



The specifiers' guide to TANALISED[®] preservative treated timber products



KOPPERS ARCH
WOOD PROTECTION

TANALISED® FRAME H2

LOSP Treated Termite Resistant Timber

Hazard level 2 (H2) according to AS1604 - Specification for preservative treatment, is defined as protected, interior timber applications where there is potential for termite attack. Examples are frames, trusses, sub-floor supports and similar timber internal building components. Timber products treated to H2 or a higher level are deemed to be termite resistant building materials according to the Building Code of Australia and AS3660.1 Termite management – New building work.

LOSP stands for Light Organic Solvent Preservative. This technology is ideal for the protection of structural timber and engineered timber products used in common building applications.

Most of the mainland areas of Australia have a termite hazard and protection of new buildings or extensions is required under the Building Code in these areas. Many populated areas have a high or even very high termite hazard as determined by the CSIRO survey (refer to the hazard map on opposite page).

Clearly, building material durability is an important consideration. The designer and builder should be aware of the need for durability as advised in Clause 1.10 and Appendix C of AS1684 - Residential timber frame construction.

Tanalised Frame H2 treated timber structure provides insurance that the structural integrity of the building will not be compromised even if termites breach the primary barriers, which they can often do. The additional cost of Tanalised Frame protection for an average house is only a fraction of the typical repair

costs where termites cause structural damage. Koppers Arch recommends the following three tiered approach for best practice in managing the risk of termite attack.

- ◆ Design and build in a termite barrier system conforming to AS3660.1.
- ◆ Design and build in durability for all concealed structural timber components with Tanalised Frame H2 LOSP treated termite resistant timber products.
- ◆ Design and build in ease of inspection for on-going maintenance.

The specifier is advised to be aware of the following considerations when specifying Tanalised Frame H2 LOSP treated termite resistant timber products.

Tanalised Frame H2 is suitable for hazard level 2 only and must not be used in a wet or weather exposed applications. If protection against fungal decay as well as termites is required for an exterior exposure (eg: window frames) then H3 level treatment should be specified for those components.

Timber species – Not all timber species are suitable for LOSP treatment. Most pinus species and some hardwoods are suitable but advice should be sought from the supplier or Koppers Arch regarding other species. A wide range of solid timber and engineered wood products such as plywood, "I" beams and laminated veneer lumber (LVL) can be supplied with Tanalised Frame protection. Contact your supplier for details.

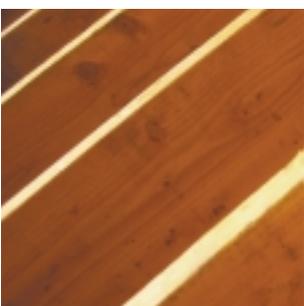
Painting: The Tanalised Frame treatment may contain a red or orange marker dye. Steps may need to be taken to avoid dye bleed if the timber is to be painted. Refer to Koppers Arch Guidelines for Painting Tanalised LOSP Treated Timber and AS2311 – The painting of buildings for further details.

End cuts that are closely butted to or joined against other treated timber need not be resealed in H2 applications. Refer to the application notes on the back page.

Tanalised Frame is non-corrosive to metal fasteners and does not affect nail plate holding or plaster board adhesion.

The Tanalised Frame treatment does not affect the structural grading of the timber products.

Koppers Arch and our partner suppliers provide a specifically developed 25 year structural guarantee on Tanalised Frame products. Contact Koppers Arch or your supplier for details.



Built in durability against termites



TANALISED® FRAME H2

TANALISED® CLEAR & PRE-PRIMED H3

LOSP Treated Structural & Architectural Timber

Hazard level 3 (H3) according to AS1604 is defined as exterior and above ground timber applications where exposure to weather and moisture may promote decay and/or termite attack.

Examples are decking, and deck supports, pergolas, cladding, exterior window and door frames, reveals, fascia, verandah posts, handrails, pickets and similar timber building components.

LOSP stands for Light Organic Solvent Preservative. This technology is ideal for the protection of structural and architectural timber products from decay and termites in common exterior building and structural applications.

Because Tanalised Clear LOSP treatment is an inherently "dry" process it does not affect the moisture content or dimensions of the timber. Thus a wide range of Tanalised Clear and Pre-Primed timber products are available including traditional sawn solid timber, finger jointed and glue laminated timber products as well as engineered timber products such as laminated veneer lumber (LVL) and plywood.

Tanalised Clear is also ideal for joinery such as window and door frames where precision machined timber components are required to have durability against decay and termites. (Refer to Section 3.2 of AS2047 Windows in buildings – Selection and installation)

Any building application with timber should consider the durability requirements as detailed in

Clause 1.10 and Appendix C of AS1684 Residential timber frame construction, and in other relevant standards and codes. Low natural durability timber should not be used in weather exposed or ground contact applications without preservative treatment conforming to AS1604.

