

**Wood preservatives - Determination of the preventive action against recently hatched larvae of *Hylotrupes bajulus* (Linnaeus) - Part 2: Ovicidal effect (laboratory method)**

This document is a preview generated by EVS

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 46-2:2010 sisaldab Euroopa standardi EN 46-2:2009 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 28.02.2010 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 11.11.2009.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN 46-2:2010 consists of the English text of the European standard EN 46-2:2009.

This standard is ratified with the order of Estonian Centre for Standardisation dated 28.02.2010 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

Date of Availability of the European standard text 11.11.2009.

The standard is available from Estonian standardisation organisation.

ICS 71.100.50

### Standardite reprodutseerimis- ja levitamiseõigus kuulub Eesti Standardikeskusele

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

Kui Teil on küsimusi standardite autorikaitse kohta, palun võtke ühendust Eesti Standardikeskusega:  
Aru 10 Tallinn 10317 Eesti; [www.evs.ee](http://www.evs.ee); Telefon: 605 5050; E-post: [info@evs.ee](mailto:info@evs.ee)

### Right to reproduce and distribute Estonian 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 permission in writing from Estonian Centre for Standardisation.

If you have any questions about standards copyright, please contact Estonian Centre for Standardisation:  
Aru str 10 Tallinn 10317 Estonia; [www.evs.ee](http://www.evs.ee); Phone: +372 605 5050; E-mail: [info@evs.ee](mailto:info@evs.ee)

English Version

Wood preservatives - Determination of the preventive action  
against recently hatched larvae of *Hylotrupes bajulus* (Linnaeus)  
- Part 2: Ovicidal effect (laboratory method)

Produits de préservation du bois - Détermination de l'action  
préventive contre les larves récemment écloses  
d'*Hylotrupes bajulus* (Linnaeus) - Partie 2: Effet ovicide  
(Méthode de laboratoire)

Holzschutzmittel - Bestimmung der vorbeugenden Wirkung  
gegenüber frisch geschlüpften Larven von *Hylotrupes*  
*bajulus* (Linnaeus) - Teil 2: Ovidize Wirkung  
(Laboratoriumverfahren)

This European Standard was approved by CEN on 10 October 2009.

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 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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



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

Management Centre: Avenue Marnix 17, B-1000 Brussels

# Contents

Page

Foreword.....	4
Introduction.....	5
1 Scope.....	6
2 Normative references.....	6
3 Terms and definitions.....	6
4 Principle.....	7
5 Test materials.....	7
5.1 Biological material.....	7
5.2 Products and reagents.....	7
5.3 Apparatus.....	7
6 Sampling.....	8
7 Test specimens.....	8
7.1 Species of wood.....	8
7.2 Wood quality.....	8
7.3 Provision of test specimens.....	9
7.4 Dimensions of test specimens.....	9
7.5 Number of test specimens.....	9
7.5.1 Test specimens for egg-laying.....	9
7.5.2 Test specimens for checking the tunnelling ability and the mortality of the larvae.....	9
8 Procedure.....	10
8.1 Preparation of the test specimens.....	10
8.1.1 Conditioning of the test specimens prior to sealing.....	10
8.1.2 Sealing of block faces.....	10
8.1.3 Treatment of the test specimens.....	10
8.1.4 Drying and conditioning of the test specimens after treatment.....	12
8.2 Exposure of the test specimens to the insects (ovicidal action).....	12
8.3 Validity of the test.....	13
9 Expression of results.....	13
9.1 Ovicidal test.....	13
9.2 Tunnelling control.....	13
9.3 Total mortality.....	13
10 Test report.....	14
Annex A (informative) Example of a test report.....	16
Annex B (informative) Technique for culturing <i>Hylotrupes bajulus</i> (Linnaeus).....	19
B.1 General.....	19
B.2 Obtaining parent beetles.....	19
B.3 Mating.....	19
B.4 Egg-laying.....	19
B.5 Hatching of eggs.....	20
B.6 Larval development.....	20
B.7 Enemies and parasites.....	21
Annex C (informative) Differentiation of heartwood and sapwood in <i>Pinus</i> species.....	22
C.1 Principle.....	22
C.2 Reagents.....	22

<b>C.3</b>	<b>Apparatus</b> .....	<b>22</b>
<b>C.4</b>	<b>Procedure</b> .....	<b>22</b>
<b>Annex D</b>	<b>(informative) Environmental, health and safety precautions within chemical/biological laboratory</b> .....	<b>23</b>
<b>Bibliography</b>	.....	<b>24</b>

This document is a preview generated by EVS

## Foreword

This document (EN 46-2:2009) 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 2010, and conflicting national standards shall be withdrawn at the latest by May 2010.

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 46-2:2006.

The standard EN 46 is composed of two parts:

- EN 46-1, *Wood preservatives — Determination of the preventive action against recently hatched larvae of *Hylotrupes bajulus* (Linnaeus) — Part 1: Application by surface treatment (laboratory method)*
- EN 46-2, *Wood preservatives — Determination of the preventive action against recently hatched larvae of *Hylotrupes bajulus* (Linnaeus) — Part 2: Ovicidal effect (laboratory method)*

EN 46 consists of two parts to enable preventive action of wood preservatives, against recently hatched larvae of *Hylotrupes bajulus*, which are intended to be applied by surface treatment; Part 1 is required to determine the larvicidal effect of preservatives and Part 2 is required to determine the ovicidal action of the preservatives after egg-laying of young females.

Significant technical differences between this document and EN 46-2:2006 are as follows:

- a) For treatment by dipping sealing of all faces except the one which is exposed to the insects added;
- b) Requirements for the selection of test specimens specified in more detail in 7.5.1.

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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

## Introduction

This test method describes a laboratory method of test which gives a basis for the assessment of the preventive action of a wood preservative, when applied as a surface treatment for timber, against eggs of *Hylotrupes bajulus*.

In combination with EN 46-1 it provides a means of checking whether larvae may hatch from eggs laid on the treated wood surface and whether they are capable of boring through the treated surface and of surviving in the untreated part of the wood.

This amended standard provides for the sealing of all but one lateral face when specimens are to be treated by dipping.

When products which are very active at very low concentration 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 preventive action of a wood preservative against eggs of *Hylotrupes bajulus* (Linnaeus) when the preservative is applied as a surface treatment to wood.

This method is applicable to:

- water-insoluble chemicals which 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; or
- water-soluble materials, for example salts.

The method is applicable whether or not the test specimens have been subjected to appropriate ageing procedures.

## 2 Normative references

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

EN 46-1, *Wood preservatives — Determination of the preventive action against Hylotrupes bajulus (Linnaeus) — Part 1: Larvicidal effect (laboratory method)*

EN 73, *Wood preservatives — Accelerated ageing tests of treated wood prior to biological testing — Evaporative ageing procedure*

EN 84, *Wood preservatives — Accelerated ageing of treated wood prior to biological testing — Leaching procedure*

EN ISO 3696:1995, *Water for analytical laboratory use – Specification and test methods (ISO 3696:1987)*

## 3 Terms and definitions

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

### 3.1

#### **representative sample**

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

[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 Adapted from EN 1001-2:2005, 4.83.