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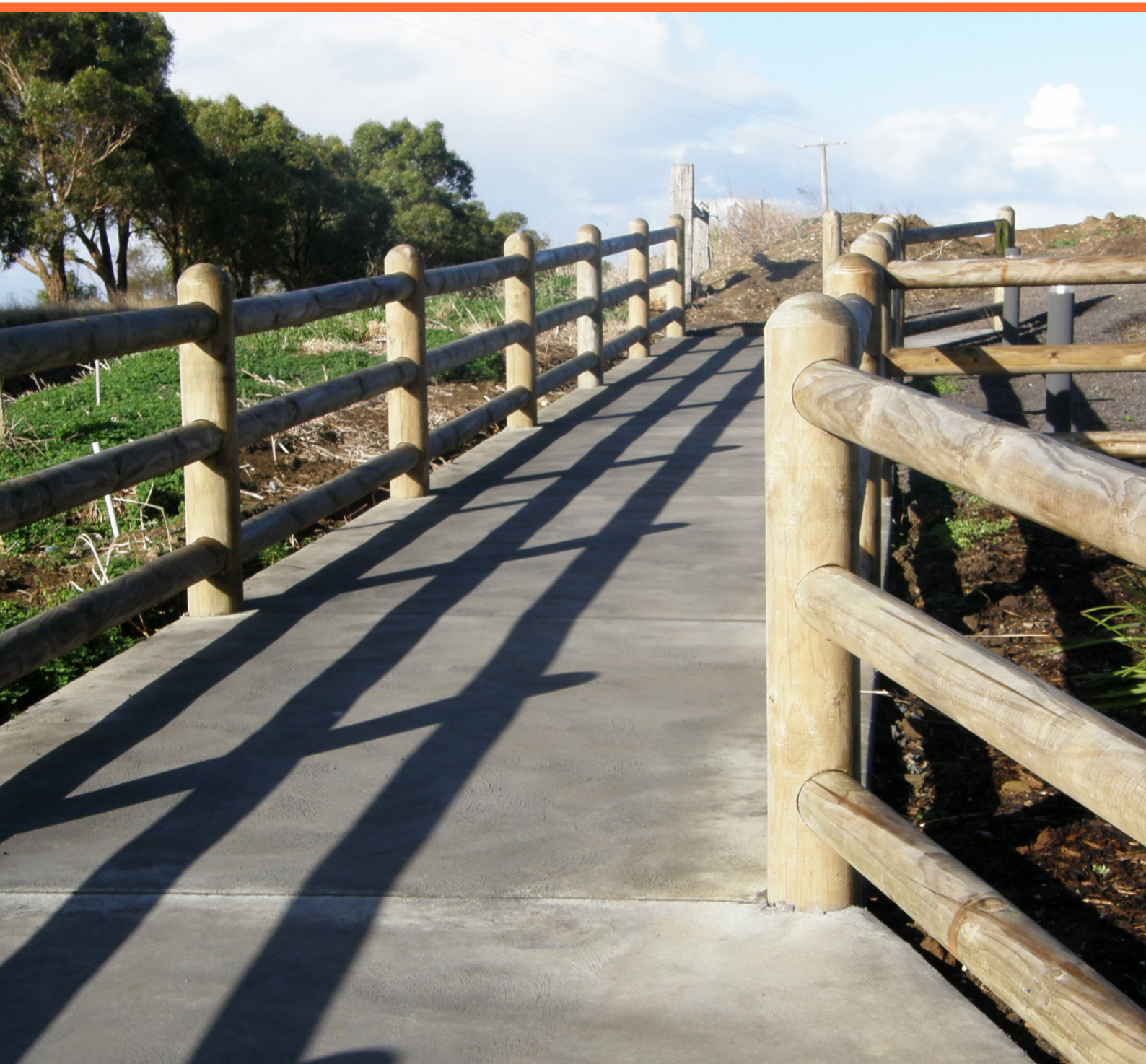
Treated Timber User Guide

Tanalith® O™ (CCA)

Tanalith® CCA TREATED TIMBER

Tanalised® CCA TREATED TIMBER

Wood Protection



Tanalith® O pressure treated timber is timber which has been impregnated with Tanalith® O Type C wood preservative under controlled conditions in a vacuum pressure timber impregnation plant.

Tanalith® O is a water based wood preservative that contains copper, chromium and arsenic, (CCA). When impregnated into the timber the preservative components bond with the wood structure and cannot easily be removed.