The specifier is advised to be aware of the following considerations when specifying Tanalised Clear & Pre-Primed LOSP treated timber products.

Tanalised Clear and Pre-Primed is suitable for hazard level 3 application as defined in AS1604. Tanalised Clear & Pre-Primed verandah posts for example must be installed using appropriate above ground anchor brackets or stirrups. If protection in ground contact is required such as with posts set in ground, then H4 or H5 level treatment must be specified such as Tanalised Ecowood or Tanalised CCA.

Timber species – Not all timber species are suitable for LOSP treatment. Most pinus species and some hardwoods are suitable but advice should be sought from the supplier or Koppers Arch regarding other species.

Painting - It is important that Tanalised Clear timber is painted or stained for exterior, weather exposed applications to prevent surface deterioration and mould. Tanalised Clear & Pre-Primed is suitable for coating with normal paints and timber stains. Tanalised Clear Pre-Primed is supplied with a factory applied holding primer which is normally pink or sometimes grey. However this primer coat is not intended for long term protection in the end-use situation and is not a substitute for full painting. Refer to the Koppers Arch Guidelines for Painting Tanalised LOSP Treated Timber, the Australian Paint Manufacturers Federation and AS2311 – The painting of buildings for further information.

Tanalised Clear & Pre-Primed treatment is non-corrosive to metal fasteners. However galvanised steel or other corrosion resistant fasteners are recommended for use in weather exposed situations.



Built in durability against decay and termites



TANALISED® ECOWOOD

The Natural Alternative

Tanalised Ecowood is an environmentally advanced treated timber product that incorporates Tanalith E, a unique Copper Azole based wood preservative system. The first European registrations and commercial uses of Tanalith E Copper Azole preservatives commenced in 1992. This early progress has led on to further developments and product improvements in response to evolving regulatory and market conditions. Arguably, on a global basis Copper Azole preservatives have become the most commercially and technically successful copper based formulation of all the chromium and arsenic free wood preservatives yet developed. Today Copper Azole preservatives are in wide use around the world including many countries in Europe, the United States and more specifically Japan, Australia and New Zealand in the Asia Pacific region.

Increasingly throughout the world, more stringent compliance standards and community expectations have driven the need for new timber preservatives with improved environmental profile. Tanalised Ecowood is a significant step in addressing these needs and is particularly recommended where durable treated timber products must meet the highest expectations for safety and environmental protection. It achieves this by using modern, clean chemical technology that reduces environmental risks during manufacture and use and presents a superior range of viable options for product disposal or recycling at the end of service life.

Tanalised Ecowood is approved for hazard level 3 and 4 applications as per AS1604. Hazard level 3 is defined as exterior and above ground timber applications. Hazard level 4 refers to more severe situations where timber will be in ground contact which requires a higher level of protection. These hazard levels cover the majority of outdoor timber building and landscaping applications where long term protection against decay and termites is required.

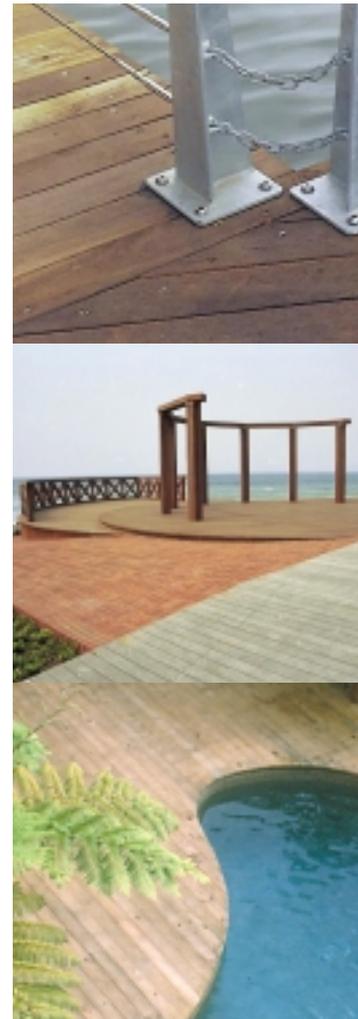
Tanalised Ecowood is ideal for sensitive applications that still require robust levels of protection such as outdoor and garden furniture, pool side decking, playground equipment, walkways and landscaping in fragile wetlands, wilderness or national park areas.

The specifier is advised to be aware of the following considerations when specifying Tanalised Ecowood.

