

LOOKING FOR THE RIGHT TREATMENT

Timber is the most environmentally friendly commercial building material available. Our only truly renewable natural resource, timber offers a range of functional qualities, inherent warmth and beauty and economic suitability which is unmatched by man-made alternatives.

Correctly treated with modern wood preservative products and processes, timber's long term durability and market appeal can be significantly enhanced.

Koppers Arch Wood Protection offers the most comprehensive range of industrially applied wood preservatives to provide complete protection against fungal decay and insect attack for every possible timber end use.

The ultimate objective of timber preservation is to give an extended service life to any timber structure.

This document helps explain the choice of treatments available appropriate to the end use of the timber and details the relevant South African National Standards and other regulatory issues applicable to the use of treated timber.

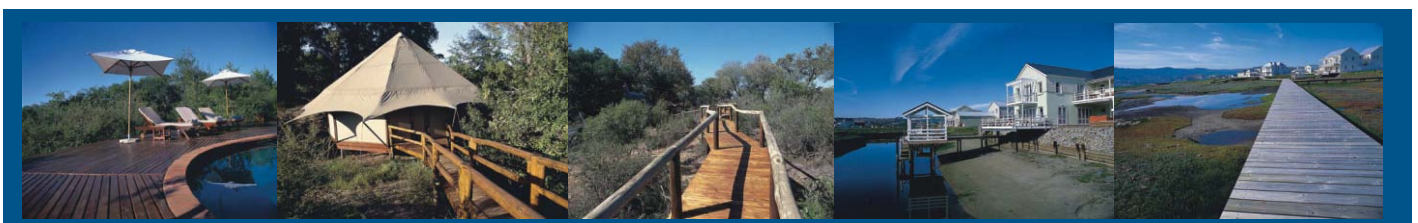


HAZARD CLASSES - PART 1

The hazard or level of risk to which wood material will be subjected to has a direct impact on the type of timber preservative that will be used as well as the amount of preservative which will vary with the hazard class.

The table below explains the different hazard classes as contained in the various National Standards:

Hazard Class	Hazard	Main Biological Activity	Typical Service Situation	Typical Service Situation
H0-1	Dry interior	Termites	Timber used under a roof, not in contact with the ground, not exposed to fungal attack, leaching or weathering. Only offers protection against termites.	Mouldings, Ceilings, Flooring Boards, Joinery.
H1	Dry interior		Not relevant to South Africa as only suited to countries where there are no termites.	
H2	Interior above-ground	Insect (borer & termites) Mild fungal	Timber under a roof and not used in contact with ground. Not exposed to leaching or weathering.	Sawn: Laminated beams, roof trusses, internal structural timber, ceiling boards, flooring, panelling, doors, cupboards, skirting, window frames, plywood. Poles: Roofing timber, interior structural.
H3	Exterior above-ground	Insect (borer & termites) Fungal	Timber not in contact with the ground, but exposed to leaching & weathering.	Sawn: Balustrades, fencing bearers & slats, outdoor decking & beams, garden furniture, laminated beams, weather boards, steps, cladding, stairs, gates, fascia boards, sawn droppers, slabbed poles, cylindrical rails, half round. Poles: Laths, machined poles for log homes, landscaping structures, playground structures, general purpose building poles, pergolas, carports.
H4	In ground contact	Insect (borer & termites) Heavy fungal	Timber in direct contact with the ground.	Sawn: rectangular posts, landscaping structures, fencing, pergolas, carports, flower boxes, decking, bridges, playground structures, rail bearers. Garden Edging. Poles: general purpose poles, piling, landscaping structures, fencing, pergolas, carports, agricultural posts, vineyards.
H5	In contact with fresh water	Insect (borer & termites) Heavy fungal Wood rot	Timber in constant or periodic contact with fresh water or heavy wet soils.	Sawn: Piling, retaining walls, slipways, groynes, jetties, walkways. Poles: Slipways, groynes, jetties, walkways, bridges, piling, agricultural poles, poles under flood irrigation.
H6	Marine contact	Insects (including marine borer) Decay	Timber in constant or periodic contact with estuarine or sea water.	Sawn: Piling, retaining walls, slipways, groynes, jetties, walkways. Poles: As above.



