

Tanasote™ S40

Treated Timber User Guide



TANASOTE pressure treated timber has been impregnated with TANASOTE wood preservative under controlled conditions in a vacuum pressure timber impregnation plant.

TANASOTE is an oil based wood preservative which contains copper and innovative organic co-biocides, specifically designed to minimise early failures whilst providing a long service life. When impregnated into the timber the oil remains mobile enough to continue to actively protect the timber in service as small checks and/or cracks form, whilst the active ingredients remain fixed in the timber for long-term protection.

TANASOTE has been designed to protect and extend the service life of industrial timber applications, such as communication poles, railway sleepers and hard landscaping. Extensive efficacy testing has shown that TANASOTE treated timbers will deliver a desired service life of up to 40 years. As is the case with all wood preservative treatments, the actual service life will be impacted by the type of timber used and the end use application. TANASOTE treated timber used in high wear applications, such as railway sleepers (cross-ties) may see shorter service lives due to mechanical damage, for example, rather than decay or insect attack.

Tanasote Wood Preservative

TANASOTE wood preservatives are approved for use by the relevant regulatory authorities. The preservative and biocides contained in TANASOTE S40 are authorised and supported under the Biocidal Products Regulation (BPR).

Treatment Specifications

TANASOTE treatment process parameters can be varied, taking into account timber species, desired service life and to match the end use (Use Class) / commodity of the timber. It is therefore extremely important that the end use and species of the timber are clearly stated within the treatment specification. Use Classes are defined in EN 335:2013 but can be summarised for TANASOTE uses as follows:

- Use Class 3 uncoated - external timbers used above ground contact and uncoated, such as sleepers (cross-ties)
- Use Class 4 - external timbers used in ground contact (such as equestrian fencing, and utility poles)*, excluding immersion in surface water bodies.

Treated Timber Appearance

TANASOTE pressure treated timber can show a characteristic colour difference between the sapwood and heartwood, and varies between species, both immediately after treatment and

*Contact our Technical Team for latest specification details.

beyond. Some colour variations may occur due to the natural variability and relative proportions of heartwood and sapwood in certain species and darkening of some hardwoods may occur.

Typically timber treated with TANASOTE has an initial emerald green colouration, although with some species such as oak the extractives within the timber cause a darkening of the surface towards a brown colour. Upon external exposure, the green colour slowly darkens to a deep brown / black, and in the longer term may turn a natural silver grey. This weathering process does not indicate any loss of preservative protection.

Note that timber is a variable and natural product. Occasionally timber containing high or mobile resin levels can give differing colouration.

Post-Treatment Machining

As far as possible all cutting, machining, notching and boring is to be carried out prior to treatment. Where cutting, machining, notching and boring has to be carried out to treated timber, the area of timber revealed by the crosscuts, holes or notches must be liberally brushed with a suitable end grain preservative in accordance with the manufacturer's instructions to maintain the integrity of the preservative protection.

TANASOTE treatment is designed for heavy duty timbers, such as sleepers (cross-ties), equestrian fencing, and utility poles, and therefore treated articles should not be rip sawn, thickened, equalised or planed after treatment as this will negate the envelope of preservative treatment and could result in reduced surface life. 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. For more information on end grain preservatives contact our Advisory Service.

Gluing and Surface Coatings

Gluing and / or surface coating after treatment is not recommended. TANASOTE wood preservative is designed for heavy duty commodities such as utility poles and railway sleepers (cross-ties), which typically would not require gluing or coating after treatment.

Metal Fixings and 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. TANASOTE 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, especially given the mechanical wear or consequence of failure in these heavy duty applications.

Performance of metal fixings is influenced by the environmental conditions including moisture content, temperature, atmospheric pollution, proximity to coastal locations, and timber species.

- As TANASOTE treated timbers are designed for exterior use, where the timber is likely to become wet and a long service life is required, greater corrosion resistance will be achieved with use of austenitic grade 316 stainless steel, silicone bronze or copper in preference to other types of fittings.
- 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. The level of galvanising should be commensurate with the end use (e.g. BS EN 1461). The use of an automated nail gun may break the galvanised layer in lower grade metal fixings and compromise their performance at the outset.
- Electroplated metals only provide a thin coating and are unsuitable for exterior applications.
- Wherever possible, timber should be machined prior to treatment, however when that is not possible, 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 fixings is NOT recommended. Direct contact with aluminium should be avoided where the moisture content will exceed 18% or where condensation is possible.
- Where the use of aluminium is unavoidable in situations where moisture content will exceed 18%, it must be separated from the timber using a bituminous, epoxy or other impervious barrier or electrically insulating coating. The use of nylon/plastic washers is recommended.
- Fixings and fastenings used on safety critical and load bearing components should be inspected regularly and replaced if necessary.