Timber species – Tanalised Ecowood is available in common hardwood and softwood timber products. Sawn softwood timber such as radiata or slash pine for use in structural applications should be dry (10 – 15% moisture) at the time of supply. Ensure that if structural Ecowood pine is required that an appropriate structural grading (ie: F7) and "dry after treatment" is specified.

Ensure that the Tanalised Ecowood product is treated to the correct hazard level, H3 for above ground and H4 for non-structural ground contact applications.

Painting: Tanalised Ecowood can be painted like normal timber once dry and clean. Painting or staining of dimensioned timber in exterior, weather exposed situations is strongly recommended to minimise surface moulds, checking, sun bleaching and dimensional movement. Galvanised steel or other corrosion resistant fasteners are recommended for use in all weather exposed or ground contact situations. Tanalised Ecowood should not be installed in direct contact with zinc-alume sheet roofing as corrosion may result. Use pre-painted roofing or install a durable water resistant membrane between the materials.



Built in durability against decay and termites



TANALISED® ECOWOOD™

TRADITIONAL TANALISED® CCA

A proud record of service

CCA stands for copper, chrome arsenate and this remarkable wood preservative has been in use for over fifty years. It has stood the test of time and even today is still preferred when the timber product must last in the most severe environments. Tanalised CCA

is the longest serving and most widely used timber treatment in Australia, New Zealand and many other parts of the world. Even in countries where CCA has been withdrawn from residential applications, it is generally retained for utility, structural and rural uses where low maintenance and high durability are essential.

The unique properties of Tanalised CCA make it the ideal choice where treated timber products must have the highest levels of durability and engineering safety. Examples are engineered retaining walls, bridges, safety barriers, building and utility poles, foundation piles, sea walls, marine piles and industrial applications such as cooling tower fill. Tanalised CCA is ideal for rural and agricultural applications such as vineyard posts and hail net poles. Of course Tanalised CCA can also be used for normal domestic construction and landscaping applications although Koppers Arch recommend that alternatives such as Tanalised Ecowood should be considered in these cases.

Tanalised CCA is suitable for application in all the hazard levels listed in AS1604 – Specification for preservative treatment (refer to hazard level guide). However it is important to understand that timber should not be used in a situation at a higher hazard level than that for which it is branded. In particular, Tanalised CCA timber branded for H3 application should not be used in ground contact (H4). Tanalised CCA timber branded H4 should not be used for structural or critical in-ground applications (H5). Structural or critical use in-ground applications

include foundation piles, building poles, engineered retaining walls, permanent fresh water contact and certain industrial applications such as cooling towers.

Marine water exposure (H6) is the most severe service condition that timber is subject to. However the exact product requirements vary depending on the site (southern or northern waters). It is strongly recommended that specialist advice is sought prior to specifying for H6 applications.

The specifier is advised to be aware of the following considerations when specifying Tanalised CCA.

Timber species – Tanalised CCA is available in common hardwood and softwood timber products.

Sawn softwood timber such as radiata or slash pine for use in structural applications should be dry (10 – 15% moisture) at the time of supply. Ensure that if structural Tanalised CCA pine is required that an appropriate structural grading (ie: F7) and "dry after treatment" is specified.

Galvanised steel or other corrosion resistant fasteners are recommended for use in all weather exposed or ground contact situations. Stainless steel fasteners and connectors (or metals of high corrosion resistance) should be used for critical applications where very long service life is required and where additional sources of corrosion are present such as salt.

Tanalised CCA should not be installed in direct contact with or over zinc-alume sheet roofing as corrosion may result. Use pre-painted roofing or install a durable water resistant membrane between the materials.

Tanalised CCA off cuts and redundant pieces are not a hazardous waste. However it is recommended that care is taken to dispose of this waste properly (as solid waste). It should not be mixed with green waste for composting and MUST NOT be burnt as toxic fumes or residues may be produced.



Built in durability against decay and termites



TREATED TIMBER HAZARD LEVEL GUIDE

The specifier or designer should ensure that the Tanalised timber is used is specified to the correct hazard level. Using treated timber in a higher hazard level than it is intended for may result in premature failure. Note that the hazard level of treatment is not related to the stress grade or other engineering properties of the timber.

H1

Inside, above ground, dry

Insect borer (other than termites) hazard
Framing, flooring, furniture etc.

