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Wood preservatives - Field test method for determining the relative protective effectiveness of a wood preservative for use under a coating and exposed-out-of ground contact: L-joint method

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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English version

**Wood preservatives - Field test method for
determining the relative protective effectiveness
of a wood preservative for use under a coating
and exposed out of ground contact: L-joint
method**

Produits de préservation du bois - Essais de
champ pour déterminer l'efficacité protectrice
d'un produit de préservation du bois pour
emploi sous un revêtement et hors de contact
avec le sol: Méthode avec un assemblage en L

Holzschutzmittel - Freilandversuch zur
Bestimmung der relativen Wirksamkeit eines
Holzschutzmittels zur Anwendung unter einem
Anstrich und ohne Erdkontakt:
L-Verbindungs-Methode

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CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

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Foreword

This European Standard was drawn up by the Technical Committee CEN/TC 38 "Durability of wood and wood-based products" of which the secretariat 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of an identical text or by endorsement, at least by October 1993, and conflicting national standards shall be withdrawn at the latest by October 1993.

This European Standard has been approved by CEN, and in accordance with the Common CEN/CENELEC Rules, the following countries are bound to implement this European Standard: Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden and United Kingdom.

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INTRODUCTION

This European Standard describes a method of test for wood preservatives that are intended for use in timber to be exposed out of contact with the ground but with a paint or similar surface coating.

The main objective of the method is to evaluate the relative effectiveness of the preservative, applied to jointed samples of Scots pine sapwood by a treatment method relevant to its intended practical use. Effectiveness is evaluated relative to a reference preservative treatment.

The method is concerned with protection against attack by the complete sequence of micro-organisms occurring under natural conditions, including eventually those basidiomycete fungi that cause decay. It takes into account also the effects of weathering (light, rain and heat) on the effectiveness of the preservative under the paint.

The method may be used, after modification, for other purposes including evaluating the effectiveness of a test preservative:

- in timber of a different wood species;
- under different types of coating.

Since the L-joints are exposed to natural outdoor conditions during the test period, variations in test conditions from one area to another have to be expected. Differences in climate, especially rainfall, will inevitably influence the general rate of development of decay fungi. However, by comparing the results obtained for the test preservative with those obtained with the reference preservative and with those for untreated control L-joints, the relative protective effectiveness of the preservative under test can be evaluated.

NOTE: The procedures described in this standard are intended to be carried out by suitably trained and/or supervised specialists. Appropriate safety precautions should be observed throughout the use of the standard.

1 SCOPE

This European Standard specifies a method for determining the relative protective effectiveness against fungal decay of a wood preservative applied to wood, in combination with a subsequent surface coating, and exposed out of contact with the ground.

The method is applicable to the testing of commercial or experimental preservatives applied to non-durable timbers by methods appropriate to commercial practice and subsequently overcoated with a specified coating system. The method is applicable to products and processes used individually or in combination to prevent the development of the decay in the wood.

2 NORMATIVE REFERENCE

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the

appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

ISO 2808: 1974 Paints and varnishes - Determination of film thickness.

3 DEFINITIONS

For the purposes of this standard, the following definitions apply:

3.1 representative sample: A sample having its physical or chemical characteristics identical with the volumetric average characteristics of the total volume being sampled.

3.2 supplier: The sponsor of the test.

4 PRINCIPLE

Jointed samples (L-joints) are treated, assembled, coated and placed out of doors, out of contact with the ground and exposed to the normal environmental and ecological factors which affect coated wood so exposed in practice. The fungi that colonize such units invade in their natural sequence of moulds, blue stain fungi, soft rot fungi and basidiomycetes. Colonization by basidiomycetes, as shown by the presence of visible decay, is assessed at least annually by visual inspection of the L-joints after being disassembled. In addition, periodically, sets of samples are examined after sawing to reveal their internal condition. These data are compared with those generated using a reference preservative and untreated samples to assess relative performance.

NOTE 1: It is recommended that the replicates for non-destructive inspection continue to be exposed beyond the minimum 5 year period, preferably until failure.

NOTE 2: Inspection after sawing is necessary because application by processes such as dipping or double vacuum treatment does not result in the complete penetration of the L-joint members. The untreated core of the samples, therefore, may show visible decay before it becomes visible on surfaces within the joint.

5 MATERIALS

5.1 End-seal compounds

5.1.1 Preservative resistant end-seal: A material resistant to the penetration of the reference and test preservative solutions (or separate materials for each).

NOTE: Polyvinyl acetate (PVAc) glues have been found to be suitable for most organic solvent formulations.

5.1.2 Weatherproof end-seal: A material which prevents water entry and remains effective during long term exposure to the weather.