

TREATED TIMBER POLES: GENERAL INFORMATION

There is often a misconception amongst end-users over the properties of treated poles. This brochure by SAWPA aims to address the misconceptions.

YOU CAN'T JUDGE A POLE BY IT'S COVER!

Some people mistrust timber because of past experiences – mainly from buying poles that failed prematurely as they didn't comply with the compulsory requirements. Treatment of poles with wood preservative chemicals is a science that requires specific processing, but there are illegal "fly-by-night treaters" who produce poles that give the impression of being treated but WILL fail after a short time. Your safeguard is buying poles from certified producers with the required quality mark of SANAS accredited bodies as proof of compliance.

HOW TO BUY A POLE

Poles with the required quality marks are deemed to have been prepared in such a way that they :-

- a) have the required amount of preservative termed as "retention and will not rot or be eaten by insects if the correct H class is used.
- b) have the preservative pressurised into the sapwood to a required depth, termed as "penetration". Poles are required to be seasoned (dried) and graded before treatment to ensure the required preservative uptake and reduce the chances of post-treatment splitting.
- c) are required to carry marking that shows the:-
 - i. identity or trademark of the producer,
 - ii. year the pole was treated,
 - iii. quality mark of a SANAS accredited body, and
 - iv. SANS 457 and H class (see hazard classifications)

To protect the end-user from malpractices, there are NRCS Regulations and a compulsory specification for preservative treated timber products. These require producers to be NRCS approved and have third party SANAS accredited certification to ensure conformity of compliance to the applicable SANS standards. Their mark of compliance means that the product is fit for the intended end use.

EUCALYPTUS (GUM) VERSUS PINE

Treated poles fall under the SANS-457-2 (pine) and SANS 457-3 (gum) standards and are preservative treated in accordance to SANS-1288.

Industry standards cater for both pine and gum poles. As a general guideline, pine is a softwood, has a larger sapwood to heartwood ratio and may be peeled/machined, while gum is a hardwood, has a lower sapwood to heartwood ratio and may be marginally stronger. Gum or pine poles produced according to the applicable part of SANS 457, are both suitable for use as structural, agricultural, fencing and general-purpose poles.

HAZARD CLASSIFICATIONS:

Because timber in service meets different degrees of hazard, the industry has developed a Hazard Classification. This specifies the amount of chemical required as well as the depth of chemical needed in each piece of timber to ensure long term efficacy in the given exposure. Here is a list of Hazard Classifications, highlighting the different exposures and uses:

H2	Internal above ground e.g. roof-trusses, flooring, etc.
H3	Exterior above ground e.g. outdoor decking, cladding, etc
H4	Exterior in ground e.g. fencing poles, carports, etc
H5	Freshwater or heavy wet soils e.g. retaining walls, jetties, walkways, agricultural/horticultural poles, foundation poles/pilings
H6	Marine e.g. harbour walls, jetty & walkway structures in direct contact with seawater.

The more hazardous the exposure and application, the more and deeper the preservative.

DIFFERENT COLOURED POLES:

There are two different colour variations available on the market. Creosote poles are normally brown to black and referred to as a tar pole. CCA is water based and poles are a light green colour. The wood preserving properties of Creosote and CCA are both able to effectively protect wood from attack by decay fungi and wood destroying insects. Other green (copper based) preservative types registered and available in South Africa is CuAz and ACQ, but their distribution is limited.

Borate is another water-based preservative but colourless which is sometimes favoured. Borate treated poles are however restricted in their use because of leaching of the preservative if used outdoors and is not suitable for in-ground contact.

THE ORIGIN OR POLES:

Poles come from plantations situated in Limpopo, Mpumalanga, KZN, Eastern Cape, Eswatini (gum) and Southern & Western Cape (pine). No matter where the pole is grown, if it complies with the SANS specification it is suitable.

PROPERTIES OF CREOSOTE AND CCA

PROPERTY		CREOSOTE	CCA
Efficacy	Fungi	Good	Good
	Termites	Good	Good
	Woodborers	Good	Good
	Marine-borers	Good as dual treatment	
Permanence (preservative losses)	Bleeding	Fair	None
	Leaching	Slight	None
	Evaporation	Slight	None
Penetration		Good	Good
Effect on wood properties	Strength	None	Slight
	Dimensions	None	Slight
	Flammability	Slight	None ¹
	Corrosiveness	None	Slight ²
	Paint ability	Poor	Good ³
	Glue ability	Poor	Good ³
	Colour	Dark	Light Green
	Odour	Strong	None
Cleanliness	Oily	Good	
Toxicity against insects		High	High ⁴
Water repellency		Good	None ⁵

1. Fencing poles treated with CCA may be damaged by intensive veld fires because of its susceptibility to "afterglow".
2. CCA-treated timber should be left for at least seven days after treatment before fixing metal fasteners or fittings.
3. Except where the preservative formulation contains a water-repellent system such as wax or waxy oil which may have a detrimental effect on the paint ability and glue ability of the treated timber.
4. Once it has completely reacted with the wood constituents, CCA-treated timber is completely safe to use and handle.
5. Water repellency may be improved with the inclusion of a wax additive.

IN SUMMARY - BUY SANS 457 COMPLIANT AND MARKED POLES

If you require further information on any aspect related to treated timber products, contact SAWPA on:

Tel: (011) 974-1061 / 078 144 6213

E-mail: admin@sawpa.co.za

Website: www.sawpa.co.za

