SLOVENSKI STANDARD
SIST EN 118:2025

01-april-2025

Zaščitna sredstva za les - Ugotavljanje preventivnega delovanja proti Reticulitermes santonensis (evropskim termitom) (laboratorijska metoda)

Wood preservatives - Determination of preventive action against Reticulitermes species (European termites) (Laboratory method)

Holzschutzmittel - Bestimmung der vorbeugenden Wirkung gegenüber Reticulitermes-Arten (Europäische Termiten) (Laboratoriumsverfahren)

Produits de préservation des bois - Détermination de l'action préventive contre les espèces de Reticulitermes (termites européens) (Méthode de laboratoire)

Ta slovenski standard je istoveten z: **EN 118:2025**

ICS:

71.100.50	Kemikalije za zaščito lesa	Wood-protecting chemicals

SIST EN 118:2025 **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 118

January 2025

ICS 71.100.50

Supersedes EN 118:2013

English Version

Wood preservatives - Determination of preventive action against *Reticulitermes* species (European termites) (Laboratory method)

Produits de préservation des bois - Détermination de l'action préventive contre les espèces de *Reticulitermes* (termites européens) (Méthode de laboratoire)

Holzschutzmittel - Bestimmung der vorbeugenden Wirkung gegenüber *Reticulitermes*-Arten (Europäische Termiten) (Laboratoriumsverfahren)

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

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Ref. No. EN 118:2025 E

Contents

Page

European foreword

This document (EN 118:2025) has been prepared by Technical Committee CEN/TC 38 “Durability of wood and derived materials”, the secretariat of which is held by SIS.

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of an identical text or by endorsement, at the latest by July 2025, and conflicting national standards shall be withdrawn at the latest by July 2025.

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

This document supersedes EN 118:2013.

EN 118:2025 includes the following significant technical changes with respect to EN 118:2013:

— the required purity of fine white quartz sand was lowered (5.2.1.1);

— the values for the examination of termite attack in rating 2a) and 3a) were slightly changed to close rating gaps.

NOTE 1 The species name “*Reticulitermes santonensis*” is officially withdrawn and replaced by *Reticulitermes flavipes*. This document will follow the new regulation.

NOTE 2 Test results obtained according to earlier versions of this document and when the tests had started before this version of EN 118 was published are considered as valid.

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye 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 the *Reticulitermes* species of European termites.

This laboratory method provides one criterion by which the value of a product can be assessed. 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 C for environmental, health and safety precautions).

1 Scope

This document specifies a method for the determination of the preventive action of a wood preservative against the *Reticulitermes* species of European termites when the preservative is applied as a surface treatment to wood.

NOTE 1 This method can be applied not only to different species of *Reticulitermes*, but also to other species of the family Rhinotermitidae, where necessary adapting the temperature and humidity conditions and the assessment of attack to the specific behaviour of the species concerned.

This method is applicable to:

— water-insoluble chemicals which are being studied as active ingredients;

— 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; and

— water-soluble materials, for example salts.

NOTE 2 This method can be used in conjunction with an ageing procedure, for example EN 73 or EN 84.

2 Normative reference

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 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.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1
representative sample
sample having its physical or chemical characteristics identical to the volumetric average characteristics of the total volume being sampled

3.2
supplier
sponsor of the test (person or company providing the sample of wood preservative to be tested)

4 Principle

Surface treatment of test specimens of a susceptible wood species with the preservative or, if a concentrate is being used, with known dilutions of the preservative.

Exposure of these test specimens to specified colonies of European *Reticulitermes* species and assessment of the attack suffered after exposure under fixed conditions and over a fixed period.

In providing biological validation of individual species, it is essential that the locality of origin of each test termite species is given. The description of the locality should at least include the district name.

Comparison of these results with those obtained from untreated and solvent or diluent-treated control test specimens.

5 Test materials

5.1 Biological material

Workers, soldiers and nymphs of an identified termite species of *Reticulitermes*.

