

Field test method for determining the relative protective effectiveness of a wood preservative in ground contact

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English Version

Field test method for determining the relative protective effectiveness of a wood preservative in ground contact

Essai de champ pour déterminer l'efficacité protectrice relative d'un produit de préservation du bois en contact avec le sol

Freiland-Prüfverfahren zur Bestimmung der relativen Schutzwirkung eines Holzschutzmittels im Erdkontakt

This European Standard was approved by CEN on 30 August 2014.

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Foreword

This document (EN 252:2014) has been prepared by Technical Committee CEN/TC 38 "Durability of wood and wood-based products", the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by May 2015 and conflicting national standards shall be withdrawn at the latest by May 2015.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 252:1989.

In relation to the previous version of the standard, the following main modifications have been made:

- change in the assessment criteria for fungal decay;
- minor changes in the description of termite attack;
- the addition of informative annexes concerning the determination of strength characteristics in wood stakes by measuring the modulus of elasticity; the characterization of field test sites and the setting-out of the test stakes in the field test sites.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

The method is primarily concerned with protection against microbial attack. However, it is also capable of being used in areas where a termite hazard exists. It should also be noted that microbial decay may alter the resistance of a stake to termite attack and that termite attack may obliterate evidence of microbial decay.

This field method provides one criterion by which the effectiveness of a wood preservative product can be assessed in a ground contact situation (Use Class 4 according to EN 335).

The main objective of the method described is to evaluate the effectiveness of a preservative relative to a reference material.

For this reason permeable timbers are used throughout so that the protective efficacy of various retentions of wood preservative can be determined.

NOTE Informative Annex A gives guidance for testing wood or wood based products in ground contact that have or have not been treated with a wood preservative.

1 Scope

This European Standard specifies a field test method for evaluating the effectiveness of wood preservatives in a ground contact situation. Wood treated with a reference preservative is included for comparison.

The protective effect of the test preservative is assessed in relation to the effect of a reference wood preservative applied by a specified treatment.

2 Principle

Wooden stakes are treated with preservative solutions to give a range of preservative retentions. After drying and, if necessary, an appropriate fixation period, the stakes are partially buried in soil in selected test fields in the open.

The stakes are regularly inspected and their condition compared with that of untreated controls and that of a group of stakes treated with a reference preservative both of which indicate the aggressiveness of the individual field.

The different agents of attack and their respective intensities are recorded.

3 Wood specimens

3.1 Wood species

Susceptible wood species that can be completely penetrated with preservative shall be chosen as follows:

- for every test the sapwood of Scots Pine (*Pinus sylvestris* (L)), shall be used;
- it is recommended that a hardwood species of local importance is included if the preservative is expected to be used in this type of wood;
- if desired other wood species may be incorporated in the test.

3.2 Wood quality

The wood shall be straight-grained and free from knots, cracks, stain, decay, insect holes, reaction wood or other defects. Test stakes with a resinous appearance shall be avoided. The wood shall not have been water-stored, floated, chemically treated or steamed or dried at a temperature above 60 °C.

The Scots Pine sapwood shall show an average rate of growth of 2,5 to 10 annual rings per 10 mm.

If additional wood species are to be used the range in the number of annual rings per 10 mm for each species shall be mentioned in the report.

The test report shall also include the mean density and moisture content for the wood used in the preparation of the stakes.

3.3 Characteristics and dimension of stakes

The boards shall be conditioned at (20 ± 2) °C, (65 ± 5) % relative humidity.

Stakes for test shall be cut from the test wood(s) as follows: