Reaction to fire tests for building products - Non-combustibility test

Aldin. Town Och Concentration of the Concentration Reaction to fire tests for building products - Noncombustibility test



# **EESTI STANDARDI EESSÕNA**

# **NATIONAL FOREWORD**

Käesolev Eesti standard EVS-EN ISO 1182;2002 sisaldab Euroopa standardi EN ISO 1182:2002 ingliskeelset teksti.

This Estonian standard EVS-EN ISO 1182:2002 consists of the English text of the European standard EN ISO 1182:2002.

Käesolev dokument on jõustatud 14.03.2002 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.

This document is endorsed on 14.03.2002 with the notification being published in the official publication of the Estonian national standardisation organisation.

Standard on kättesaadav Eesti standardiorganisatsioonist.

The standard is available from Estonian standardisation organisation.

# Käsitlusala:

This Standard specifies a method of test for determining the non- combustibility performance, under specified conditions, og homogeneous building product and substancial components of non-homogeneous building products.

# Scope:

This Standard specifies a method of test for determining the non- combustibility performance, under specified conditions, og homogeneous building product and substancial components of nonhomogeneous building products.

ICS 13.220.50

Võtmesõnad: combustibility, construction materials, definitions, fire tests, flammability, test equipment, testing

# **EUROPEAN STANDARD** NORME EUROPÉENNE EUROPÄISCHE NORM

**EN ISO 1182** 

February 2002

3.220.50

# **English version**

# Reaction to fire tests for building products

Non-combustibility test (ISO 1182: 2002)

Essais de réaction au feu des produits de construction - Essai d'incombustibilité (ISO 1182: 2002)

Prüfungen zum Brandverhalten von Bauprodukten -Nichtbrennbarkeitsprüfung (ISO 1182: 2002)

This European Standard was approved by CEN on 2001-05-03.

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 Management Centre or to any CEN member.

The European Standards exist in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

1000 OF 117 C. European Committee for Standardization Comité Européen de Normalisation Europäisches Komitee für Normung

Management Centre: rue de Stassart 36, B-1050 Brussels

# **Contents**

Test apparatus	troduction	20 20 27 27
Scope	Scope Normative references Terms and definitions Test apparatus  Test specimen Conditioning Expression of results Test report Test report Innex A (informative) Precision of test method Innex B (informative) Typical designs of test apparatus Innex C (normative) Thermocouples for additional measurements Innex D (informative) Temperature recording	2 1 12 20 2 2 2 2 2 2 2 2 2 2
P. Normative references	Normative references  Terms and definitions  Test apparatus  Test specimen  Conditioning  Expression of results  Test report  Innex A (informative) Precision of test method  Innex B (informative) Typical designs of test apparatus  Innex C (normative) Thermocouples for additional measurements  Innex D (informative) Temperature recording	2 12 12 20 2 2 27
Test apparatus 5 Test specimen 11 Conditioning 12 Test procedure 12 Expression of results 12 Test report 20 Annex A (informative) Precision of test method 21 Annex B (informative) Typical designs of test apparatus 24 Annex C (normative) Thermocouples for additional measurements 27 Annex D (informative) Temperature recording 29	Test apparatus Test specimen Conditioning Test procedure Expression of results Test report Test report Test R (informative) Precision of test method Tenex B (informative) Typical designs of test apparatus Tenex C (normative) Thermocouples for additional measurements Temperature recording	12 12 20 21 22 27
Test apparatus	Test specimen  Conditioning  Test procedure  Expression of results  Test report  Innex A (informative) Precision of test method  Innex B (informative) Typical designs of test apparatus  Innex C (normative) Thermocouples for additional measurements  Innex D (informative) Temperature recording	12 12 20 2 <sup>2</sup> 2 <sup>2</sup> 2 <sup>2</sup>
Test specimen	Test specimen  Conditioning  Test procedure  Expression of results  Test report  Innex A (informative) Precision of test method  Innex B (informative) Typical designs of test apparatus  Innex C (normative) Thermocouples for additional measurements  Innex D (informative) Temperature recording	1 <sup>2</sup> 12 20 2 <sup>2</sup> 2 <sup>2</sup> 2 <sup>2</sup>
Conditioning	Conditioning  Test procedure  Expression of results  Test report  nnex A (informative) Precision of test method  nnex B (informative) Typical designs of test apparatus  nnex C (normative) Thermocouples for additional measurements  nnex D (informative) Temperature recording	12 20 2 <sup>2</sup> 2 <sup>2</sup> 2 <sup>2</sup>
Test procedure	Test procedure  Expression of results  Test report  Innex A (informative) Precision of test method  Innex B (informative) Typical designs of test apparatus  Innex C (normative) Thermocouples for additional measurements  Innex D (informative) Temperature recording	12 20 2 2 2 2 2 2 22
Expression of results 20 Test report 20 Annex A (informative) Precision of test method 21 Annex B (informative) Typical designs of test apparatus 24 Annex C (normative) Thermocouples for additional measurements 27 Annex D (informative) Temperature recording 29	Expression of results  Test report	20 20 2 <sup>-</sup> 2 <sup>7</sup>
Test report	Test report	20 2 <sup>-</sup> 2 <sup>2</sup>
Annex A (informative) Precision of test method	nnex A (informative) Precision of test method nnex B (informative) Typical designs of test apparatus nnex C (normative) Thermocouples for additional measurements nnex D (informative) Temperature recording	2 <sup>-</sup> 2 <sup>2</sup>
Annex B (informative) Typical designs of test apparatus	nnex B (informative) Typical designs of test apparatus  nnex C (normative) Thermocouples for additional measurements  nnex D (informative) Temperature recording	24 27
Annex C (normative) Thermocouples for additional measurements 27 Annex D (informative) Temperature recording 29	nnex C (normative) Thermocouples for additional measurements	27
Annex D (informative) Temperature recording 29	nnex D (informative) Temperature recording	
		0.0
		29
		<b>\</b>
		(