Tanalith® O pressure treated timber has a long term protection against fungal and insect attack, including termites, for both in and out of ground contact, interior and exterior applications when treated to the correct hazard class for the desired end use application.

Tanalith® O pressure treated timber has an initial yellow colouration. Upon external exposure, the initial yellow hue changes to its recognisable green colour and then slowly weathers to a natural silver grey. This weathering process does not indicate any loss of preservative protection.

In a rapidly changing environment it is rare to find a product or technology that has remained more or less unchanged for over eighty years.

Yet due to the unique characteristics of CCA, it has survived the tests of many years in countless applications and end uses throughout the world. To this day CCA preservatives remain the benchmark by which the performance and effectiveness of new wood preservatives are measured.

With increasing changes to government regulations and the development of alternatives Tanalith® C pressure treated timber use is limited to high hazard situations.

Tanalith® O Type C Wood Preservative

Tanalith® O Type C wood preservative is approved for use by the Australian Pesticides and Veterinary Medicines Authority (APVMA).

Treatment Specifications

Tanalith® O treatment process parameters can be varied, taking into account timber species, desired service life and to match the end use application (Hazard Class) of the timber. It is therefore extremely important that the end use and species of the timber are clearly stated within the treatment specification. Hazard Classes are defined in AS1604.1 but can be summarised as follows:

- H3 OUTSIDE, ABOVE GROUND, DRY Moderate fungal decay and termites
- H4 OUTSIDE, IN GROUND High fungal decay and termites
- H5 OUTSIDE, IN GROUND OR FRESH WATER High fungal decay and termites.
- H6 OUTSIDE, IN GROUND OR MARINE ENVIRONMENT High fungal decay and marine borers.

Tanalith® O treated timber products are not permitted for use in H3 and some H4 situations where the treated wood product will be used for domestic decks, handrails, outdoor furniture, children's playgrounds or picnic tables.

Treated Timber Appearance

Colour variations of Tanalith® O treated timber may occur due to the natural variability of the relative proportions of heartwood and sapwood and darkening of some hardwoods may occur. Upon external exposure, the initial yellow hue changes to its recognisable green colour and then slowly weathers to a natural silver grey. This weathering process does not indicate any loss of preservative protection.

If required, the green colour of Tanalith® O treated timber can be refreshed at any stage using a suitable coating product. Always follow the coating manufacturer's instructions in these situations.

Tanalith® O Type C wood preservative will not hide or mask wood grain nor will it totally mask discolouration caused by weathering or dirt, fungal staining or wood defects. In addition, some resinous softwoods, eg. redwood, may exhibit resin flecking or resin bloom around knots if treated when the timber is still fresh/unseasoned.

Enhanced protection against the weather can be obtained by using a suitable brush applied water repellent coating. These are particularly effective when applied as a regular maintenance product to the surface of Tanalith® O pressure treated timber.

Always follow the coating manufacturer's instructions.

Post-Treatment Machining

As far as possible all cutting, machining, notching and boring is to be carried out prior to treatment.

Pieces which are rip sawn, thicknessed, equalised or planed must be returned to the supplier of the treated timber for re-treatment.

On no account are fence posts to be pointed after treatment.

The shortening of posts and columns should be avoided if possible, but in any event cross cutting must be restricted to the top of the post or column and the cross cut surface must liberally brushed with a suitable end grain preservative in accordance with instructions on the product label.

On no account are the cut ends of posts to be placed in contact with the ground.

† Contact us for latest specification details.

Resealing Cut Ends and Rebates

Where cutting, machining, notching and boring has to be carried out to treated timber, the area of timber revealed by the cross cuts, holes or notches must be liberally resealed with a suitable "in-can" or "brush on" end grain preservative in accordance with the manufacturer's instructions to maintain the integrity of the preservative protection.

In hazard level H4 or H5 applications cut ends must be sealed with a heavy duty preservative such as CN Timber Oil or CN Timber Protective Emulsion.

Gluing

Tanalith® O pressure treated timber dried to less than 20% moisture content and in equilibrium or within 5% of its expected in-service moisture content, may be glued with most commonly available adhesives.

Tanalith® O pressure treated timber may be glued after cleaning off any surface deposits or dirt with a wire brush, or after a light sanding.

In consultation with the adhesive manufacturer, select an adhesive appropriate to the in-service exposure condition and appropriate for load bearing or non-load bearing requirements. Consult the glue manufacturer on the suitability and use of their particular product and follow the directions of the appropriate regional standards.

