

1. FURFURYLATED TIMBER = PRIMA WOOD

Prima Wood is radiata pine treated with furfuryl alcohol = FA, where the FA is polymerized in the timber by a special curing process.

FA is a hydrocarbon derived from pentosan from the cellulose of agricultural residues such as bagasse = sugar cane and corn cobs. The FA penetrates the cell wall, where it reacts with the hydroxyl groups in the wood cells.

By having the FA reacting with the hydroxyl groups in the wood cells, the FA improves the dimensional stability of the timber and makes the timber very resistant against attack by decay fungus, termites and marine borers. Since FA is strongly fixed in the timber, FA treated timber resists leaching even when exposed to heavy rain, ground contact or submersion in fresh water and sea water.

Since FA is a waste product from the production of important agricultural products such as sugar cane and corn cobs, FA is available in large quantities and at low cost. This makes FA an ideal product for upgrading of timber in a sustainable and environmental friendly manner.

1.1 Properties

- i) The dimensional stability is improved by 50 – 80%.
- ii) Offers very good protection against a wide spectrum of decay fungus, termites, and marine borers. Can be used in both above ground and in ground contact applications. Durability is equivalent to CCA treated wood: Durability Class 1.
- iii) Resistant against attack by termites and marine borers.
- iv) Dark brown color.
- v) Increased timber hardness.
- vi) All chemicals used in the process are derived from agricultural plant waste material.

1.2 Limitations

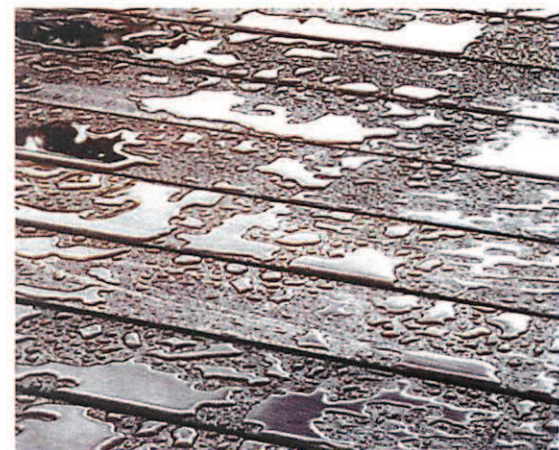
- i) Only suitable for impregnation of the sapwood in easy permeable timber species such as radiata pine.
- ii) A reduction in the impact strength is to be expected. Other strength properties remain unchanged or are slightly improved.
- iii) Limited protection against mold fungus.
- iv) For the treatment to be effective, the consumption of FA is relative high (100–250 kgs of FA per m³ of treated timber) making the process relative expensive.
- v) Contains small amount of organic acid. Metal fasteners in contact with the FA treated timber has therefore to be made from corrosion resistant material such as stainless steel.

1.3 Applications

Prima Wood is used in outdoor applications where a high resistance against biological degradation, good weathering resistance and good strength properties are required such as:

- i) Decking.
- ii) Timber in ground contact.
- iii) Marine timber.
- iv) Garden furniture.

For More Information



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