

# TIMBER FLOORS

## A GUIDE TO THE SELECTION OF SPECIES AND COATINGS.

TIMBER SPECIES	HARDNESS	COLOUR/TONE
	Janka k/N	
Ash, Alpine or Mountain (commonly called Victorian Ash or Tasmanian Oak)	4.9	Pale pink or light straw to pale grey brown.
Baltic (White)	2.1	White to pale yellow, with some tight knots.
Beech, Australian (a grouping of stringybarks and similar light coloured timbers)	8.0 (av)	Yellowish to pale brown with possible pink tinges.
Beech, Silver	3.2	Pale greyish pink to reddish brown.
Blackbutt	8.9	Pale yellowish brown with a possible light pinkish tinge.
Box, Brush	9.1	Pinkish grey to rich reddish brown.
Box, Northern	11.0 (Provisional)	Dark red to reddish brown.
Cypress, White	6.1	Pale to dark yellow with variegated browns. Knots common.
Gum, Rose (Flooded)	7.3	Pink to pale red brown.
Gum, Southern Blue	11.5	Pale yellowish brown with a possible light pinkish tinge.
Gum, Spotted	10.1	Pale to dark browns, variegated.
Gum, Sydney Blue	8.1	Dark pink to red brown.
Ironbark, Grey	14.0	Pale to dark chocolate brown with some dark red, variegated.
Ironbark, Red	13.0 (Av)	Dark red.
Jarrah	8.5	Light to dark red, variegated.
Karri	9.0	Pale pink to dark reddish brown.
Kauri, Indonesian	2.7	Pale yellow to pale brown sometimes with a pink tinge.
Kwila (Merbau)	8.6	Dark yellowish to reddish brown.
Maple, American Rock	6.4	Creamy brown to pale red brown.
Messmate (often mixed in Tasmanian Oak)	7.1	Pale yellowish to greyish brown.
Oak, American White	6.0	Pale yellowish to mid brown.
Pine, Hoop/Radiata/Slash	3.0/3.3	Pale yellow brown, knots prominent.
Ramin	5.8	Straw to pale yellow.
Tallowwood	8.6	Yellowish brown with an olive tinge.
Turpentine	11.6	Dark pink to reddish brown.

**Note** : Hardness is expressed in kilonewtons , the Janka rating is a measure of the wood to resist indentation.

There are a number of coating systems available on the market. Generally they can be divided into:

**Moisture curing polyurethane** : This product otherwise known as single pack polyurethane forms a hard wearing surface. The drying time will vary based on atmospheric conditions. Problems can also occur where application takes place in very dry conditions. The product can also suffer from the edge bonding affect(see edge bonding below).

**Two pack polyurethane** : The coating gives an excellent, harder wearing surface with drying as for moisture curing above. Again some problems may occur with edge bonding (see edge bonding below). This product is only available in gloss.

**Water-based polyurethane** : The coating cures by evaporation and reaction with the water embodied in the sealer. It forms a clear, hardwearing surface. Drying times are relatively short and more than one coat can be applied in a day. It contains no solvents or formaldehyde and is often selected where there is some concerns regarding fumes. Gloss and satin finishes are available however to achieve a high level of gloss may require up to 4 or more coats.

**Oleoresinous Oils** : Oleoresinous coating systems are clear varnishes. They are generally made up using a mixture of a resin and a an oil (usually a tung oil). They are easy to apply, penetrating and give a slightly softer look as compared with the polyurethanes. The coating drying times are affected by atmospheric conditions and are generally slower than polyurethane. They are less hardwearing than the polyurethane, however any scratches can be readily touched up. A surface polish is recommended to enhance the gloss levels and to protect the coating from scratching. High gloss levels are achieved using a polishing machine and regular maintenance.

**Oils** : Oils such as tung oils are a traditional method of coating timber floors. They are a penetrative finish which is generally less hard wearing than the modified oils or polyurethanes. The coting is slow drying and requires regular coatings with maintenance products. The product gives a very soft and natural appearance.

**EDGE BONDING** : Commonly called Clumping this problem arises when the moisture cured polyurethane coating oozes into the tongue and groove joints between the individual boards. The surface area of this joint is fairly high and the coatings adhesive properties effectively "glue" the boards together. The forces involved in shrinkage may then open up a large gap every 4-6 boards. In some cases, the bond may be stronger than a particular board which might split the board. This problem cannot be resolved and is permanent. Producers of these products are aware of this affect and advice should be sought regarding application methods or pre-finish coats which may eliminate the problem.

**NOTE** : In all cases it is imperative to closely follow the manufacturers instructions.

This interim document was prepared by :

The Timber Development Association !3-29 Nichols Street Surry Hills 2010

Tel 9360 3088 Fax 9360 3464 Advisory Service 1800 044 529

