Tanasote®

arxada

A NEW CHOICE FOR HIGH PERFORMANCE HEAVY DUTY TIMBERS

Tanasote® S40 is a modern oil-based copper preservative designed for high performance timbers such as railway sleepers, utility poles and landscaping timbers. With BPR (Biocidal Products Regulation) authorisation, it is supplied fully formulated and ready for use.

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Creosote has a long history in successfully protecting high performance heavy duty timbers, such as railway track timbers and utility poles, against the threat of decay or insect attack. However, from a regulatory point of view, its safety and environmental credentials have been under severe review, especially in Europe and the UK, for quite some time.

Like any other product, wood preservatives need to evolve with changes in the market place. We have a dedicated Research and Development team who look at how our product portfolio can continue to enhance the durability of wood as a sustainable resource. For over a decade the team have been working on Tanasote® – a wood protection technology developed as a modern day alternative for Creosote.

WHY TANASOTE?

Tanasote® is a hot oil-based wood preservative containing copper and innovative organic co-biocides. It has been specifically designed to minimise early failures whilst providing a long service life*.

In April 2021, Tanasote® was launched in Europe following Biocidal Products Regulation (BPR) authorisation. Across 22 countries, it has been granted the maximum 10 year authorisation (before re-authorisation) under the BPR, passing all necessary environmental, human and animal health risk assessments. It is the only oil-based wood preservative that has this authorisation.

**Depending on commodity, desired service life, timber species and application, service life requirements can vary. For more information on service life of different commodities please contact us.*

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KEY FEATURES OF TANASOTE

- Hot oil-based copper preservative designed to offer a high performance alternative to traditional Creosote treatments.
- Depending on timber species treated, and end-use application, Tanasote® has been designed to deliver a service life of 40+ years*, whilst minimising the risk of early failures.
- Oil-based product provides deep preservative penetration and mobility in the wood.
- Innovative organic co-biocide protecting against a wide spectrum of aggressive decay fungi.
- Incorporates a long lasting water-repellent to minimise splitting.
- Low odour from the preservative and the treated timber.
- Across Europe, Tanasote® has been granted the maximum 10 year authorisation (before re-authorisation) under the BPR.
- In the Risk Assessments[1] commissioned for the BPR Product Assessment for Tanasote® it was evidenced that:
  - No issues are to be expected when it (the product) is handled, stored or applied as recommended;
  - No unacceptable risk is identified for professionals or non-professionals working with Tanasote® treated timber, or for the general public;
  - Tanasote® treated timber is considered acceptable for the infants in a playground risk assessment scenario –*please note, Tanasote® has not been designed for this particular end-use application, but it reinforces the acceptable risk that the BPR process has identified.*
- Full Life Cycle Analysis available for Tanasote® treated utility poles and track timbers.
- It is both NWPC NTR and FCBA CTB P+ approved.
- The efficacy data for Tanasote® has been reviewed by BM TRADA, a reputable independent third-party assessor.
- It is award winning – Tanasote® won the Innovation Award at the Wood Protection Association (WPA) Awards, 2021.

* Depending on timber species treated, and end-use application, Tanasote® has been designed to deliver a service life of 40+ years.*

[1] For further detail refer to the *BPR Product Assessment Report for Tanasote® S40, 2021*

RAILWAY SLEEPERS

UTILITY POLES

LANDSCAPING TIMBERS

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TRUST IN PERFORMANCE THROUGH TESTING

The testing of wood preservatives is a well-documented procedure, covering both laboratory and field testing. In the development of new products across Europe and the UK, wood preservatives are commonly referenced against CCA and tested to the following Standards:

- **EN 252** - This European Standard specifies a field test method for evaluating the effectiveness of wood preservatives in a ground contact situation. To assess the protective effect of the preservative, wood treated with a reference preservative is included for comparison.
- **EN599-1:2009 + A1:2013** - For each of the five use classes defined in EN 335-1, this Standard specifies the biological tests required for evaluating the efficacy of wood preservatives for the preventive treatment of solid timber, together with the minimum ageing tests required for the respective use class.