(Contact Koppers Arch for information regarding Diffusol)



TANALISED CLEAR



DIFFUSOL

TANALISED H1



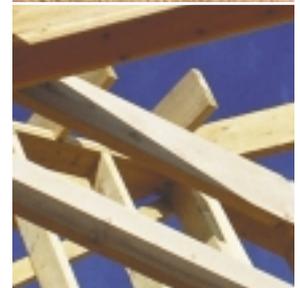
H2

Inside, above ground, dry

Insect borer and termite hazard
Framing, flooring, trusses



TANALISED FRAME H2



H3

Outside, above ground

Moderate fungal decay and termite hazard
Decking, fencing, cladding, fascia, window
joinery, exterior structural timber



TANALISED CCA



TANALISED CLEAR H3



TANALISED ECOWOOD



H4

Outside, in ground

High fungal decay and termite hazard
Fencing, greenhouses, pergolas,
non-structural and landscaping timbers

(Contact Koppers Arch for information regarding Creosote)



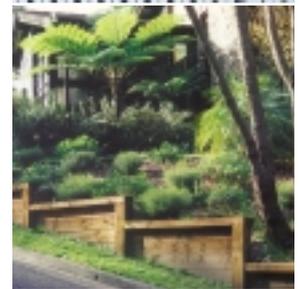
TANALISED ECOWOOD



TANALISED CCA



TANALISED CREOSOTE



H5

Outside, in ground or fresh water

High fungal decay and termite hazard
Engineered retaining walls, building poles,
pilings and cooling tower fill, structural or
critical applications

(Contact Koppers Arch for information regarding Creosote)



TANALISED CCA



TANALISED CREOSOTE



H6

Marine water exposure

Marine borers hazard
Marine piles, jetty crossbracing,
landing steps, sea walls

(Contact Koppers Arch for information regarding Creosote)



TANALISED CCA



TANALISED CREOSOTE



ADDITIONAL APPLICATION NOTES:

Tanalised protection can not be applied by the end user or on site. A conforming Tanalised product can only be provided by pre-treatment in dedicated industrial facilities prior to supply.

Tanalised timber products should not be re-sawn, or re-sized after treatment (except for cutting to length or notching as required for fitting and joining). These processes may reduce the protection afforded by the treatment and may void the product guarantee. Where timber is cut or rebated in H3, H4 and H5 situations, the exposed areas must be resealed with a suitable 'in-can' preservative to ensure that a satisfactory preservative envelope is maintained. In H4 situations it is recommended not to place a cut end in ground contact. For H5 applications a cut end must not be placed in ground or water contact and doing so may void the guarantee. No cutting or notching should be done after treatment on H6 level treated timber in the water contact zone.

It is strongly recommended that all dimensioned Tanalised timber in weather exposed applications is painted, stained or sealed to avoid surface deterioration, checking and dimensional movement. Tanalised timber can be painted or stained like normal untreated timber providing that it is dry and clean. The paint manufacturers' instructions should always be followed. The Australian Paint Manufacturers Federation can also be contacted for further information.

Corrosion resistant fasteners, fixings and connectors should be used in all weather exposed, damp or ground contact applications.

SOME RELEVANT AUSTRALIAN STANDARDS

AS1604 - Specification for preservative treatment - Parts 1-5

AS1684 - Residential timber frame construction

AS3660 - Termite management - Part 1, New building work

AS2311 - The painting of buildings

AS2047 - Windows in buildings - Selection and installation

AS1720 - Timber structures - Design methods
(including handbook HB 108 -1998)

AS4678 - Earth Retaining Structures

KOPPERS ARCH
WOOD PROTECTION

SAFETY AND ENVIRONMENTAL PROTECTION:

Tanalised timber products are safe to use however as with handling many materials, certain precautions should be observed, particularly where machining or sanding generates wood dust and air borne residues. Detailed handling guides, consumer information sheets and material safety data sheets are available from Koppers Arch for further information.

Tanalised treatment facilities are required to conform to strict environmental regulations and are under the jurisdiction of environmental protection authorities in each state. Tanalised preservatives are approved by the National Registration Authority and other regulatory authorities.

Tanalised timber wastes and off cuts are not hazardous waste. However care should be taken to dispose of these waste appropriately through normal disposal services. Treated timber wastes should not be mixed with general green waste for composting. Treated timber should not be burnt in uncontrolled situations.

CONSUMER PROTECTION:

In addition to all statutory consumer rights under law, Koppers Arch and our partner suppliers provide a limited Lifetime Guarantee on Tanalised outdoor timber. Contact your supplier or Koppers Arch for further details.

FURTHER INFORMATION:

Koppers Arch have a wide range of technical, safety and application literature available. For further sources of information contact the Timber Preservation Association of Australia, the CSIRO Division of Forest Products, your state Forestry, Building Information or Timber Advisory Service, the National Registration Authority or Worksafe Australia.

This information is presented in good faith and is believed to be accurate based the best available advice and knowledge at the time of printing. However due to the variability of application situations, the user must satisfy themselves as to the suitability of the information or the products for any particular purpose or circumstance.

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