For load bearing constructions, phenol resorcinol formaldehyde, resorcinol formaldehyde, phenol formaldehyde, melamine urea formaldehyde, melamine formaldehyde, urea formaldehyde, emulsion polymer isocyanate glues are generally used.

For non-load bearing constructions, emulsion polymer isocyanate, polyurethane, polyvinyl acetate, urea formaldehyde, melamine urea formaldehyde, melamine formaldehyde and phenol resorcinol formaldehyde glues are generally used.

For exterior or damp conditions, phenol resorcinol formaldehyde, resorcinol formaldehyde or phenol formaldehyde glues are generally used.

For internal dry conditions, resorcinol formaldehyde, phenol formaldehyde, melamine urea formaldehyde casein, polyvinyl acetate, urea formaldehyde, emulsion polymer isocyanate glues are generally used.

Surface Coatings

Tanalith® O pressure treated timber does not have to be painted or stained to maintain its preservative properties.

Many coating products are available on the market. Always consult the coating manufacturer's recommendations before applying a coating product to Tanalith® O pressure treated timber.

If Tanalith® Tanalith® O pressure treated timber is to be painted, stained or varnished, the timber should be dried throughout the cross section. Always follow the coating manufacturer's instructions, taking note of the recommended maximum moisture content prior to application.

The preservative treatment is not a substitute for sealing of knots, base coating or priming.

If waterbased coatings are applied, some discolouration may occur in exceptional circumstances. If this happens, allow the coating to dry completely. Then apply an additional coat of product, preferably one with a high build, high solids content.

Metal Fixings & Fittings

General Advice

It is important to follow the recommendations of the manufacturer of any metal products used for specific advice regarding suitability, desired service life expectations and particular exposure conditions.

Tanalith® O pressure treated timber has a long life expectancy and it is appropriate to use metal fixings and fastenings that will have a comparable length of life.

- Performance of metal fixings is influenced by the environmental conditions including moisture content, temperature, atmospheric pollution, proximity to coastal locations, timber species, as well as the thickness of any galvanising.
- For most exterior use, hot dipped galvanised steel will provide satisfactory performance, although higher grade material such as stainless steel should be considered for critical connections particularly where the timber is likely to be wet for long periods, in high situations where there are additional sources of corrosion (salt) or where a long service life is required. Consult the fixing manufacturer if in doubt.
- Galvanising provides a sacrificial zinc barrier. It is important that the specifier/end user is aware that there are many thicknesses of galvanised coating available and the thicker the galvanised coating the longer the expected service life.
- Electroplated metals only provide a thin coating and are unsuitable for exterior applications.
- It is good practice to drill pilot holes for fixings, in particular when screwing near the edge or end of a piece of timber.
- Attach connectors, fasteners and fittings after preservative treatment and only after the timber has re-dried to less than 20% moisture content.
- To prevent bimetallic corrosion between fastener and connector components it is important not to mix metals in the same connection. DO NOT mix galvanised and stainless steel components.
- The use of aluminium and galvanised steel nails is NOT recommended.
- Do not put Tanalith® O treated timber in direct contact or above uncoated zincalume roof sheeting. The pressence of copper ions may cause severe corrosion of the sheeting.
- Fixings and fastenings used on safety critical and load bearing components should be inspected regularly and replaced if necessary.
- Specialist advice should be obtained in the selection of connectors for use in swimming pool buildings.

Typical Applications

It is advisable to consult with us using the contact details given in this document if in doubt about any particular area of application.

This list below, which is not totally exhaustive, gives an indication of the range of timbers and timber based products which can be treated with Tanalith® O Type C wood preservative. The treatment process parameters are varied to match the end use of the timber and its species. It is therefore extremely important that you make sure that the timber has been treated to the correct specification.

Building

External structural elements and general timbers in domestic, commercial and public buildings, such as beams, joists, subfloors, roof timbers, battens and cladding.

Garden & Landscaping

Pergolas, gazebos, arbours, bridges†, summer houses, soil retaining walls, timbers around fish ponds, lawn edging, and fencing. For certain applications it may be appropriate to use a brush-on water repellent.

Agricultural & Horticultural

Earth retaining vegetable beds, (It is recommended to use an impervious barrior between treated timber and soil to reduce the risk of fungal attack), fruit tree stakes, hop poles, vine stakes.

Enclosures/Fencing

Natural round, machine turned and square sawn fence posts, rails, droppers, gates and gate posts, stiles, highway, farm and security fencing

Transport

Floors and other timbers for railway and road vehicles, container floors and linings, packing cases, cable drums and hatch covers. For treatments to meet Australian Quarantine Regulations (AQIS) contact us directly for the latest information.

