Reaction to fire tests for building products - Determination of a building product's propensity to undergo continuous smouldering

EESTI STANDARDIKESKUS
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NATIONAL FOREWORD

See Eesti standard EVS-EN 16733:2016 sisaldab Euroopa standardi EN 16733:2016 ingliskeelset teksti.	This Estonian standard EVS-EN 16733:2016 consists of the English text of the European standard EN 16733:2016.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 04.05.2016.	Date of Availability of the European standard is 04.05.2016.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

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Reaction to fire tests for building products - Determination of a building product's propensity to undergo continuous smouldering

Essais de réaction au feu pour les produits de construction - Détermination de la propension d'un produit de construction à subir un feu couvant continu

Prüfungen zum Brandverhalten von Bauprodukten - Bestimmung der Neigung eines Bauprodukts zum kontinuierlichen Schwelen

This European Standard was approved by CEN on 12 February 2016.

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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Contents

Page

European foreword ... 3
Introduction ... 4
1 Scope ... 5
2 Normative references ... 5
3 Terms and definitions ... 5
4 Principle ... 6
5 Test apparatus ... 6
5.1 Main apparatus ... 6
5.1.1 Test specimen holder ... 7
5.1.2 Wire mesh box ... 7
5.1.3 Propane burner ... 7
5.1.4 Thermocouples in the test specimen ... 7
5.1.5 Recording device ... 7
5.2 Additional equipment ... 8
5.2.1 Flowmeter ... 8
5.2.2 Timing device ... 8
5.2.3 Anemometer ... 8
5.2.4 Fire extinguishing board ... 8
6 Test specimens ... 8
6.1 General ... 8
6.2 Dimensions and number of test specimens ... 8
6.3 Loose fill materials ... 8
7 Conditioning of specimens ... 8
8 Test procedure ... 9
9 Termination of test ... 9
10 Expression of results ... 10
11 Performance criteria and declaration ... 10
12 Direct and extended application of test results ... 10
13 Test report ... 11
Annex A (informative) Precision of the method ... 19
A.1 General ... 19
A.2 Conclusions ... 20
Bibilography ... 21

European foreword

This document (EN 16733:2016) has been prepared by Technical Committee CEN/TC 127 “Fire safety in buildings”, the secretariat of which is held by BSI.

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 November 2016, and conflicting national standards shall be withdrawn at the latest by February 2018.

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

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

This standard is produced in response to the EC mandate M/385. CEN/TC 127 was requested to develop this test method to determine possible glowing combustion behaviour in building products. This test method forms part of the present EC classification system for the reaction to fire.

Task Group 6 of CEN TC 127/WG4 was created to develop this test method. In the early stages of its development, it was found that the term ‘glowing combustion’ as defined in EN ISO 13943 does not completely characterize the specific combustion behaviour of a building product. In particular, the increase of temperature which is considered as typical for the process of smouldering is not considered in the EN ISO 13943 definition. Therefore the task group made a clarification and changed the term glowing combustion to smouldering combustion. Smouldering is defined in this standard as 'combustion of a material without flame and with or without visible light’. This includes glowing combustion.

According to the CEN/CENELEC Internal Regulations, the national standards organizations 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.

Introduction

This test method has been developed considering methods NT FIRE 002 and NT FIRE 035 and standards BS 5803-4 and Önorm B 3800. It specifies a test for determining the propensity of products to smoulder continuously when tested in a vertical orientation. The method does not impose a mechanically influenced airflow through the test specimens since this would not represent most end-use conditions.

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.

Adequate means of extinguishing the specimen should be provided, bearing in mind that some specimens may produce severe flaming during the test. A hand water spray or an inert gas suppression system e.g. compressed nitrogen which can be directed to the burning area should be available together with other means, such as fire extinguishers etc.

In some cases, smouldering may be difficult to extinguish completely and immersion in water may be necessary.

1 Scope

This European Standard specifies a test method to determine the propensity (ability) of a building product to smoulder continuously when exposed to an open flame under the influence of natural convective airflow.

It is intended for all building products classified according to EN 13501-1. Details as to how the products is mounted and fixed for this test are given in the relevant product standards. The field of application of the test results is defined in the product standards.

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

EN 60584-1 *Thermocouples — Part 1: EMF specifications and tolerances (IEC 60584-1)*

EN ISO 13943, *Fire safety — Vocabulary (ISO 13943)*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN ISO 13943 and the following apply.

3.1
product
material, composite or assembly about which information is required

3.2
material
basic single substance or a uniformly dispersed mixture of substances e.g. metal, stone, wood, concrete, mineral wool

3.3
composite
combination of materials which are generally recognised as discrete entities e.g. coated or laminated materials

3.4
assembly
fabrication of materials and/or composites e.g. sandwich panels

3.5
exposed surface
surface of the product which is subjected to the heating conditions of the test

3.6
test specimen
representative piece of the sample (prepared for testing in accordance with instruction)