

Fire classification of construction products and building elements - Part 4: Classification using data from fire resistance tests on components of smoke control systems KONSOLIDEERITUD TEKST

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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| <p>Käesolev Eesti standard EVS-EN 13501-4:2007+A1:2009 sisaldab Euroopa standardi EN 13501-4:2007+A1:2009 ingliskeelset teksti.</p> <p>Standard on kinnitatud Eesti Standardikeskuse 30.10.2009 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 02.09.2009.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p> | <p>This Estonian standard EVS-EN 13501-4:2007+A1:2009 consists of the English text of the European standard EN 13501-4:2007+A1:2009.</p> <p>This standard is ratified with the order of Estonian Centre for Standardisation dated 30.10.2009 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.</p> <p>Date of Availability of the European standard text 02.09.2009.</p> <p>The standard is available from Estonian standardisation organisation.</p> |
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English Version

**Fire classification of construction products and building elements
- Part 4: Classification using data from fire resistance tests on
components of smoke control systems**

Classement au feu des produits et éléments de
construction - Partie 4: Classement à partir des données
d'essais de résistance au feu des composants de
dispositifs de contrôle de fumée

Klassifizierung von Bauprodukten und Bauarten zu ihrem
Brandverhalten - Teil 4: Klassifizierung mit den
Ergebnissen aus den Feuerwiderstandsprüfungen von
Anlagen zur Rauchfreihaltung

This European Standard was approved by CEN on 16 December 2006 and includes Amendment 1 approved by CEN on 17 July 2009.

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Foreword

This document (EN 13501-4:2007+A1:2009) 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of an identical text or by endorsement, at the latest by March 2010, and conflicting national standards shall be withdrawn at the latest by March 2010.

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 includes Amendment 1, approved by CEN on 2009-07-17.

This document supersedes EN 13501-4:2007.

The start and finish of text introduced or altered by amendment is indicated in the text by tags **A1** **A1**.

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

A1 Amendment 1 provides for the use of extended application reports in the classification procedure. **A1**

CEN, CENELEC and EOTA committees preparing technical specifications which contain performance requirements against fire resistance tests should make reference to the fire resistance classification given in this European Standard and not refer directly to any specific fire test method.

EN 13501 consists of the following parts:

Part 1: Classification using data from reaction to fire tests

Part 2: Classification using data from fire resistance tests, excluding ventilation services

Part 3: Classification using data from fire resistance tests on products and elements used in building service installations: fire resisting ducts and fire dampers

Part 4: Classification using data from fire resistance tests on components of smoke control systems

Part 5: Classification using data from external fire exposure to roof tests

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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

Introduction

This European Standard defines a harmonised procedure for the classification for resistance to fire of construction products. This classification is based on the test procedures sited in the relevant documents listed in ^[A1] Clause 2 and the relevant field of application procedures ^[A1].

This European Standard is prepared in support of the second essential requirement, in the EC Construction Products Directive (89/106/CEC) and is detailed in the Interpretative Document number 2 (ID2): Safety in case of fire (OJC62 Vol 37).

The Interpretative Document and the Commission Decision of 3 May 2000 specify performance and classes regarding fire resistance.

These classes are identified by designation letters, each of which refers to an important characteristic of fire resistance behaviour.

This European Standard provides for a common understanding for these requirements. It interprets the functional requirements for the different groups of building products/elements and explains the method for deriving their classification on the basis of ^[A1] test results and/or extended application results for individual products/elements ^[A1].

^[A1] NOTE Test reports constitute the basis for extended application reports as explained in prEN 15725. ^[A1]

1 Scope

This European Standard specifies the procedure for classification of components of smoke control systems, using data from fire resistance tests which are within the field of application of the relevant test methods. ^[A1] Classification on the basis of extended application of test results is also included in the scope of this European Standard. ^[A1]

Products covered by this European Standard are:

- smoke control ducts;
- smoke control dampers;
- smoke barriers;
- powered smoke and heat exhaust ventilators (fans), including connectors;
- natural smoke and heat exhaust ventilators.

Relevant documents which include the relevant test methods which have been prepared for these products are listed in Clause 2.

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 1363-1, *Fire resistance tests — Part 1: General requirements*

EN 1363-2, *Fire resistance tests — Part 2: Alternative and additional procedures*

EN 1366-1, *Fire resistance tests for service installations — Part 1: Ducts*

EN 1366-2, *Fire resistance tests for service installations — Part 2: Fire dampers*

EN 1366-8, *Fire resistance tests for service installations — Part 8: Smoke extraction ducts*

prEN 1366-9, *Fire resistance tests for service installations — Part 9: Single compartment smoke extraction ducts*


prEN 1366-10, *Fire resistance tests for service installations — Part 10: Smoke control dampers*

EN 12101-1:2005, *Smoke and heat control systems — Part 1: Specification for smoke barriers*

EN 12101-2, *Smoke and heat control systems — Part 2: Specification for natural smoke and heat exhaust ventilators*

EN 12101-3, *Smoke and heat control systems — Part 3: Specification for powered smoke and heat exhaust ventilators*

^[A1] prEN 15725, *Extended application reports on the fire performance of construction products and building elements*

prEN 15882-5¹⁾, *Extended application of results from fire resistance tests for service installations — Part 5: Smoke extraction ducts* 

EN ISO 13943:2000, *Fire safety — Vocabulary (ISO 13943:2000)*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN ISO 13943:2000 and the following apply.

3.1

direct field of application

outcome of a process (involving the application of defined rules) whereby a test result is deemed to be equally valid for variations in one or more of the product properties and/or intended end use applications

3.2

extended field of application

outcome of a process (involving the application of defined rules that may incorporate calculation procedures) that predicts, for a variation of a product property and/or its intended end use application(s), a test result on the basis of one or more test results to the same test standard

3.3

test specimen

product provided for test purposes

3.4

smoke control duct

duct used in a system to control the movement and/or containment of smoke and heat

3.5

multi compartment smoke control duct

smoke control duct designed to provide a degree of fire resistance for use in multi compartment applications

3.6

smoke control damper

device, open or closed in its operational position to control the flow of smoke and hot gasses, which is automatically or manually activated

3.6.1

single-compartment smoke control damper

smoke control damper for use within a single compartment, associated with a single compartment smoke extraction duct tested to prEN 1366-9

3.6.2


multi-compartment fire resisting smoke control damper

smoke control damper for use in multi-compartment applications, associated with a smoke extraction duct tested to EN 1366-8

3.7

smoke barrier

device to channel, contain and/or prevent the migration of smoke (fire effluent)

¹⁾  To be published. 