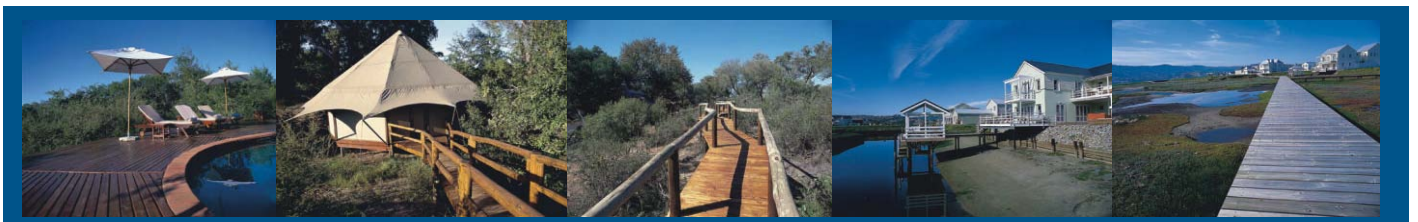


MAKING THE RIGHT CHOICES

HAZARD CLASSES - PART 2

The **TANALISED**® User Guide shows where the different **TANALISED**® products can be used, vis-a-vis the Hazard Classes.

	HO-1 Dry Interior	H2 Interior above- ground	H3 Exterior above- ground	H4 In-ground contact	H5 in contact with fresh water	H6 Marine contact Dual treatment with creosote
	✓	✓	✓	✓	✓	✓
	✓	✓	✓ + coating	-	-	-
	✓	✓	-	-	-	-
	✓	✓	✓	✓	✓	-
	✓	✓	✓	✓	✓	✓ Dual treatment with creosote





MAKING THE RIGHT CHOICES



Timber treated with TANALISED® C (CCA) preservative, a waterborne copper chrome arsenate preservative which can be specified in both in and out-of-ground contact applications, for example - roofing, general construction, decking, fencing, garden and leisure timbers.

It offers comprehensive protection (medium to high risk) against wood boring insects, termites and fungal decay. Due to the copper base ingredient of the preservative, the treated timber is light green in colour and is leach resistant.



Timber treated with TANALISED® V, an organic solvent based timber preservative can be specified in interior (H2) and exterior above-ground (H3) structural applications. For H3 applications, a suitable water repellent and UV resistant coating must be used.

This treated timber, marketed as TANALISED® CLEAR timber is a dry-after treatment product that is dimensionally stable and most suited for appearance type applications due to its light honey colour, for example - laminated beams, flooring, ceiling and timber mouldings.



TANALISED® timber (sawn and poles) treated with Flambor®, which is a waterborne Boron based preservative with a fire retardent additive, can be specified for interior applications (H2).

Flambor® treated timber is colourless and when it is dry, can be painted, stained or glued, for example - thatch roofing, timber balustrades, general construction, interior / exterior above-ground leisure timbers.



Timber treated with TANALISED® E preservative (overseas branded as Wolman E) is a water borne product based on copper triazole technology.

This treated timber is marketed as TANALISED® ECOWOOD and can be specified for both in and out-of-ground contact applications where there is a medium to high risk of decay or insect attack. The treated timber is light green in colour and is well suited to environmentally sensitive applications, for example - general construction, decking, fencing, garden, leisure and playground timbers.



Timber treated with a combination of TANALISED® C preservative and special additive Weatherwood®, which provides special water repellent properties to the timber.

Weatherwood® poles and sawn timber are light green in colour and can be specified for all above-ground and in-ground applications where high risk protection against decay and insect attack is required, for example - fencing, decking, roofing (thatch), landscaping (water contact), vineyard and other agricultural applications.








OFFERING A CHOICE THAT IS GUARANTEED

Koppers Arch Wood Protection, the manufacturers of TANALISED® timber preservatives has a comprehensive guarantee program.

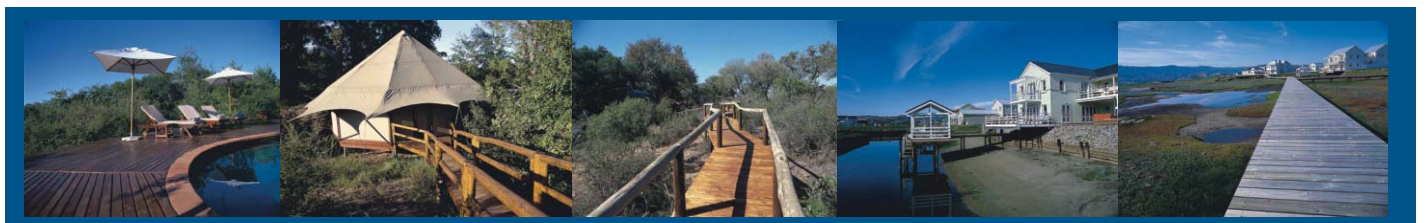
The TANALISED® Guarantee is:

- a guarantee against insect attack and wood decay;
- A replacement guarantee of timber rendered structurally unserviceable;
- transferable from one owner to the next.

