

## 10 good reasons to choose



PRESSURE TREATED  
POWER & UTILITY POLES

- Proven protection against decay and insect attack - up to 50 year assured service life.
- Treated with odourless TANALITH preservative product.
- Clean, non-oily treatment.
- No migration and massing of preservative product at the base of the pole.
- Cost effective alternative to other products.
- Easy and safe to handle.
- Can be stored without the need to rotate, avoiding the cost of extra handling.
- Made from timber, our most natural and renewable material.
- Recyclable after use.
- Excellent corrosion, oxidation, fatigue and spalling resistance.



**Properly protected your timber  
transmission and telecommunication  
poles can last a lifetime...**



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25mm full sapwood TANALITH preservative penetration on eucalyptus pole, ensuring a long term and permanent protection.

Throughout the world, timber poles have been successfully utilised as an adaptable, cost effective and durable product in the power and utility industries. Timber has unique properties to offer against alternative pole materials: it is **readily available, light in weight yet strong in performance, easily worked and renewable**, making it the perfect choice for your next transmission or telecommunication project.

The service life of timber poles can also be extended by effective preservative treatment to protect the timber against the threat of fungal decay or insect attack. The timber treatment industry has traditionally had a choice between water based wood preservatives and solvent based creosote. For over 55 years, TANAPOLE pressure treated power and utility poles, treated with water based TANALITH wood preservatives from Arch Timber Protection, have been subjected to every soil and environmental condition imaginable. The results are well-proven in terms of **long service life, reliability, cost, cleanliness and safety**, and their unique position as a **renewable resource**. TANALITH treatment also provides excellent **resistance to oxidation, corrosion, fatigue and spalling**, making TANAPOLE the number one choice in Africa.

## TANALITH v Creosote

Creosote has been a traditional alternative to treatment with water based preservatives. However, its continued use is increasingly being questioned. It is now banned for domestic use in the European Union and completely banned in some African countries.

Based on petroleum, creosote prices also continue to rise. Specified retentions for creosote treatment are in the region of 115kg/m<sup>3</sup> -150kg/m<sup>3</sup>. Working on a creosote retention of 150kg/m<sup>3</sup>, typical costs for a treated 10 metre pole, ex works, are as follows:

TANALITH US \$150      Creosote US \$185

In addition, creosote treatment requires increased transport and storage costs due to the large amount of product consumed and no concentrate being available. Creosote treatment plants are also more expensive to run and maintain because of the energy required to heat the treatment fluid. Moreover, creosote is also aggressive towards the metals of a treatment plant.

A full list of benefits of treatment with TANALITH over creosote is shown on the back cover of this folder.

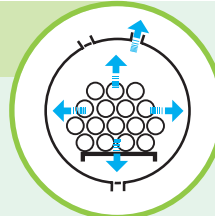


Creosote can leach from treated poles reducing its protection capability.



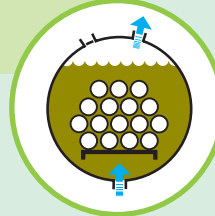
## TREATMENT PROCESS

1



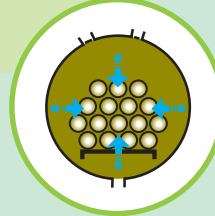
Timber is placed in an industrial treatment cylinder and an initial vacuum is created. The timber cells are evacuated of air and the vacuum is held.

2



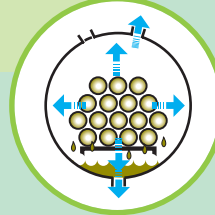
The cylinder is flooded under vacuum with TANALITH wood preservative.

3



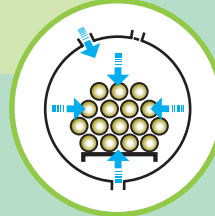
Hydraulic pressure is applied, forcing the preservative deep into the timber cells.

4



A final vacuum extracts excess preservative solution, which is pumped back to storage.

5



Low pressure inside the timber draws in surface preservative solution when vented to atmosphere. Treated timber is then stored until dry before despatch.

In Africa TANALITH preservative has been supplied for pole treatment since 1950 and is now the number one choice. This proven performance now allows an assured service life against the threat of decay or insect attack of up to **50 years** on new treated poles, with a likely long term performance beyond this.

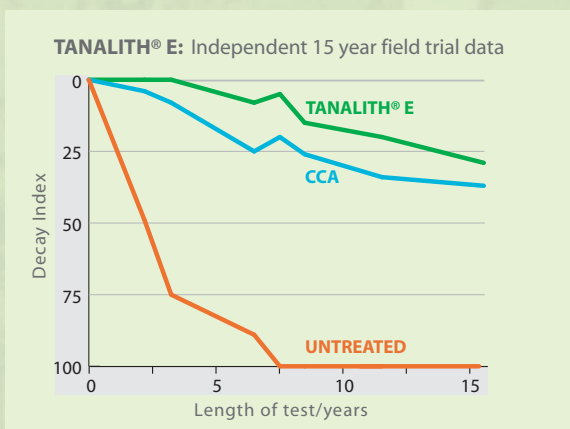
## A Choice of Treatments



Within most African markets there is still a choice of Arch TANALITH water based preservative products to protect your utility poles.

