

STN	Trvanlivosť dreva a výrobkov na báze dreva. Skúšanie a klasifikácia odolnosti dreva a výrobkov na báze dreva proti biologickým činiteľom.	STN EN 350 49 0661
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Durability of wood and wood-based products - Testing and classification of the durability to biological agents of wood and wood-based materials

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 01/17

Obsahuje: EN 350:2016

Oznámením tejto normy sa ruší
STN EN 350-1 (49 0661) z júla 1997

STN EN 350-2 (49 0661) z júla 1997

124157

Úrad pre normalizáciu, metrológiu a skúšobníctvo SR, 2017
Podľa zákona č. 264/1999 Z. z. v znení neskorších predpisov sa môžu slovenské technické normy
rozmnžovať a rozširovať iba so súhlasom Úradu pre normalizáciu, metrológiu a skúšobníctvo SR.

EUROPEAN STANDARD

EN 350

NORME EUROPÉENNE

EUROPÄISCHE NORM

August 2016

ICS 79.040

Supersedes EN 350-1:1994, EN 350-2:1994

English Version

Durability of wood and wood-based products - Testing and classification of the durability to biological agents of wood and wood-based materials

Durabilité du bois et des matériaux dérivés du bois -
Méthodes d'essai et de classification de la durabilité
vis-à-vis des agents biologiques du bois et des
matériaux dérivés du bois

Dauerhaftigkeit von Holz und Holzprodukten - Prüfung
und Klassifikation der Dauerhaftigkeit von Holz und
Holzprodukten gegen biologischen Angriff

This European Standard was approved by CEN on 18 June 2016.

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.

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

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Contents	Page
European foreword.....	4
1 Scope	5
2 Normative references	5
3 Terms and definitions	6
4 Sampling of wood and wood-based materials to be tested	8
4.1 Testing wood species	8
4.1.1 General	8
4.1.2 Sampling logs	8
4.1.3 Sampling sawn timber	9
4.2 Testing of sets of wood	9
4.3 Testing of wood-based materials	9
5 General principles for testing and classification	9
5.1 General principles for testing wood specimens	9
5.2 General principles for the classification of durability	10
6 Test methods and classification system	11
6.1 Durability to wood-destroying fungi	11
6.1.1 General	11
6.1.2 Testing durability against basidiomycete and soft-rot fungi	12
6.2 Durability to larvae of dry wood-destroying beetles	14
6.3 Durability to termites	14
6.4 Durability to marine organisms	15
Annex A (informative) Example of scheme for sampling heartwood	16
A.1 Logs	16
A.2 Central boards	17
Annex B (informative) Guide to biological durability and treatability of wood species marketed in Europe	18
B.1 General	18
B.2 Wood species	18
B.3 Sapwood/heartwood	19
B.4 Treatability	19
B.5 Additional notes in Tables B.1, B.2, and B.3	20
B.6 Convention on International Trade in Endangered Species (CITES)	20
B.7 Adding new wood species or adjust data in Table B.1	20
Annex C (informative) Classification of treatability with aqueous wood preservatives	58
Annex D (informative) Classification of permeability to water	60
D.1 General	60
D.2 Principles for classification of permeability to water	60

Annex E (informative) Testing durability to disfiguring fungi.....	61
E.1 General	61
E.2 Testing durability to disfiguring fungi.....	61
E.3 Classification of durability to disfiguring fungi	61
Annex F (informative) Classification of performance	62
F.1 General	62
F.2 Principles of the assessment of performance	62
F.3 Principles of the classification of performance	63
Annex G (informative) Form to be used for the inclusion of new data on wood species / wood-based material.....	64
Bibliography	67

European foreword

This document (EN 350:2016) 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 February 2017, and conflicting national standards shall be withdrawn at the latest by February 2017.

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 350-1:1994 and EN 350-2:1994.

Wood durability is an important factor that influences the service life of a wood product. This standard provides input to service life prediction of wood and wood-based products. It's intended to give guidance on using wood products appropriate for different end-uses avoiding excessive requirements. It also ranks durability against wood-decay organisms of various wood species thereby allowing species of appropriate durability to be selected for a particular use. It will however be emphasized that the biological durability rating of wood species given in Annex B cannot be regarded as any guarantee of performance in service.

There are many other factors influencing service life of a wood product, such as the principles of good design, use conditions, climate, maintenance which should be taken into consideration.

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, 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.

1 Scope

This European Standard gives guidance on methods for determining and classifying the durability of wood and wood-based materials against biological wood-destroying agents.

The methods can be applied either to individual wood species, batches of wood and processed wood-based materials, including heat-treated, preservative-treated wood and modified wood. However, this standard is not intended to replace testing of the efficacy of biocides.

The wood-destroying agents considered in this standard are:

- wood-decay fungi (basidiomycete and soft-rot fungi);
- beetles capable of attacking dry wood;
- termites;
- marine organisms capable of attacking wood in service.

Data on the biological durability of selected wood species considered of economic importance in European countries are presented in Annex B (informative), which also provides information relating to their geographical origin, density, sapwood width and treatability.

NOTE Treatability, durability to disfiguring fungi, permeability to water and performance in use of wood and wood-based materials are also important issues. However, because standardized methods aiming to assess and classify these factors do not exist and/or have not been extensively experienced yet, preliminary guidance is given in Annex C (informative) for the classification of wood treatability with aqueous wood preservatives, Annex D (informative) for the classification of the permeability to water, Annex E (informative) for the durability to disfiguring fungi, and Annex F (informative) for the classification of performance.

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 20-1, *Wood preservatives - Determination of the protective effectiveness against Lyctus Brunneus (Stephens) - Part 1: Application by surface treatment (laboratory method)*

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 49-1, *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)*

EN 117, *Wood preservatives - Determination of toxic values against Reticulitermes species (European termites) (Laboratory method)*

EN 252, *Field test method for determining the relative protective effectiveness of a wood preservative in ground contact*

EN 275, *Wood preservatives - Determination of the protective effectiveness against marine borers*

ENV 12038, *Durability of wood and wood-based products - Wood-based panels - Method of test for determining the resistance against wood-destroying basidiomycetes*

EN 350:2016 (E)

EN 13556, *Round and sawn timber - Nomenclature of timbers used in Europe*

CEN/TS 15083-1, *Durability of wood and wood-based products - Determination of the natural durability of solid wood against wood-destroying fungi, test methods - Part 1: Basidiomycetes*

CEN/TS 15083-2, *Durability of wood and wood-based products - Determination of the natural durability of solid wood against wood-destroying fungi, test methods - Part 2: Soft rotting micro-fungi*

EN 16449, *Wood and wood-based products - Calculation of the biogenic carbon content of wood and conversion to carbon dioxide*

ISO 13061-2, *Physical and mechanical properties of wood — Test methods for small clear wood specimens — Part 2: Determination of density for physical and mechanical tests*

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