# **Foreword**

The text of EN ISO 1182:2002 has been prepared by Technical Committee CEN/TC 127 "Fire safety in buildings", the secretariat of which is held by BSI in collaboration with Technical Committee ISO/TC 92 "Fire safety".

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 August 2002, and conflicting national standards shall be withdrawn at the latest by December 2003.

Annexes A, B and D are informative. Annex C is normative.

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

# Introduction

This fire test has been developed for use by those responsible for selection of construction products which, whilst not completely inert, produce only a very limited amount of heat and flame when exposed to temperatures of approximately 750 °C.

The limitation of the field of application to testing homogeneous products and substantial components of non-homogeneous products was introduced because of problems in defining specifications for the specimens. The design of the specimen of non-homogeneous products strongly influences the test results, which is the reason why non-homogeneous products cannot be tested to this standard.

#### Safety warning

The attention of all persons concerned with managing and carrying out this test is drawn to the fact that fire testing may be hazardous and that there is a possibility that toxic and/or harmful smoke and gases may be evolved during the test. Operational hazards may also arise during the testing of specimens and the disposal of test residues.

An assessment of all potential hazards and risks to health should be made and safety precautions should be identified and provided. Written safety instructions should be issued. Appropriate training should be given to relevant personnel. Laboratory personnel should ensure that they follow written safety instructions at all times.

EN ISO 1182: 2002

#### 1 Scope

This European Standard specifies a method of test for determining the non-combustibility performance, under specified conditions, of homogeneous building products and substantial components of non-homogeneous building products.

Information on the precision of the test method is given in annex A.

# 2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at 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 Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 13238, Reaction to fire tests for building products — Conditioning procedures and general rules for selection of substrates.

EN ISO 13943, Fire safety — Vocabulary (ISO 13943:1999).

EN 60584-2, Thermocouples — Part 2: Tolerances (IEC 60584-2:1982+A1:1989).

#### 3 Terms and definitions

For the purpose of this European Standard, the terms and definitions given in EN ISO 13943, together with the following, apply:

#### 3.1

#### product

material, element or component about which information is required

# 3.2

#### material

a single basic substance or uniformly dispersed mixture of substances e.g. metal, stone, timber, concrete, mineral wool with uniformly dispersed binder, polymers

#### 3.3

#### loose fill material

material without any physical shape

#### 3.4

### homogeneous product

a product, consisting of a single material, having uniform density and composition throughout the product

#### 3.5

#### non-homogeneous product

a product that does not satisfy the requirements of a homogeneous product. It is a product composed of more than one component, substantial and/or non-substantial