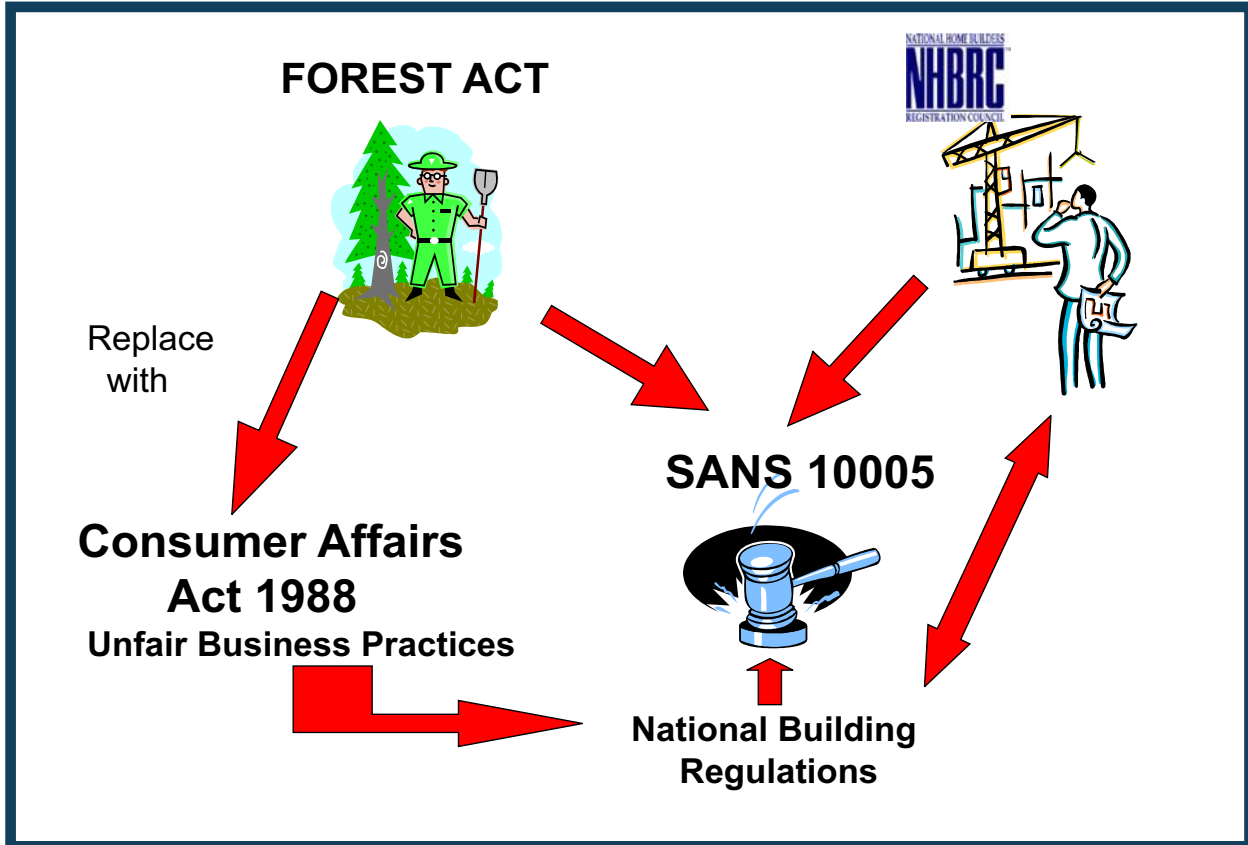
	*Guaranteed period	H2 (interior above-ground)	H3 (exterior above-ground)	H4 (in-ground)
	50 years (structural sawn timber)	✓	✓ + painted or stained	-
	25 years (structural sawn timber, laminated & timber mouldings)	✓	✓ + water & UV resistant coating	-
	25 years (poles)	✓	✓	✓
	50 years (sawn timber)	✓	✓	-

*Refer to guarantee brochures for terms and conditions

An important requirement of the guarantee is that for all TANALISED® timber that is end-cut, drilled or machined, the exposed areas are re-sealed with approved re-sealing product such as TANALISED® ENSEAL GREEN or TANALISED® ENSEAL CLEAR. The TANALISED® ENSEAL range of products are penetrating solvent based wood preservative sealers offering fungicidal and insecticidal protection.



