

ICS 79.040

English Version

**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**

Durabilité du bois et des matériaux dérivés - Détermination
de la durabilité naturelle du bois massif vis-à-vis des
champignons lignivores, méthodes d'essai - Partie 2:
Micro-organismes de pourriture molle

Dauerhaftigkeit von Holz und Holzprodukten - Bestimmung
der natürlichen Dauerhaftigkeit von Vollholz gegen
holzerstörende Pilze, Prüfverfahren - Teil 2:
Moderfäulepilze

This Technical Specification (CEN/TS) was approved by CEN on 1 March 2005 for provisional application.

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Foreword

This document (CEN/TS 15083-2:2005) 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 document consists of two parts, Part 1 determines the natural durability of solid wood against wood destroying basidiomycetes fungi and Part 2 against soft rotting micro-fungi.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to announce this CEN Technical Specification: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

Introduction

This CEN Technical Specification describes a laboratory method of test which gives a basis for the assessment of the natural durability of a sample of timber against micro-fungi (ascomycetes and fungi imperfecti) which cause soft rot of wood in service. The infection source is the natural micro-flora of the soil substrate which can also contain other micro-organisms, such as bacteria, and other fungi such as moulds and basidiomycetes. These other organisms can influence the development of soft rot attack in the test specimens. The natural durability of a species of timber can vary depending on the conditions of growth such as climate and soil type. For this reason, the durability established using the method described in this CEN Technical Specification will relate only to the sample of timber tested. Guidance on sampling is given in Annex A.

This laboratory method provides one criterion by which the durability of the timber can be assessed. It is recommended that this information be supplemented by data from other relevant tests, for example CEN/TS 15083-1, and above all by practical experience.

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

1 Scope

This CEN Technical Specification specifies a method of test for determining the natural durability of a timber against soft rotting micro-fungi. The method is applicable to all timber species.

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

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

EN ISO 3696, *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

supplier

sponsor of the test (person or company providing the sample of timber to be tested)

4 Principle

Test specimens prepared from the timber under test and reference timber test specimens are exposed to attack by soft rotting micro-fungi. After a prescribed period of incubation under defined conditions, the percentage loss in dry mass of the test specimens is used to estimate the resistance of hardwood test timbers to attack by the test fungi and as the basis of a provisional durability rating. For softwood test timbers, the percentage loss in dry mass is recorded but the provisional durability rating is based on the loss of modulus of elasticity.

5 Test materials and apparatus

5.1 Biological material

5.1.1 Soil

Natural top soil or a fertile loam-based horticultural soil ¹⁾ of pH 6 to pH 8 and not containing added agrochemical. It shall have a water holding capacity (WHC) of between 25 % and 60 %.

NOTE 1 A suitable method for determining WHC is described in Annex B.

¹⁾ A horticultural soil of the John Innes No. 2 type and with the following composition has been found to be suitable; seven parts by volume loam, three parts by volume sphagnum peat, two parts by volume sharp sand plus 0,6 g chalk and 6,0 g slow release fertilizer per litre of soil mixture. If the WHC is too high, it can be lowered by modifying the soil with the addition of sand.