

Guidance Note

Wooden piling or foundation poles used for permanent buildings

November 2015



South African Wood Preservers Association

1. Background and purpose

H4 treated wooden poles are used in most normal ground contact applications in South Africa. According to the SANS 457-2 (Softwood species) and SANS 457-3 (Hardwood species) standards, the expected service life of timber used in ground contact should be at least 20 years or longer if treated and used correctly. However, in the case of a permanent timber building the required lifespan should be in excess of the minimum period given in the standards, and in all likelihood should be equal to the expected lifespan of any normal brick and mortar house if maintained accordingly.

This Guidance Note provides guidance to specifiers, designers, engineers, timber frame builders, or any other person or company regarding the correct use of treated timber poles for pilings or foundation poles in permanent buildings. This note gives information on the correct Hazard Class treatment needed for such poles as well as a remedial inspection and maintenance treatment program to be implemented by the relevant and applicable parties after installation. This note is in addition to and supports of all the requirements already specified in the relevant and applicable national and compulsory standards as well as the regulations related to the compliance and use of preservative treated timber.

2. Definitions

permanent building

a building in which people live, work or gather for leisure activities.

piling

wooden poles used as load bearing foundation poles or posts and which forms part of the support frame of the substructure on which the main building or permanent structure is built.

primary preservative treatment

the preservative treatment of timber with an industrial type wood preservative in accordance with the approved impregnation processes specified in SANS 10005 to the applicable retention and penetration requirements specified in the relevant SANS wooden pole product specifications.

remedial and supplemental treatment

a secondary preservative treatment applied to primary preservative treated timber that has been in-ground contact use for some years to augment and supplement the initial primary treatment and to prevent or remedy incipient fungal decay or subterranean termites attack at the ground line area.

3. Selection of the correct and appropriately treated timber material for use as piling

Only SANS 457-2 or SANS 457-3 poles shall be used. The use of SANS 1288 machine turned softwood poles **shall not** be allowed.

H5 treated poles - Only H5 treated poles shall be used for piling.

The tables in SANS national standards that give the penetration and retention requirements for preservative treated timber and poles, lists poles used as piling under hazard class H5 with the following footnote:

- *Due to preservative treatment requirements, all piling that is to be used in direct contact with the ground or that will be constantly or periodically in contact with fresh water or heavy wet soils (or both), shall be treated and marked in accordance with hazard class H5. All piling that will be in contact with estuarine or sea water shall be treated and marked in accordance with hazard class H6.*

The rationale for specifying at least a H5 treatment for piling to be used in ground contact is because of the permanence or long term service life required as well as the critical function that pilings have to fulfill.

H4 treated poles - In cases where H4 treated poles have been used for piling instead of the required H5 treated poles, a remedial and supplemental treatment program shall be implemented to ensure that the required lifespan or service life of such poles is achieved (See Section 4 below for details).

Note: The implementation of a remedial inspection and maintenance treatment program with the aim to augment and supplement the initial primary treatment of H4 treated poles should not be regarded as an alternative to the correct use and application of H5 treated poles but as an option to remedy H4 treated poles already in use as piling and to maintain the remedial action on an ongoing basis.

4. Implementation of an ongoing remedial inspection and maintenance treatment program for H4 treated piling in service

The remedial inspection and maintenance treatment program shall consist of periodic surveillance inspections done by a qualified remedial inspection and treatment person or company to assess the soundness of H4 treated poles and posts used as piling in ground contact. Should any signs of incipient fungal decay or subterranean termite activity be found, remedial and supplemental preservatives shall be applied to stop and prevent further degradation at the ground line area of such poles and posts.

Initial inspection of H4 treated wooden piling shall commence at 5 years, and not more than 10 years, after installation. Thereafter, follow-up surveillance inspections and remedial and supplemental treatment, as and when required, shall be done on a 5 yearly cycle.

Please contact SAWPA for more information on the recommended remedial and supplemental treatment products available as well as qualified companies that can do the remedial inspection and maintenance treatment, or where training can be done to qualify for inspection and assessment of poles used for piling as well as the correct application of remedial and supplemental treatment chemicals.