**TANALITH C** is a traditional CCA (chromated copper arsenate) product. Although restricted in its use in certain African markets as well as for exports to Europe, TANAPOLE products treated with TANALITH C are readily available and TANALITH C can be supplied to pole treatment companies.

**TANALITH E** is a new generation wood preservative from Arch, based on innovative copper and triazole technology, providing a performance to match TANALITH C preservative. First introduced in the early 1990s, TANALITH E treated timbers now have a proven performance across a wide range of markets and end uses, including utility poles.



*The graph shows that EN 252 field trial samples of TANALITH pressure treated stakes are providing outstanding performance, in an aggressive field test site, after 15 years. From this data you can be confident that commercial sized poles can achieve a desired service life of 30 years and beyond in ground contact.*



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## Standards and References

The current European Standard for utility poles is EN 14229 – Structural timber – wood poles for overhead lines. This Standard cross references EN 599-1 which lays down the testing requirements for wood preservatives. TANALITH conforms to the efficacy requirements of EN 599-1 and timber is treated in accordance with the penetration and retention guidance given in EN 351-1 to give a desired service life in the selected Use Class.

Use Classes are defined in EN 335-1. Utility poles are identified as a Use Class 4 item – treated timber in permanent ground contact.

TANALITH wood preservative is used and approved in over 30 countries worldwide. In authorising its use, independent international authorities have satisfied themselves as to the performance of TANALITH wood preservative.



## TANAPOLE Utility Pole Users

AES Sonel (Cameroon)  
Ethiopian Telecom Corporation  
Ethiopian Electric Power Corp.  
Ghana Ministry of Energy  
Volta River Authority, Ghana  
Electricity Company of Ghana  
Kenya Power and Lighting Co Ltd.  
Liberia Electricity Corporation  
Rwandan Electricity Company  
Southern Sudan Electricity Corporation  
TANESCO (Tanzania)  
UMEME Ltd. (Uganda)  
Uganda Telecom  
Zambia Electricity Supply Company

## Approved TANAPOLE Suppliers

Dupaul Wood Treatment (GH) Ltd. - Ghana  
Kakuzi Ltd. - Kenya  
Cabro East Africa - Kenya  
Timber Treatment International (formerly EATEC) – Kenya  
Tipsey Timber treatment Co. - Kenya  
Muwa Trading - Kenya  
Timsales – Kenya  
Comply – Kenya  
Rosoga - Kenya  
Raiply - Malawi  
Sao Hill Industries Ltd. - Uganda and Tanzania  
Mufindi Woodpoles Plant & Timber Ltd. - Uganda and Tanzania  
East African Pole Co. - Uganda  
Busoga Forestry Co. - Uganda  
Kampala Pole Co. - Uganda

# Creosote or TANAPOLE? The Choice is Simple!

## Creosote

- X** Creosote has a strong smell which is unpleasant for workers at the treatment plant and during pole installation.
- X** Creosote transfers onto the skin and clothes of workers handling the poles.
- X** Creosote is regarded as a primary skin irritant.
- X** Creosote leaches from the wood throughout the life of the pole. Tests in the USA suggest that these losses can be as high as 85% in wet conditions.
- X** Such losses cause a lowering of effectiveness, poisoning of the ground and contamination for surroundings and people.
- X** Remedial ground line maintenance of creosoted poles is often required because of leaching, therefore increasing costs.
- X** Creosote poles in storage need to be rotated periodically so the creosote does not sink to the lower side. This increases cost before the pole has even been installed.
- X** The cost of all petroleum based products, including creosote, is continually increasing.
- X** The European Union's Directive 2001/90/EC of October 2001 stated that "A recent study has concluded that creosote has a greater potential to cause cancer than previously thought."

Creosote can migrate from treated poles causing contamination problems.



- ✓** TANALITH is the most effective waterborne wood preservative ever developed.
- ✓** Effective against all wood destroying organisms.
- ✓** TANALITH treated poles have guaranteed service life up to 30 years.
- ✓** Odourless, non-tainting, non-flammable and compatible with a wide range of metal fixings.
- ✓** Very economical treatment – is not reliant on the cost of petroleum.
- ✓** Safe to humans, animals and plants when handled and applied correctly. Unlike creosote, TANALITH does not kill plants which come into contact with freshly treated timber.
- ✓** When impregnated into the timber, the chemical components of TANALITH preservative bond within the wood structure.
- ✓** Excellent pole strength - full-scale testing has shown that TANALITH treated poles meet all specifications required.
- ✓** Cleanliness - TANALITH treated utility poles are easier to handle, clean to the touch and non-staining to utility work crews.

TANALITH preservative bonds within the timber after treatment and cannot easily be removed.



**Arch  
Timber  
Protection**

Wheldon Road, Castleford, West Yorkshire, WF10 2JT, England.  
Tel: +44 (0)1977 714000 Fax: +44 (0)1977 714001  
E-mail: [advice@archchemicals.com](mailto:advice@archchemicals.com) [www.archtp.com](http://www.archtp.com)

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