



Recommendations for the use of Treated Pine Outdoors

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Introduction

Preservative treated pine is pine which has been treated to make it suitable for external application. Typical examples of such application are fences, decks, pergolas, gazebos, greenhouses, retaining walls and playground equipment.

While the preservative treatment protects against fungal decay and insect attack the product still requires protection against weathering and instability. For maximum serviceability and long life it should be fixed, finished and maintained as specified below.

Before Fixing and Finishing

All timber should be kept clean and stacked clear of the ground and out of direct sunlight. Timber should be supplied free of surface deposits resulting from preservative treatment. The timber should be surface dry before being used. All joints and ends that expose untreated heartwood should be flood brushed with a water repellent preservative before fabrication. Timber should be primed with one coat of water repellent preservative or a first coat of stain or paint finish prior to construction.

Fixing

All bolts, screws, nails plus brackets, framing anchors and other hardware in contact with preservative treated pine should be hot dipped galvanised, monel, silicone bronze or stainless steel. Electroplated fasteners are not suitable due to early break down of the plating.

Finishing and Maintenance

Weathering performance is enhanced by the application of a suitable finish, whether the surface be sawn or dressed. The finish may take the form of a clear external finish, a pigmented oil based stain, or a good quality paint system. The use of the finish should be in accordance with manufacturer's recommendations. The retention of the timber's original colour cannot be guaranteed with the use of a clear finish. Refer to TDS 2.

NOTES:

- (i) Many water repellent preservatives are intended only for short term protection against the weather and are not suitable for final finish. Refer to the relevant manufacturer's recommendations.
- (ii) Pale coloured paints and stains are preferred as they absorb less heat and reduce the potential for degrade associated with severe moisture loss.
- (iii) The use of linseed oil and mineral turpentine are not recommended as they can lead to development of unsightly black mould.

To maintain the surface appearance of the timber the protective finish needs reapplication at regular intervals. The measure of this is when the surface tends to absorb water rather than repel it.

Water Repellent Preservatives (Some available trade brands)

Trade Brand	Clear or Semi-Clear	Green
Cellavit	WR 102 Clear	WR 101 Green
Wattyl	Combat Clear	Combat Green
Cabots	Bar-D-K	-
Koppers	XJ Timber Protective	-
Intergrain	Dimension 4	-

NOTES:

- (i) Most "clear" water repellent preservatives will darken the timber or may impart a light brown colour.
- (ii) Some of the above products are not intended as a finish coat. Check with the manufacturers when selecting a product to suit your application.

Safe Working

Working with timber produces dust particles. Protection of the eyes, nose and mouth when sanding, sawing and planing is highly recommended. Refer to tool manufacturers for safe working recommendations for particular items of equipment.

Disposal of Offcuts and Waste

As with all treated timber, do not burn offcuts or sawdust. Preservative treated offcuts and sawdust should be disposed of by approved local authority methods.



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TABLE 1 DETAILED RECOMMENDATIONS

APPLICATION OR USE	MINIMUM GRADE	FIXING	ADDITIONAL RESTRAINT	SIZES	REMARKS
FENCING (a) Posts - Round - Sawn	-	-	-	Up to 1.2m:- 100 to 125mm (min) butt dia. 1.2-1.8m: - 125 to 150mm (min) butt dia	Slope cut to top of posts As above
	F5	-	-	Up to 2.1m: - 100x75mm (min) Corner and End Posts: - 100x100mm (min)	Where rails are not housed into posts use 2/M10 bolts or 2/75mm No 14 Type 17 screws For fence heights greater than 1.2m use 3 rails.
(b) Rails	F5	Into Hardwood Posts: 2/75 x 3.75mm HDG flathead nails or 1/75mm No 14 Type 17 Screws Into Softwood Posts: 2/75 x 3.75mm HDG deformed shank flathead nails plus 1/M10 HDG bolt or cuphead bolt, or 1/75mm No 14 Type 17 Screw.	-	For posts up to 2.4m centres 100x38mm spaced at 900mm maximum centres	
(c) Palings	-	2/50 x 2.8mm HDG flathead nails per crossing. Deformed shank mails give superior fixing. Offset the nails.	-	Minimum Paling Thickness: 15mm for up to 100mm width 25mm for between 100 & 150mm width Max span 900mm Max Overhang top and bottom – 100mm	For diagonal palings measure span along the length of the paling.
PERGOLAS AND CARPORTS	F5	As per Timber Queensland Technical Data Sheet No 19.			
DECKS	F5	As per Timber Queensland Technical Data Sheet No 4.			
PLAYGROUND EQUIPMENT Rounds Sawn	-	As required by individual designs	Max unrestrained length 2.4m	As required by individual designs	Seal end-grain of posts and rounds with wax sealer or approved oil based primer.
	F5				Seal all surfaces with an oil based primer.

NOTES:

- 1) For recommended practice using treated pine cladding refer Timber Queensland Technical Data Sheet No. 3
- 2) All fasteners to be hot dipped galvanised, monel, silicon bronze or stainless steel
- 3) Minimum grade requires that untreated heartwood comprise not more than 20% of the timber cross-section (refer Timber Utilisation and Marketing Act)
- 4) All preservative treated timber should be branded in accordance with the Timber Utilisation and Marketing Act