Whilst the above EN Standards have played a significant part in the development of Tanasote®, they typically are used to predict a service life of between 15 to 30 years. For heavy duty timbers, it is imperative that a longer service life is provided, so as a business we have engaged in additional testing that goes above and beyond standard requirements.

To prove real world performance in the most demanding of environments, Tanasote® has been subject to additional testing in high humidity and aggressive field test sites as well as laboratory fungal studies. Testing of water-repellent properties has also been undertaken.

ACCELERATED FIELD STAKE TESTS

In the development of Tanasote® we adopted the Fahlstrom stake test method, which is an accepted fast approach to determine decay in a real-world environment through the use of thin stakes. The combination of a very small size and harsh conditions at the aggressive, high humidity field site in Florida, has enabled us to evaluate the long-term performance of Tanasote® treated timber compared with CCA as the reference preservative. In this testing we went beyond the standard CCA retention to demonstrate performance against preservative retention known to deliver a service life of 40 years. In addition, we also compared Tanasote® with a water-based copper wood preservative treatment.

Florida field stake test

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ASSESSING ENVIRONMENTAL IMPACT

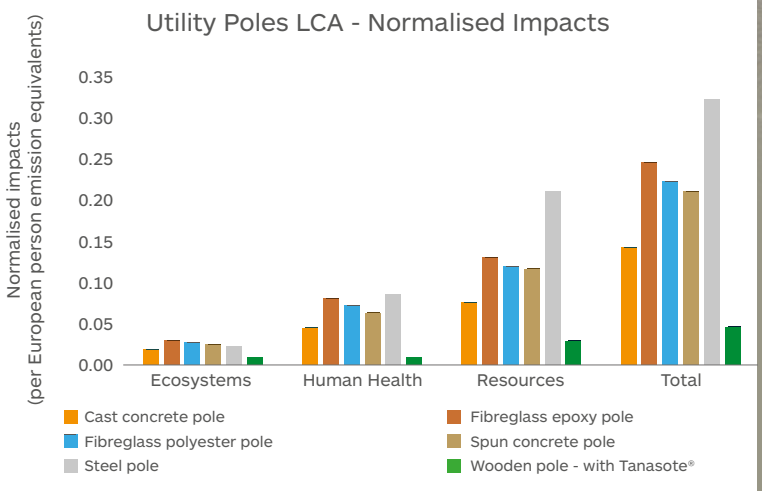
Investment in life cycle analysis (LCA) to evaluate the environmental impact of a product from cradle to grave is critical when comparing wood products with alternatives. For the development of Tanasote®, an LCA was carried out by independent practitioners following ISO 14040 and ISO 14044.

The LCA 'ReCiPe' method was adopted, covering analysis of the following three categories for end use applications such as railway sleepers and utility poles:
(i) damage to ecosystem;
(ii) damage to human health; and
(iii) damage to resources.

A sensitivity analysis was also completed to assess the influence of agricultural land occupation and terrestrial land transformation as part of the LCA.

SUMMARY OF LCA FOR UTILITY POLES

Looking specifically at utility poles, the LCA[2] results show that Tanasote® treated wooden poles were the lowest impact pole type when compared against a cast concrete pole, fibreglass polyester pole, steel pole, spun concrete pole and fibreglass epoxy pole. The Tanasote® treated wooden pole had the lowest impact in damage to ecosystems, damage to human health and damage to resource. Several sensitivity analyses also showed that the Tanasote® treated wooded pole was the lowest impact option.



[2] *ISO 14044 Life Cycle Assessment of Tanasote® S40 Treated Utility Poles* by Circular Economy, 2017.

