheet No 13 – Timber Research and Development Advisory Council, Brisbane
- Australian Hardwood and Cypress Specifiers Guide, Domestic Decks – Australian Hardwood Network, Sydney
- Timber Decks – Timber Promotion Council, Melbourne
- The Australian Deck & Pergola Construction Manual – Alan Staines (available from most Timber Advisory Services and Technical Book Shops)
- Decks, TABMA Project Sheet no. 27 – Timber and Building Materials Association, Sydney.

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Table 2 – Grade Descriptions for Imported Hardwood Decking

All references are for one product only - 90 x 19 decking

The primary difference between SELECT and STANDARD grades is the the exclusion of PIN HOLE in select grade

	ATIF Select Grade			ATIF Standard Grade		
Basis of Grading	Face & 2 edges			Face & 2 edges		
Sapwood	Not Permitted			Not Permitted		
Moisture Content:						
Belian, Merbau, Kwila (AS)	Max 25%			Max 25%		
All Species (KD)	Max 18% – min 10%			Max 18% – min 10%		
Tolerances – KD material (see note below for AS tolerance)	Width – Plus or Minus 0.5mm			Width – Plus or Minus 0.5mm		
	Thickness – Plus or Minus 0.5mm			Thickness – Plus or Minus 0.5mm		
Skip, hit & miss	Not permitted (main face)			Not permitted (main face)		
Cutter Marks	Min 10 per 25mm			Min 10 per 25mm		
Raised Grain	Max 0.5mm from normal surface			Max 0.5mm from normal surface		
Torn Grain	Max 0.5mm from normal surface			Max 0.5mm from normal surface		
Chips, Roller marks	Not permitted (main face)			Not permitted (main face)		
Pause Marks, Glazing	Once per piece			Once per piece		
Torn Corners & edges	Not permitted			Not permitted		
For 90 x 19 decking	Spring	Bow	Twist	Spring	Bow	Twist
length of piece: 1.2	3	5	1.0	3	5	1.0
1.8	7	11	1.5	7	11	1.5
2.4	13	19	2.0	13	19	2.0
3.0	20	30	2.5	20	30	2.5
3.6	30	45	3.0	30	45	3.0
4.2	40	60	3.5	40	60	3.5
4.8	50	75	4.0	50	75	4.0
5.4	65	95	4.5	65	95	4.5
Cupping	Maximum 1.0 mm			Maximum 1.0 mm		
Tight Knots	Not permitted			Not permitted		
Loose Knots	Not permitted			Not permitted		
Borer Holes (Pin Hole)	Not permitted			Slight & scattered allowed		
Larger Holes > 3mm	Not permitted			Not permitted		
Resin Pockets etc	Not permitted			Not permitted		

General Notes

- Decking to be produced only from species with known durability class of 1 or 2.
- Kiln Dried Light Decking is required to have a maximum moisture content of 18% in order to comply with AS2796 and both the NSW Timber Marketing Act and the Queensland Timber Utilization and Marketing Act (TUMA).
- When Light Decking is supplied above 18% moisture content ie "Air Stabilized", to comply with the Queensland TUMA the buyer must be made aware in writing that the timber is unseasoned.
- Tolerances quoted above relate to product at time of machining. For Air Stabilised decking, negative tolerance in excess of 0.5 mm may develop over time due to some shrinkage.
- These grade descriptions are for 90x19 only, if applied to other sizes i.e. 70x19 the data should be proportionally adjusted.

For further information on this brochure, contact the Timber Advisory Service on free call 1800 044 529 or email showroom@tdansw.asn.au Level 6, 525 Elizabeth Street, Surry Hills NSW 2010. General Information on the use of timber can also be found at the web page www.timber.net.au



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