The termite species and the locality of origin shell be stated in the test report and their identification should be proved.

The termites should be obtained from colonies reared as described in Annex B.

5.2 Products and reagents

5.2.1 Substrate for establishing the colonies. A choice of:

5.2.1.1 Fine white quartz sand consisting of grains of crystallized silica, very pure (90 % pure silica), and free from any organic substances[1].

5.2.1.2 A hydrated, laminar, aluminium-iron-magnesium silicate exfoliated to give particles of 1 mm to 3 mm with an apparent density of 80 kg/m³ to 90 kg/m³. Particles of less than 1 mm shall be eliminated by sieving prior to use, to ensure the absence of free water and prevent any significant agglomeration of the particles.

5.2.2 Adhesive, which cannot be attacked by the termites and is non-toxic, for securing the tubes. This adhesive shall also not react with the preservative applied to the wood.

5.2.3 Sealant.

5.2.3.1 Paraffin wax, setting point of 52 °C to 54 °C, for sealing the relevant surfaces of test specimens to be treated with solutions in which water is the continuous phase.

5.2.3.2 Gelatine, for sealing the relevant surfaces of test specimens to be treated with solutions in which an organic solvent is the continuous phase.

5.2.3.3 Inert adhesive, for sealing the relevant surfaces of test specimens to be treated with other solutions in which e.g. an emulsion solvent is the continuous phase.

5.2.4 Water, complying with grade 3 of EN ISO 3696.

5.2.5 Solvent or diluent. A suitable volatile liquid that will dissolve or dilute the preservative but does not leave a residue in the wood which would have a toxic effect on the insect at the end of the conditioning period.

[1] In France, Fontainebleau sand, of which more than 97 % of the particles are between 75 µm and 300 µm in size, meets these requirements.

5.3 Apparatus

5.3.1 Culturing chamber, with air circulation, controlled at (26 ± 2) °C and a relative humidity of (70 ± 5) %.

5.3.2 Conditioning chamber, well ventilated, controlled at (20 ± 2) °C and relative humidity (65 ± 5) %.

NOTE The conditioning of test specimens after treatment is permissible in the laboratory work area (5.3.3) provided that this meets the conditions specified for the conditioning chamber (5.3.2).

5.3.3 Laboratory work area, well ventilated, where treatment of the test specimens is carried out.

NOTE It is essential to follow proper safety measures for handling flammable or toxic material. It is essential that operators avoid excessive exposure to solvents or their vapours.

5.3.4 Testing chamber, protected from light, ventilated and controlled at (26 ± 2) °C and at a relative humidity of (70 ± 5) %.

5.3.5 Ordinary laboratory equipment for application by brushing or by pipette of a liquid preservative product and including an analytical balance capable of weighing to an accuracy of 0,01 g.

5.3.6 Safety equipment, protective clothing, protective gloves appropriate for the test product and the test solvent, to ensure the safety of the operator.

5.3.7 Instruments adapted for termite manipulation (aspirator, forceps).

5.3.8 Glass tubes open at both ends, one end being ground:

— interior diameter: ca. 25 mm;

— length: ca. 110 mm.

6 Sampling

The sample of preservative shall be representative of the product to be tested. Samples should be stored and handled in accordance with any written recommendations from the supplier.

For the sampling of preservatives from bulk supplies, the procedure given in EN 212 should be used.

7 Test specimens

7.1 Species of wood

The reference species is Scots pine (*Pinus sylvestris Linnaeus*).

Additional tests can be made with other timber species but, if so, this shell be stated in the test report.

7.2 Wood quality

The wood shall be free from visible cracks, stain, decay, insect damage and other defects. The wood shall not have been water-stored, floated, chemically treated or steamed. The wood shall originate from trees preferably felled in winter.

Wood that has been kiln dried at temperatures below 60 °C may be used.

The wood shall be exclusively sapwood containing little resin and having between 2,5 and 8 annual rings per 10 mm. The proportion of latewood in the annual rings shall not exceed 30 % of the whole.