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IS TIMBER DURABLE?

I have recently come back from three months traveling right around Australia.

One of the things that interested me is how different building techniques and materials are used in different regions.

While in Broome, I found the common design of new houses was using Colorbond as a wall cladding with steel wall frames and timber or steel roof trusses.

When asked why they used steel wall frames, the answer was 'termites eat through timber even if it is treated'.

However this is a misconception, and probably stems from the fact that not all termite (durability) treatments are the same. If the correct timber is used in the right application, timber can last just as well as steel.

This leads me to talk about some of the durability hazards around a general building site covered by Hazard Classes ('H') in AS1604:

- Insects (borers and termites)
- In-ground and above ground decay

The Hazard Levels for specification of preservative treated timber from AS1604 are:

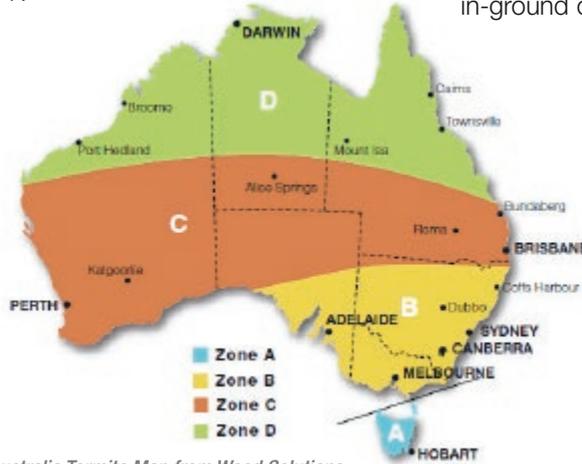
- H1 – fully protected indoors, borers only,
- H2 – fully protected indoors, borers and termites
- H3 – exposed to weather, above ground, well ventilated
- H4 – in-ground (landscaping not structural)
- H5 – in-ground (more critical structural members)
- H6 – marine piles

So our situation for wall frames and roof trusses to be resistant from termites would need to be Hazard Level H2.

For most of Australia, you have probably become used to seeing 'Blue' dyed pine. For example products like Hyne T2 Blue, LASERframe TERMINATOR Blue.

But are you aware that these products are not suitable for all areas of Australia. If you read the fine print on the timber from the manufacturer, you will see on their stamp wording similar to:

'Envelope Treated – Use South of Tropic of Capricorn only' and their branding will also contain the letter 'F' ie. 1234-75-H2-F.



■ Australia Termite Map from Wood Solutions

So what do you use above the Tropic of Capricorn (Region D in Termite Hazard Zones Map from Wood Solutions)?

The timber manufacturers have come up with an alternative treatment that is 'Red' dyed pine. For example products like Hyne T2 Red, LASERframe TERMINATOR Red.

This H2 treated timber can be used throughout all of Australia.

What is the difference between the two H2 'F' 'Blue' and H2 'Red' treatments. The H2 'F' 'Blue' timber has a two or five mm treated envelope layer around the outside edge of the cross section.

Whereas the stronger H2 'Red' treatment requires all sapwood to be treated and the heartwood (middle of the log) to be termite resistant or be treated as well. The Timber Queensland diagram shows this nicely.

In summary, the possible uses for timber treatments are:

H2 treated timber is for indoor use.

H3 treatment would be required for uses where it is above ground, exposed to

weather, but well ventilated such as for weatherboard, fascia, veranda posts.

H4 treatment is for use in outside in-ground contact subject to severe wetting and leaching but not for structural purposes. The typical use for this level is fence posts, greenhouses, pergola posts and landscaping timbers.

H5 treatment is for structural in-ground use which can be subject to contact with fresh water subject to extreme wetting and leaching. The typical use of this grade is for retaining walls, piling, and house stumps.

So, next time you supply trusses, wall framing or materials to a building site ensure you allow for the right treatment level, and if you are shipping timber to a far northern region, go as far as ensuring the correct H2 treatment level.

If timber is supplied to be durable to Australian Standards, then the builders in Broome won't have to worry about termites in timber.

For further information, please refer to Forest & Wood Products Australia, WoodSolutions, Technical Design Guide 5: Timber Service Life Design (woodsolutions.com.au); Timber Queensland, or your timber supplier. **TTN**