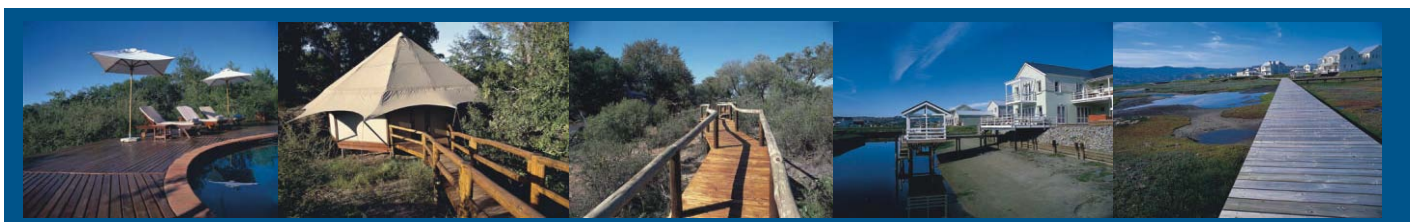
Treatment of timber is governed by various regulatory drivers as outlined in the diagram below:



Up until now, timber treatment has been legislated in the Forest Act, which is still in force but will be replaced in the very near future with the Consumer Affairs (Unfair Business Practice) Act 1988. The enforcement of this Act falls under the Department of Trade & Industry. The amendments to this Act applies to all treated timber and not only structural timber, as was the case previously.

The key provisions in the Consumer Affairs Act 1988 regarding the Sale of all Treated Timber are:

- No person shall sell treated timber for compensation or any other consideration unless the timber has been preserved and carries the product certification mark of a body acceptable to the South African National Accreditation Systems (SANAS). At this stage, this would be a SABS mark or a SATAS mark.
- "Certification mark" means an inspection, quality or performance mark used under permit issued by an accredited inspection and certification body.
- "Preserved" means the treatment of timber with a remedy as prescribed in the Code of Practice of South African National Standards (SANS 10005): The Preservative Treatment of Timber.
- "Treated Timber" refers to all timber that has been preserved with the intention of protecting the timber against timber destroying factors or agents.
- Any person contravening these regulations shall be liable on conviction to a fine up to R4000 or imprisonment for a period of 12 months.





TIMBER TREATMENT REGULATIONS

The National Building Regulations, clause A13 - Building Materials and Tests, has the following requirements as far as the treatment of structural building timber is concerned:

- Timber materials used shall be treated against termite, wood borer attack and fungal decay using the recognized method and according to SANS 10005 (previously SABS 05).
- The local authority may require proof of such treatment and if testing is required, make necessary arrangements for a sample of timber to be removed for the purpose of testing.
- If the material does not comply to these regulations, the local authority can serve a notice on the person erecting the structure to stop using this material for that particular purpose. Costs of these tests may be recovered from this person.
- Unless the local authority permits the use of such material, on receipt of the above notice, this material must be removed.
- If the owner of the building desires to use material not permitted by these regulations and satisfies the local authority that the material used is as suitable for the required purposes as the prescribed material, then the local authority may permit the use of such material.

The National Home Builders Registration Council, in its Home Builders Manual (Clause 2.2.1.1 of Part 1, Section 2) states: "All timber to be used in a building, shall comply with the requirements of SABS 05 (will change to SANS 10005) and shall bear the certification mark of SABS or the certification mark of any other standards authority".

RELEVANT NATIONAL STANDARDS

The National Standard which is the central pivot in treatment of timber in South Africa, is SANS 10005 (SABS 05) "The Preservative Treatment of Timber".

