

Levels of Treatment - Hazard Levels

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.

Types of Preservatives commonly in use in Australia today.

Water-borne preservatives (e.g. Copper Chrome Arsenate (CCA), Alkaline Copper Quaternary (ACQ), Copper azole) - which are carried into the wood mixed in water. They have a wide variety of applications, both indoors and outdoors, for residential, commercial, and industrial structures.

Light organic solvent-borne preservatives (commonly called LOSPs) - which are carried into the wood mixed in a light organic solvent such as white spirit. They are used in high value joinery and similar products and are treated generally in their final form and shape and must only be used out of ground contact. The actives in LOSPs include tributyl tin naphthenate (TBTN), azoles and the synthetic pyrethroids (e.g. permethrin).

Envelope treatments - (e.g. blue pine) which are synthetic pyrethroids (e.g. bifenthrin, permethrin) dissolved in water or oil such as linseed oil and are applied by spraying or dipping to cover the timber in the preservative. Used primarily in framing timber South of the Tropic of Capricorn.

Oil-borne preservatives (e.g. pigment emulsified creosote (PEC)) which are carried into the wood as oil or mixed in oil. Used primarily for heavy duty construction and in the marine environment including utility poles, rail sleepers and marine piles.