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DEPARTMENT OF PARKS AND WILDLIFE

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E (DURAPINE)

The term *WAPINE* applies to pine timber produced in Western Australia from *Pinus radiata* and *Pinus pinaster.* Marketing Information Sheets Nos. 1 and 2 provide detail of the wide range of applications for which *WAPINE* is becoming available in increasing quantities. While there is a grade of *WAPINE* to meet almost any timber specification it is essential to have close regard to the grade and dimension required to meet any selected application, also to consider the treatment or finish required.

It is necessary to take particular care in specifying pine for external and ground contact situations.

PINE FOR HOUSE FRAMING

Provided that proper building practice is followed (see below) pine is entirely suitable for house framing in the "untreated" condition. Building timber should be specified in the appropriate Standards Association of Australia grade (see Sheet No. 2—e.g. F5 Standard Building Grade, F8 Standard Engineering Grade, i.e. seasoned, gauged to accurate dimension, graded and branded). Proper building practice entails compliance with the Uniform Building By-Laws, 1974, which requires proper protection for all components of a dwelling against decay and termite hazards. This in turn requires *full compliance with Australian Standards CA 43 or CA 50* for the provision of physical (ant capping) and chemical (soil) barriers—and the *certification by the builder that such chemical treatment has been carried out and guaranteed* by a reputable pest control contractor.

It should be noted that in South Australia, where decay and termite hazards are very similar to ours, the use of untreated pine framing above floor level is accepted by all banks and other lending authorities, also by the South Australian Housing Trust and the Australian Housing Corporation.

TREATED *WAPINE* (*DURAPINE*)

For exposed moist or ground contact situations it is essential for pine to be treated, i.e. to be impregnated under pressure with preservative chemicals, commonly with an acqueous solution of copper, chromium and arsenic (sold as "CCA" or "Tanalith"). This multisalts formulation imparts a greenish hue to the wood and confers on *sapwood* a high resistance to decay and insect (termite) attack. Small pine trees are comprised largely of sapwood and hence posts and rails produced therefrom are fully treatable for long life in the ground.

The treatability of *heartwood,* however, is extremely variable and in some cases with sawn timber, is confined to a surface layer together with reasonable penetration. For continuing protection this envelope must remain intact, hence moulding, etc., must be carried out before treatment. Any drilling, machining or cutting (of heartwood) after treatment is to be avoided.

TREATMENT HARMLESS

Extensive tests carried out by the Division of Building Research, C.S.I.R.O. (P.O. Box 56, Highett, Victoria 3190) have confirmed that in the wood structure and on the surface the CCA preservative is insoluble in water, inert and harmless to children, animals or plants. Tests with similar findings have also been carried out by the Industrial Hygiene Branch of the Health Commission of New South Wales.

For some applications where appearance and clean handling are not important, creosote is an effective treatment solution.

LEVEL OF PROTECTION

The relevant standard for sawn timber is AS-1604—"Preservative Treated Sawn Timber, Veneer and Plywood".

It has now been generally agreed by suppliers that, whereas levels of treatment as low as 5·6 kilograms retained per cubic metre are effective for certain above ground applications, *a minimum retention of 12 kg/m³ is adopted as the standard (minimum) treatment* both for above ground and in ground use.

For extreme situations such as marine immersion, frequent or continuous immersion (e.g. swimming pools, cooling towers) and some tropical applications, double treatments (CCA/creosote) or retention levels as high as 32 kg/m³ are specified (consult supplier).

Creosote retentions as specified range from 96 kg/m³ to 320 kg/m³.

POINTS TO NOTE IN BUYING OR USING PRESSURE TREATED *WAPINE* (*DURAPINE*)

1. The preserving water-borne chemicals are forced under pressure into seasoned timber, completely saturating it and remaining *permanently* in the wood structure.

   It is essential, therefore, that the timber be re-seasoned after treatment, to remove the possibility of shrinkage, etc., in service.

2. *DURAPINE* has all the normal properties of *WAPINE* with respect to:

   Strength
   Ease of working
   Ease of handling
   Paintability.

   Gluability is adequate for most purposes—but for some applications special glues or techniques may be required.

   Long lasting fastenings are recommended, desirably hot dipped galvanised or copper, brass or monel bolts, nails and screws.
3. Buyers and specifiers should discuss their proposed use and requirement with the supplier.
4. *Sapwood* can be fully impregnated. It can be cut, drilled and machined without reducing its durability.
5. *Heartwood* can be partially impregnated. Its protection relies largely on the surface envelope of preservative which should not be broken after treatment. *All cutting, drilling and dressing should be done before treatment.*

NOTE OF WARNING

The Timber Preservers Association of Australia (P.O. Box 457, Camberwell, Victoria 3124) has issued the following *warning* in the interests of the timber using public:

Since the early 1930s, C.C.A. preservative treated timber has been used throughout the world for poles, fence posts, building timbers, boats, garden furniture, playground equipment—in fact, every conceivable purpose where wood can be used, and time has established beyond doubt its excellent record of performance and safety.

The C.C.A. preservative chemicals are locked into the timber in an insoluble form and can only be released if the timber is burned.

Green coloured, C.C.A. treated timber must never be burnt in an enclosed space and it must never be used for fuel in barbeques, cooking stoves or grates.

In the event of inhalation of fumes from the burning of C.C.A. treated timber, in sufficient volume so as to cause nausea or a feeling of sickness, it is suggested that contact should be made with the appropriate Poisons Information Centre in your nearest capital city as listed—

i.e. in W.A.:

Poisons Information Centre
c/o Princess Margaret Hospital for Children
Thomas Street,
West Perth, W.A. 6005. Telephone 81 3222.

FURTHER INFORMATION

In addition to the sources quoted, i.e.

Division of Building Research, C.S.I.R.O.
Timber Preservers' Association of Australia
(addresses above).

Information can be obtained from suppliers, i.e.

Bunning Bros. Pty. Ltd.

Koppers Australia Pty. Ltd.
South West Highway, Picton.

Cullity Timber (Sales) Pty. Ltd. (agent for Koppers).

and from

Timber Advisory Service
(Forest Products Association)
103 Colin Street,
West Perth, W.A. 6005.
Telephone 22 2088

Forests Department
(Marketing Branch)
54 Barrack Street,
Perth, W.A. 6000.
Telephone 25 8077.