The preservative treatment of timber shall comply with provisions of the following specific use-type standards:

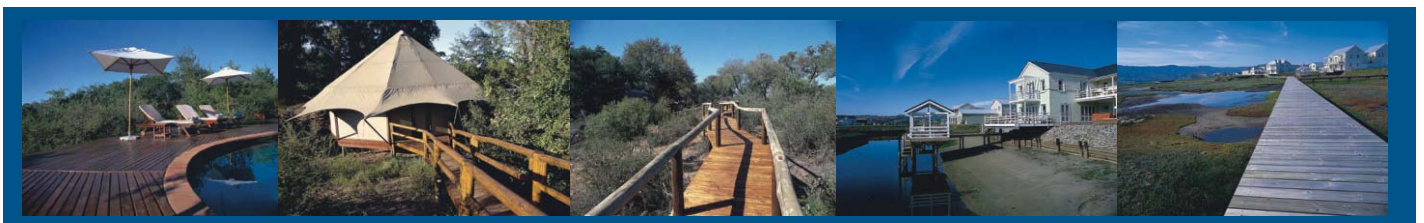
SABS	In time these will be changed to South African National Standards (SANS).
1288 : 1994	Preservative treated timber - Sawn softwood preservatives.
457 (2): 2000	Softwood Species: wooden poles, droppers, lathes, guard-rail posts and spacer bars.
457 (3): 1994	Hardwood Species: wooden poles, droppers, lathes, guard-rail posts and spacer bars.

The operation of treatment plant must comply with the provisions of SANS 10255 (SABS 0255).

SANS 10005 refers to two main timber species used as structural building timber, namely Gymnospermae and Angiospermae.

1. Gymnospermae

These species are typically your soft wood coniferous variety of trees, such as radiata pine. Sawn timber (including planed and profiled), poles or logs (round or partly round) from these species shall be treated in the following municipal areas or towns:



Amahlati, Bergrivier, Big Five Falsebay, Bitou, Breede Valley, Breede River (Winelands), Buffalo City, Cape Agulhas, Cederberg, City of Cape Town, Drakenstein, Durban Metropolitan, eNdongakusuka, Ezingolweni, George, Great Kei, Hibiscus, Hlabisa, Impendle, Jozini, Kamiesberg, King Sabata Dalindyebo, Knysna, Kouga, Kou-kamma, Kwadukuza, Langeberg, Makana, Maphumulo, Matzikama, Mbonambi, Mbhashe, Mbizana, Mkhambathini, Mnquma, Mooi Mpofana, Mossel Bay, Mthonjaneni, Mtubatuba, Mzunduzi, Nama Khoi, Nelson Mandela Metropolitan, Ndlambe, Ndwedwe, Nkonkobe Ngqushwa, Ntambanana, Nyandeni, Overberg District, Overstrand, Port St Johns, Qaukeni, Richmond, Richtersveldt, Saldanha Bay, Stellenbosch, Sunday's River, Swartland, Swellendam, Threewaterskloof, Ubuhlebezwe, Umdoni, Umngeni, uMhlathuze, uMhlabuyalingana, uMlalazi, uMshwati, uMuziwabantu, Umvoti, Umzumbe, Vulamehlo, Witzenberg.

2. Angiospermae

These species are typically your hardwood broad leaved variety of trees. All sawn and planed timber (excluding laminated timber, block and strip flooring, ceilings, paneling, mouldings and joinery, garden furniture and outdoor decking boards), poles or logs (round or partly round) from these species shall be treated as per the previously mentioned standards.

IMPORTANT NOTE:

Although the treatment of sawn timber is not legislated in inland municipalities, it is still advisable to specify treated timber for the following reasons:

- Commercially grown timbers are not durable as they contain high levels of starch which can suffer rapid degrade if exposed to moisture and wood destroying insects.
- Permeability of wood, particularly with softwoods such as pine, enables one to penetrate with chemicals toxic to these organisms. For this reason, treated softwood provide a very effective barrier against fungi and insects.
- Borer is less likely to occur in non-coastal areas, however, wood destroying organisms know no geographic boundaries and there have been ad hoc outbreaks in Mpumalanga - Nelspruit and White River.
- The real threat inland is subterranean termites and wood rot. With South Africans generally not being as maintenance conscious as countries such as the USA, it is quite possible for water ingress occurring in a roof. Untreated roofing timber creates the ideal situation for wood rot to set in. One just has to think of the "leaky building syndrome" in New Zealand and the millions of dollars in claims that have arisen.
- Treatment extends the service life of timber products as the preservative is fixed into the wood structure and is very resistant to leaching, resists wood decay and insect attack and is extremely cost effective protection.

The TANALISED® treatment guarantee program gives the home owner the added peace of mind that his or her investment is protected for years to come against insect attack and fungal decay.

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