

Wood preservatives — Determination of the protective effectiveness against wood destroying basidiomycetes — Application by surface treatment

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National foreword

This Draft for Development is the official English language version of ENV 839:2002. It supersedes DD ENV 839:1994 which is withdrawn.

This publication is not to be regarded as a British Standard.

It is being issued in the Draft for Development series of publications and is of a provisional nature because there is at present insufficient experience in the use of the test method. It should be applied on this provisional basis, so that information and experience of its practical application may be obtained.

Comments arising from the use of this Draft for Development are requested so that UK experience can be reported to the European organization responsible for its conversion into a European Standard. A review of this publication will be initiated 2 years after its publication by the European organization so that a decision can be taken on its status at the end of its three-year life. The commencement of the review period will be notified by an announcement in *Update Standards*.

According to the replies received by the end of the review period, the responsible BSI Committee will decide whether to support the conversion into a European Standard, to extend the life of the prestandard or to withdraw it. Comments should be sent in writing to the Secretary of BSI Subcommittee B/515/4, Assessment of preservation efficacy, at 389 Chiswick High Road, London W4 4AL, giving the document reference and clause number and proposing, where possible, an appropriate revision of the text.

A list of organizations represented on this subcommittee can be obtained on request to its secretary.

Cross-references

The British Standards which implement international or European publications referred to in this document may be found in the BSI Standards Catalogue under the section entitled “International Standards Correspondence Index”, or by using the “Find” facility of the BSI Standards Electronic Catalogue.

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Summary of pages

This document comprises a front cover, an inside front cover, the ENV title page, pages 2 to 21, and a back cover.

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Amendments issued since publication

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English version

**Wood preservatives - Determination of the protective
effectiveness against wood destroying basidiomycetes -
Application by surface treatment**

Produits de préservation du bois - Détermination de
l'efficacité protectrice vis-à-vis des champignons
basidiomycètes lignivores - Application par traitement de
surface

Holzschutzmittel - Bestimmung der vorbeugenden
Wirksamkeit gegen holzerstörende Basidiomyceten -
Anwendung mit Oberflächenverfahren

This European Prestandard (ENV) was approved by CEN on 23 December 2001 as a prospective standard for provisional application.

The period of validity of this ENV is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the ENV can be converted into a European Standard.

CEN members are required to announce the existence of this ENV in the same way as for an EN and to make the ENV available promptly at national level in an appropriate form. It is permissible to keep conflicting national standards in force (in parallel to the ENV) until the final decision about the possible conversion of the ENV into an EN is reached.

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Foreword

This document ENV 839:2002 has been prepared by Technical Committee CEN/TC 38 "Durability of wood and derived materials", the secretariat of which is held by AFNOR.

This document supersedes ENV 839:1993.

This standard includes annexes A and C that are informative and an annex B that is normative.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to announce this European Prestandard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

Introduction

This European Prestandard specifies a laboratory method of test which gives a basis for assessing the effectiveness of a wood preservative, when applied as a surface treatment, against wood destroying basidiomycetes. It tests whether the applied treatment is able to prevent the penetration of the fungi into the untreated interior of the test specimens under the conditions of test.

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 also recommended that this information be supplemented by data from other relevant tests and above all by practical experience.

The procedures described in this standard method are intended to be carried out by suitably trained and/or supervised specialists.

1 Scope

This European Prestandard specifies a method of test for determining the protective effectiveness of a wood preservative, applied to the surface of the wood, against wood destroying basidiomycetes cultured on an agar medium.

The method is applicable to all products which are to be applied by superficial application processes. This includes :

organic solvent-based wood preservatives ; or

organic water-dispersible formulations, as supplied or as prepared in the laboratory by dilution of concentrates ; or

water-soluble products ; or

chemicals which are being studied as active ingredients for application by superficial processes.

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

2 Normative references

This European Prestandard 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 Prestandard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

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

3 Terms and definitions

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

3.1

superficial application process

process which does not include particular features or procedures intended to overcome the natural resistance of wood to penetration by a wood preservative product in its ready to use form

3.2

representative sample

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

3.3

supplier

sponsor of the test

4 Principle

Several series of test specimens of a susceptible wood species are end-sealed with a material to prevent penetration of the test product into the end grain of the specimens. The end-sealed specimens are treated with the wood preservative product under test using the process and application rate specified by the supplier.

NOTE Suitable application methods are brushing, pipetting and dipping.

The treated test specimens are exposed to attack by basidiomycetes in pure culture. The performance of the test product is assessed in terms of its ability to prevent visible decay and its ability to prevent colonization of the untreated interior of the test specimens.

5 Test materials and apparatus

5.1 Biological material

The test fungi to be used are as follows :

5.1.1 Obligatory fungus in all cases

- *Coniophora puteana* (Schumacher ex Fries) Karsten (BAM Ebw. 15) on softwood.

Loss in mass of Scots pine sapwood in 16 weeks: a mass fraction of minimum 20 %.

5.1.2 Obligatory fungus for particular hazards

- *Coriolus versicolor* (Linnaeus) Quélet (CTB 863A) on hardwood and/or on softwood as appropriate.

Loss in mass of beech in 16 weeks: a mass fraction of minimum 20 %.

Loss in mass of Scots pine sapwood in 16 weeks: a mass fraction of minimum 15 %.

5.1.3 Two species to be used compulsorily on the basis of the nature of the test product

For all products except creosote-type products :

- *Poria placenta* (Fries) Cooke sensu J. Eriksson (FPRL 280) on softwood.

Loss in mass of Scots pine sapwood in 16 weeks: a mass fraction of minimum 20 %;

- *Gloeophyllum trabeum* (Persoon ex Fries) Murrill (BAM Ebw. 109) on softwood.

Loss in mass of Scots pine sapwood in 16 weeks: a mass fraction of minimum 20 %.

For creosotes and similar products :

- *Lentinus lepideus* Fries ex Fries (BAM Ebw. 20) on softwood.

Loss in mass of Scots pine sapwood in 16 weeks: a mass fraction of minimum 20 %;

- *Lentinus cyathiformis* (Schaeffer ex Fries) Bresadola (CTB 67-02B) on hardwood.

Loss in mass of beech in 16 weeks: a mass fraction of minimum 20 %.

5.1.4 Optional fungi

For specific regional uses or conditions, it is also possible to select other fungi on an optional basis.

NOTE When optional fungi are used, information similar to that given in annex A for the obligatory fungi should be included in the test report.

5.1.5 Maintenance of strains

The strains shall be maintained and treated (frequency of subculturing, alternation of culture media, etc.) in accordance with the instructions of their laboratory of origin (see A.2). The parent strain shall be maintained in the laboratory of its origin so as to conserve and to assure its vigour.

If tests are not undertaken regularly or if a strain shows signs of degeneration a new standard culture of the strain should be obtained from the laboratory of its origin for each test (see A.2). When new strains are received, the virulence shall be tested to ensure the strain can achieve the minimum loss in mass (see 5.1.1, 5.1.2 and 5.1.3).