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**Konstruktivski les – Zaščita konstrukcijskega lesa pred biološkim napadom**

Structural timber - Structural timber preservative treated against biological attack

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SIST EN 15228:2009

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April 2005

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ICS

English version

## Structural timber - Structural timber preservative treated against biological attack

Bois de structure - Bois de structure traité avec un produit de préservation contre les attaques biologiques

Bauholz - Bauholz für tragende Zwecke mit Schutzmittelbehandlung gegen biologischen Befall

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 124.

If this draft becomes a European Standard, 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.

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EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
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## Foreword

This document (prEN 15228:2005) has been prepared by Technical Committee CEN/TC 124 “Timber structures”, the secretariat of which is held by SFS.

This document is currently submitted to the CEN Enquiry.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

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## Introduction

According to this standard structural timber treated against biological attack is characterised by the properties (strength grade or characteristic strength and stiffness) and the improved resistance of the treated timber against biological attack.

For structural timber treated against biological attack it is assumed that the reduction, if any, of strength and stiffness due to the treatment is taken into account by reduction factors given in the design codes.

NOTE In this standard the term “use class” has been used instead of “hazard class” in line with the decision of CEN/TC 38

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## 1 Scope

This standard specifies requirements for preservative-treatment against biological attack of structural timber.

This standard also provides for the evaluation of conformity of products with the requirements of this standard.

## 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 335-1	Durability of wood and wood-based products – Definition of hazard classes of biological attack –Part 1: General
EN 335-2	Durability of wood and wood-based products – Definition of hazard classes of biological attack –Part 2: Application to solid wood
EN 351-1	Durability of wood and wood-based products – Preservative-treated solid wood – Part 1: Classification of preservative penetration and retention
EN 351-2	Durability of wood and wood-based products – Preservative-treated solid wood – Part 2: Guidance on sampling for analysis of preservative treated wood.
EN 599 –1	Durability of wood and wood-based products – Performance of preventive preservatives as determined by biological tests – Part 1: Specification according to hazard class <a href="https://standards.iteh.ai/catalog/standards/sist/acc44a44-25ca-469d-a786-5e55fffc269d/sist-en-15228-2009">https://standards.iteh.ai/catalog/standards/sist/acc44a44-25ca-469d-a786-5e55fffc269d/sist-en-15228-2009</a>
EN 599-2	Durability of wood and wood-based products – Performance of preventive preservatives as determined by biological tests – Part 2: Classification and labelling
prEN 14081-1	Timber structures – Strength graded structural timber with rectangular cross section – Part 1: General requirements
EN ISO 9001	Quality managements systems – Requirements

## 3 Terms and definitions

For the purposes of this standard, the terms and definitions given in EN 351-1, EN 351-2, EN 385, EN 599-1 and prEN 14081-1 apply

## 4 Symbols and abbreviations

## 5 Requirements for structural timber treated against biological attack

### 5.1 General

Preservative treated products shall be defined by :

- use class in accordance with EN 335-2;
- wood preservative in accordance with EN 599-2;
- penetration class in accordance with EN 351-1;
- retention of preservative in accordance with EN 351-1.

### 5.2 Timber

Any machining, boring, planing etc. shall be completed before preservative treatment. In case of wane, the bark shall be removed.

### 5.3 Preservatives

Wood preservatives used shall conform to the performance requirements given in EN 599-2 appropriate for the use class

### 5.4 Penetration

The minimum penetration shall be declared in terms of the penetration classes listed in EN 351-1.

### 5.5 Retention

The average retention in the analytical zone (see EN 351-1) shall be equal to or greater than the retention requirement for the preservative used in the declared use class.

## 6 Evaluation of conformity

### 6.1 General

The compliance of preservative treated products with the requirements of this standard shall be demonstrated by :

- initial type testing;
- factory production control by the producer, including product assessment.

### 6.2 Type testing

#### 6.2.1 Initial type testing, general

Initial type testing shall be performed to show conformity with this standard. Tests previously performed in accordance with the provisions of this standard (same product, same characteristic(s), test method, sampling procedure, system of attestation of conformity, etc.) may be taken into account.

Whenever a change occurs which would change significantly one or more of the characteristics, the type tests shall be repeated for the appropriate characteristic(s).



## 6.2.2 Initial type testing of timber treated against biological attack

For the preservative used, the critical value shall be determined by initial type testing in accordance with EN 599-1.

For the preservative treated products, the penetration and the retention shall be subject to initial type testing, according to EN 351-1

## 6.2.3 Records

Records shall be kept for at least 5 years after the last date of production of the product to which they refer.

## 6.3 Factory production control (FPC)

### 6.3.1 General

The manufacturer shall establish, document and maintain an FPC system to ensure that the products placed on the market conform to the stated performance characteristics. The FPC system shall consist of procedures, regular inspections and tests and/or assessments and the use of the results to control raw and other incoming materials or components, equipment, the production process and the product.

An FPC system conforming with the requirements of ISO 9001 and made specific to the requirements of this standard, is considered to satisfy the above requirements.

The results of inspections, tests or assessments requiring action shall be recorded, as shall any action taken. The action to be taken when control values or criteria are not met shall be recorded.

### 6.3.2 Equipment

All weighing, measuring and testing equipment shall be calibrated and regularly inspected according to documented procedures, frequencies and criteria.

### 6.3.3 Raw materials and preservatives , general

The specifications of all incoming raw materials and preservatives, shall be documented, as shall the inspection scheme for ensuring their conformity.

### 6.3.4 Structural timber treated against biological attack

**6.3.4.1** The concentration of the preservative product ready for use shall be controlled.

**6.3.4.2** The penetration shall be controlled according to EN 351-1 and EN 351-2.

**6.3.4.3** The retention shall be controlled for each charge. The control shall be done by direct testing unless a safe relationship has been established between both the penetration and retention requirements given in 5.4 and 5.5 and other properties associated with the treated timber. In this case the latter may be used to determine the quality of the preservative treatment on a charge basis

**6.3.4.4** The number of treated specimens in a charge that make up a sample (sampling unit) shall be in accordance with EN 351-1 and EN 351-2. Sampling units shall be selected from a charge immediately after appropriate post-treatment conditioning, so that all members within a charge have an equal chance of being included in the sample.

## 7 Marking

### 7.1 General

The marking according to the following clauses provides information related to the treatment only.

### 7.2 Information to be given on the product

- Either, the information required in 7.3 or a reference number that identifies the documentation containing the information required in 7.3.
- T and Use Class

### 7.3 Information to be given on the product or in accompanying documentation

- Preservative
- Penetration class
- Retention
- Charge number and year

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