Engineering

Transmission poles, shells, gantries, bridges† and bridge decks†, marine piles and sound barriers.

End Use Considerations

Tanalith® O pressure treated timber should not be used to build children's play equipment, patios, domestic decking, handrails, new garden furniture, exterior seating or picnic tables.

Tanalith® O pressure treated timber can be used in internal and external building applications and outdoors, both in ground contact and above the ground, without any need for further protection.

Tanalith® O pressure treated timber is treated to meet the requirements of a particular end use.

Only use treated timber that is clean, dry and free of surface residues and deposits.

When using timber for exterior situations, either treated or untreated, consideration should be given to the propensity of the material to stain light coloured adjacent faces, such as render, paving flags, swimming pool tiles or coated timber surfaces, with its natural extractives during the weathering process, although the potential for this to occur does reduce with time.

Where used in this external environment, it is highly recommended that contact between the timber and these surfaces is eliminated by design, in order to prevent surface discolouration.

Where close tolerance work is involved it is advisable to pre-machine the timber at the in-service equilibrium moisture content prior to treatment. Consultation with the treatment supplier is advised in these situations.

When used in construction applications it is always best practice for preservative treated timbers to be dried down to the in-service moisture content prior to fabrication.

Treated timber should not be used in a higher hazard level than it is intended for as this may result in premature failure.

Treated timber should not be used where it may come into contact with drinking water or for food preparation surfaces/ structures or containers for storage.

If supplying timber for treatment it is best practice to prepare the timber as fully as possible prior to treatment to ensure best results.

If any cutting, notching or drilling is made to the treated timber following treatment, any exposed surfaces should be liberally resealed with an appropriate end grain preservative to maintain the integrity of the treatment.

Handling Precautions

You should have received the treated timber in a drip-free condition with no sign of preservative fluid on the surface. If this is not the case, the timber should be stored open stacked under ventilated conditions and protected from rain and snow to dry before use.

When working with timber, wear gloves to protect the skin against abrasions and splinters. Any cuts and abrasions should be protected by a waterproof dressing.

When power-sawing and machining, wear goggles to protect the eyes from flying particles. Wear a dust mask and, whenever possible, perform these operations outdoors to avoid accumulations of airborne sawdust or use a suitable dust extraction system around any mechanical saw or planing machine. Avoid frequent or prolonged inhalation of sawdust. Consult local regulatory authorities for further information on workplace exposure limits for wood dust.

In order to prevent injury, care should be taken when lifting or moving timber. These handling precautions equally apply to untreated and treated timber.

DO NOT BURN off-cuts or waste pieces.

† Contact us for latest specification details.

Personal Hygiene

After handling or working with treated timber, all exposed skin should be washed before commencing other activities, especially eating, drinking, smoking or going to the toilet.

Control of exposure to wood dust will also limit the exposure to that of the preservative constituents. If sawdust accumulates on clothes, clean them before re-use.

Launder heavily soiled clothes separately from other household wash items.

It must be stressed that individual sensitivity to particular materials, man made or natural, can vary widely. In the unlikely event that any undesireable effects occur, stop work and review your personal protective measures.

Consult a doctor if required. A product safety data sheet for Tanalith® O treated timber products are available from the treatment provider for further information on request.

On-Site Precautions

All sawdust and construction debris should be cleaned up and disposed following local regulations.

Waste Disposal

Domestic end users should dispose of any waste treated timber, sawdust or ash through the ordinary waste collection service or at a local authority amenity/disposal site.

Tanalith® O treated timber and post treatment processing wastes, such as sawdust and offcuts, must not be used for animal litter or bedding or for fuel in barbecues, cooking stoves or grates.

Any waste timber, sawdust or redundant timber from commercial or industrial use (e.g. construction sites) should preferably be recycled by re-use, or disposed of to an authorised landfill or to a correctly controlled and approved waste incinerator.

After a bushfire, keep children and pets away from the CCA treated timber ash until it is removed, and follow safety precautions for clean up.

Further Information

For further information with respect to Tanalith® O treated timbers please contact us using the details overleaf.

Suites 15-18 at 1-11 Elgar Road,
3026 Derrimut, Australia
T: +61 1300 650 636
E: tanalised-information.oceania@lonza.com
www.arxadawoodprotection.com/apac

Use wood preservatives safely. Always read the label and product information before use.

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