CE / UK Marking

In the UK, the CE marking of permanently installed preservative treated construction timbers is required as part of the Construction Products Regulation. This means, for example, that if TANASOTE treated timber is used for structural components such as bridges, they would need to be CE Marked. However, it's imperative to note that as part of the EU Withdrawal Agreement, Great Britain has introduced the UK Mark and intends to end recognition of the CE mark by 1st January 2022. If further guidance on the product marking of TANASOTE treated timber is required, please contact our Technical Team.

End Use Considerations

TANASOTE is designed for preservative treatment of heavy duty applications such as Utility Poles, Sleepers (cross-ties), and agricultural / equestrian fencing. Treated timber should not be used where it may come into contact with surface water bodies / fresh water, 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 swabbed 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 the 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.

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.

If sawdust accumulates on clothes, clean them before re-use. Launder heavily soiled clothes separately from other household wash items.

On-Site Precautions

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

End Of Life

In the UK, TANASOTE treated end of life wood is covered by Waste Exemption U8 irrespective of the treatment date. This allows the placing on the market of re-used wood as long as it does not need treating in any way (e.g. unsound areas cut-out etc) before being sold.

TANASOTE treated sleepers, for example, could be placed on the market for certain end-uses prescribed in Waste Exemption U8. These end uses include construction of buildings, fencing, barriers, containment or similar above ground construction.

Waste Disposal

Where TANASOTE treated wood cannot be reused, it must be disposed of safely according to local regulations.

Wood treated with TANASOTE S40 is not considered hazardous waste in many applications, such as TANASOTE treated oak railway sleepers. However, certain species / commodities may be classified as hazardous when consigned as waste - please refer to the table below for guidance, and contact our Technical Team for further information and guidance if required.

TABLE 1: PRODUCT IN SAPWOOD

Density kgm ³	Heartwood %							
	50	55	60	65	70	75	80	
400	Haz	Haz	Haz	Haz	Haz	Haz	Haz	Non-haz
425	Haz	Haz	Haz	Haz	Haz	Haz	Haz	Non-haz
450	Haz	Haz	Haz	Haz	Haz	Haz	Haz	Non-haz
475	Haz	Haz	Haz	Haz	Haz	Haz	Non-haz	Non-haz
500	Haz	Haz	Haz	Haz	Haz	Haz	Non-haz	Non-haz
525	Haz	Haz	Haz	Haz	Haz	Haz	Non-haz	Non-haz
550	Haz	Haz	Haz	Haz	Haz	Haz	Non-haz	Non-haz
575	Haz	Haz	Haz	Haz	Haz	Non-haz	Non-haz	Non-haz
600	Haz	Haz	Haz	Haz	Haz	Non-haz	Non-haz	Non-haz
625	Haz	Haz	Haz	Haz	Haz	Non-haz	Non-haz	Non-haz
650	Haz	Haz	Haz	Non-haz	Non-haz	Non-haz	Non-haz	Non-haz
675	Haz	Haz	Haz	Non-haz	Non-haz	Non-haz	Non-haz	Non-haz
700	Haz	Haz	Haz	Non-haz	Non-haz	Non-haz	Non-haz	Non-haz
725	Haz	Haz	Haz	Non-haz	Non-haz	Non-haz	Non-haz	Non-haz
750	Haz	Haz	Non-haz	Non-haz	Non-haz	Non-haz	Non-haz	Non-haz

Waste Disposal continued

TANASOTE 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.

Further Information

TANASOTE S40 is a BPR authorised product. Use wood preservatives safely. Always read the label and product information before use.

For further information with respect to TANASOTE S40 treated timbers please contact us using the details below

Trading as Arch Timber Protection Ltd
Wheldon Road, Castleford, West Yorkshire, WF10 2JT
Telephone +44 (0)1977 714000 Fax +44 (0)1977 714001
E-Mail: timberprotectionadvice.ukca@lonza.com

All trademarks belong to Arch Timber Protection Ltd, an LSI company, or its affiliates or to their respective third party owners. The companies and assets comprising the Lonza Specialty Ingredients Business (LSI) were acquired by Herens HoldCoLtd. (Buyer), an entity controlled by Bain Capital Private Equity and Cinven, and LSI is no longer part of the Lonza Group Ltd. Neither Lonza Group Ltd nor any other member of the Lonza Group shall have any responsibility for this document, the use of any Lonza labels, or any other act or omission by LSI or the Buyer.

The information contained herein is believed to be correct and corresponds to the latest state of scientific and technical knowledge. However, no warranty is made, either expressed or implied, regarding its accuracy or the results to be obtained from the use of such information. Some products may not be available in all markets or for every type of application. Any user must make his own determination and satisfy himself that the products supplied by us, and the information and recommendations given by us, are (i) suitable for intended process or purpose, (ii) in compliance with environmental, health and safety regulations, and (iii) will not infringe any third party's intellectual property rights.

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

We review literature as and when necessary. Please ensure you have an up to date copy.

© 2021 Arch Timber Protection Ltd. All rights reserved.

www.trusttreatedtimber.com