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FIND OUT MORE

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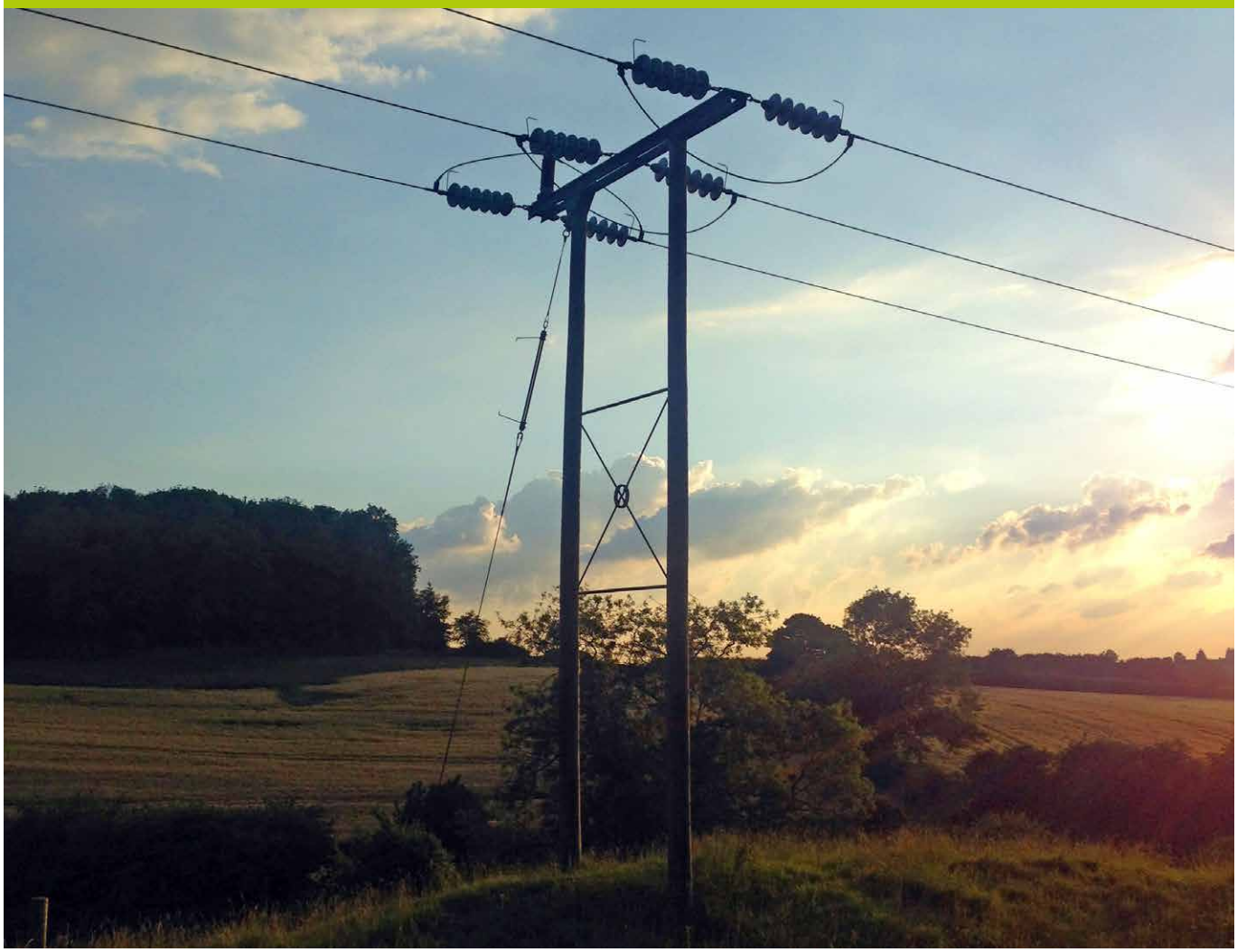
Tanasote® is a wood preservative developed and manufactured by Arxada.



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

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