

Wood preservatives - Determination of the protective effectiveness against *Anobium punctatum* (De Geer) by egg-laying and larval survival - Part 1: Application by surface treatment (Laboratory method)

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 49-1:2016 sisaldab Euroopa standardi EN 49-1:2016 ingliskeelset teksti.	This Estonian standard EVS-EN 49-1:2016 consists of the English text of the European standard EN 49-1:2016.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 22.06.2016.	Date of Availability of the European standard is 22.06.2016.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 71.100.50

Standardite reprodutseerimise ja levitamise õigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonsesse süsteemi või edastamine ükskõik millises vormis või millisel teel ilma Eesti Standardikeskuse kirjaliku loata on keelatud.

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardikeskusega:

Aru 10, 10317 Tallinn, Eesti; koduleht www.evs.ee; telefon 605 5050; e-post info@evs.ee

The right to reproduce and distribute standards belongs to the Estonian Centre for Standardisation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without a written permission from the Estonian Centre for Standardisation.

If you have any questions about copyright, please contact Estonian Centre for Standardisation:

Aru 10, 10317 Tallinn, Estonia; homepage www.evs.ee; phone +372 605 5050; e-mail info@evs.ee

English Version

Wood preservatives - Determination of the protective effectiveness against *Anobium punctatum* (De Geer) by egg-laying and larval survival - Part 1: Application by surface treatment (Laboratory method)

Produits de préservation du bois - Détermination de l'efficacité protectrice vis-à-vis d'*Anobium punctatum* (De Geer) par l'observation de la ponte et du taux de survie des larves - Partie 1: Application par traitement de surface (Méthode de laboratoire)

Holzschutzmittel - Bestimmung der vorbeugenden Wirkung gegenüber *Anobium punctatum* (De Geer) durch Beobachten der Eiablage und des Überlebens von Larven - Teil 1: Oberflächenverfahren (Laboratoriumsverfahren)

This European Standard was approved by CEN on 5 January 2017.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of 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 United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents

Page

European foreword.....	4
Introduction	5
1 Scope	6
2 Normative references	6
3 Terms and definitions	6
4 Principle	6
5 Test materials.....	7
5.1 Biological material.....	7
5.2 Products and reagents.....	7
5.3 Apparatus.....	8
6 Sampling.....	8
7 Test specimens.....	8
7.1 Species of wood.....	8
7.2 Wood quality.....	9
7.3 Provision of test specimens.....	9
7.4 Dimensions of test specimens	9
7.5 Number of test specimens.....	9
8 Procedure.....	10
8.1 Preparation of the test specimens	10
8.1.1 Conditioning of test specimens prior to sealing	10
8.1.2 Sealing.....	10
8.1.3 Treatment of the test specimens	10
8.1.4 Drying and conditioning of the test specimens after treatment.....	11
8.2 Exposure of the test specimens to the insects	12
8.3 Conditions and duration of the test.....	12
8.4 Examination of the test specimens	12
9 Validity of test.....	12
10 Expression of results.....	13
10.1 Assessment of the protective effectiveness.....	13
10.2 Toxic values.....	13
11 Test report.....	13
Annex A (informative) Example of a test report	15
Annex B (informative) Identification of sex of test insects <i>Anobium punctatum</i>	17
Annex C (informative) Culturing technique for <i>Anobium punctatum</i>	18
C.1 Culture wood.....	18
C.1.1 Wood species	18
C.1.2 Collection of culture wood	18
C.1.3 Cutting of culture wood.....	18

C.1.4	Drying of culture wood	18
C.2	Source of beetles	18
C.2.1	Collection of beetles	18
C.2.2	Quarantine of beetles	18
C.3	Infestation of culture wood	18
C.3.1	Culture vessels	18
C.3.2	Preparation of wood	18
C.3.3	Introduction of beetles	19
C.4	Culturing conditions	19
C.4.1	Normal environment	19
C.4.2	Natural pupation induction	19
C.4.3	Artificial pupation induction	19
C.5	Collection of beetles	19
C.6	General culture hygiene	19
Annex D (informative) Environmental, health and safety precautions within chemical/biological laboratory		21
Bibliography		22

European foreword

This document (EN 49-1:2016) 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 December 2016, and conflicting national standards shall be withdrawn at the latest by December 2016.

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 49-1:2005.

Significant technical differences between this document and EN 49-1:2005 are as follows:

- a) generalization of material for preparing the egg-laying zones;
- b) introduction of new harmonized specifications for wood quality.

This document consists of two parts, Part 1 is required to enable effectiveness assessments of wood preservatives that are intended to be applied by surface treatment and Part 2 those that are intended to be applied by impregnation.

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

This document describes a laboratory method of testing which gives a basis for assessment of the effectiveness of a wood preservative, when applied as a surface treatment, against *Anobium punctatum*. It allows the determination of the concentration at which the product prevents the development of infestation from egg laying. It can also be used with formulations ready for use.

The method simulates conditions that can occur in practice on timber which has been treated some time previously with wood preservative applied by dip, brush or spray and on which eggs of *Anobium punctatum* are laid.

This laboratory method provides one criterion by which the value of a product can be assessed. In making this assessment the methods by which the preservative may be applied should be taken into account. It is further recommended that results from this test should be supplemented by those from other appropriate tests, and above all by comparison with practical experience.

When products which are very active at low concentrations are used it is very important to take suitable precautions to isolate and separate, as far as possible, operations involving chemical products, other products, treated wood, laboratory apparatus and clothing. Suitable precautions should include the use of separate rooms, areas within rooms, extraction facilities, conditioning chambers and special training for personnel (see also Annex D for environmental, health and safety precautions).

1 Scope

This European Standard specifies a method for the determination of the protective effectiveness or the toxic values of a wood preservative against infestation by *Anobium punctatum* (De Geer) when the product is applied as a surface treatment to wood.

This method is applicable to:

- water-insoluble chemicals that are being studied as active insecticides;
- organic formulations, as supplied or as prepared in the laboratory by dilution of concentrates;
- organic water-dispersible formulations as supplied or as prepared in the laboratory by dilution of concentrates;
- water-soluble materials, for example salts.

NOTE This method may be used in conjunction with an ageing procedure, for example EN 73.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN ISO 835, *Laboratory glassware — Graduated pipettes (ISO 835)*

EN ISO 3696, *Water for analytical laboratory use — Specification and test methods (ISO 3696)*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

representative sample

sample having its physical or chemical characteristics identical to the volumetric average characteristics of the total volume being sampled

[SOURCE: EN 1001-2:2005, 4.71]

3.2

supplier

sponsor of the test (person or company providing the sample of wood preservative to be tested)

Note 1 to entry: Adapted from EN 1001-2:2005, 4.83.

4 Principle

Depending on the test being carried out either:

- on a set of test specimens of a susceptible wood species that is surface treated with a solution of the preservative, or