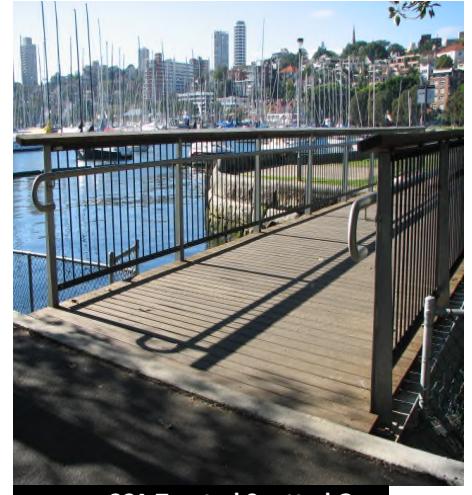




Treated H5 Spotted Gum & Ironbark



CCA Treated Spotted Gum

TREATMENT OF EXTERNAL TIMBER

PURPOSE OF TREATMENT

Timber is treated with a preservative to improve the timber's resistance to attack by wood destroying fungi and wood destroying insects.

Both untreated and treated timber used externally should be protected from the affects of weathering by the application of a coating or oil.

The sapwood of the majority of species is comparatively easily penetrated by preservatives, whereas the heartwood of many species is very difficult to treat because of the changes that occur to the wood cells at the time of heartwood formation. The general rule of thumb is that only the sapwood of hardwoods can be penetrated whereas the sapwood and some of the heartwood of most softwood species can be penetrated.

Most treatment methods for round timbers (posts, poles and piles) aim to provide a considerable loading of preservative in the ring of sapwood. Removal of bumps to improve the aesthetic appearance of the round timber should be avoided if the underlying heartwood is not of high durability.

Because it is only the sapwood that is usually commercially treatable, only durable timbers should be used as sawn timbers that are going to be placed in a high-hazard situation.

It is a common misconception that when ordering sawn or dressed hardwood for external use, the durability of the hardwood can be enhanced by having it treated. Remember that only the sapwood of hardwoods can be penetrated.

Australian Standards relating to treated timber and treated timber products (1604 series) set out minimum preservative penetration requirements and minimum preservative retention requirements.

TYPES OF PRESERVATIVES

1. Water-borne preservatives (e.g. Copper Chrome Arsenate (CCA))
2. Light organic solvent-borne preservatives (commonly called LOSPs) - which are carried into the wood mixed in a light organic solvent such as white spirit.
3. Oil-borne preservatives (e.g. pigment emulsified creosote (PEC)) which are carried into the wood as oil or mixed in

Table 1 – Levels of Treatment-Hazard Levels

Levels of Treatment - Hazard Levels

Table from www.timber.net.au

There are six main levels of treatment and a number of sub-levels. These are called hazard levels and relate to the hazard to which the timber is going to be exposed.

Hazard Level	Exposure	Specific Service Conditions	Biological Hazard	Typical Uses
H1	Inside, above ground	Completely protected from the weather and well ventilated and protected from termites	Lyctid Borer	Framing, flooring, furniture, interior joinery
H2	Inside, above ground	Protected from wetting, Nil leaching	Borers and termites	Framing, flooring, etc., used in dry situations
H2F	Inside, above ground	Protected from wetting, Nil leaching	Borers and termites	Framing (envelope treatment) used in dry situations south of the Tropic of Capricorn only
H2S	Inside, above ground	Protected from wetting, Nil leaching	Borers and termites	LVL/Plywood (glue-line treatment) used in dry situations south of the Tropic of Capricorn only
H3	Outside, above ground	Subject to periodic moderate wetting and leaching	Moderate decay, borers and termites	Weatherboard, fascia, pergola posts (above ground), window joinery, framing and decking
H3A	Outside, above ground	Products predominantly in vertical exposed situations and intended to have the supplementary paint coat system that is regularly maintained	Moderate decay, borers and termites	Fascia, bargeboards, exterior cladding, window joinery, door joinery and non-laminated verandah posts
H4	Outside, in-ground contact	Subject to severe wetting and leaching	Severe decay, borers and termites	Fence posts, greenhouses, pergola posts (in-ground) and landscaping timbers
H5	Outside, in-ground contact, contact with or in fresh water	Subject to extreme wetting and leaching and/or where the critical use requires a higher degree of protection	Very severe decay, borers and termites	Retaining walls, piling, house stumps, building poles, cooling tower fill
H6	Marine waters	Subject to prolonged immersion in sea water	Marine wood borers and decay	Boat hulls, marine piles, jetty cross bracing

Notes:

1. Examples shown in this table are not exhaustive.
2. Not all preservatives are suitable for all hazard levels.

The sapwood of all species is non-durable because of its life-supporting starches and sugars. Therefore, for timber exposed to the weather or in ground contact, the sapwood is normally either removed or preservative treated.

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