

**EHITUSTOODETE JA -ELEMENTIDE
TULEOHUTUSALANE KLASSIFIKATSIOON. OSA 2:
KLASSIFIKATSIOON TULEPÜSIVUSKATSETE ALUSEL,
VÄLJA ARVATUD VENTILATSIOONISÜSTEEMID**

**Fire classification of construction products and
building elements - Part 2: Classification using data
from fire resistance tests, excluding ventilation
services**

EESTI STANDARDI EESSÕNA**NATIONAL FOREWORD**

See Eesti standard EVS-EN 13501-2:2016 sisaldab Euroopa standardi EN 13501-2:2016 ingliskeelset teksti.	This Estonian standard EVS-EN 13501-2:2016 consists of the English text of the European standard EN 13501-2:2016.
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English Version

Fire classification of construction products and building
elements - Part 2: Classification using data from fire
resistance tests, excluding ventilation services

Classement au feu des produits et éléments de
construction - Partie 2: Classement à partir des
données d'essais de résistance au feu à l'exclusion des
produits utilisés dans les systèmes de ventilation

Klassifizierung von Bauprodukten und Bauarten zu
ihrem Brandverhalten - Teil 2: Klassifizierung mit den
Ergebnissen aus den Feuerwiderstandsprüfungen, mit
Ausnahme von Lüftungsanlagen

This European Standard was approved by CEN on 23 April 2016.

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European foreword

This document (EN 13501-2:2016) has been prepared by Technical Committee CEN/TC 127 “Fire safety in buildings”, the secretariat of which is held by BSI.

This document supersedes EN 13501-2:2007+A1:2009.

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of an identical text or by endorsement, at the latest by December 2016, and conflicting national standards shall be withdrawn at the latest by December 2016.

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

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

Changes have been made in this revision to bring it in line with the relevant current EC Decisions on fire resistance classification, and experience in use in the first edition.

EN 13501 *Fire classification of construction products and building elements* 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 components of normal 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*
- *Part 6: Classification using data from reaction to fire tests on electric cables*

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.

Introduction

The aim of this European Standard is to define a harmonised procedure for the classification for resistance to fire of construction products and building elements. This classification is based on the test procedures listed in Clause 2 and the relevant field of application procedures.

This European Standard is prepared in support of the second basic requirement, in the EC Construction Products Regulation (305/2011) 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 2 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 elements and explains the method for deriving their classification on the basis of test results and/or extended application results for individual elements.

NOTE Test reports constitute the basis for extended application reports as explained in EN 15725.

1 Scope

This European Standard specifies the procedure for classification of construction products and building elements using data from fire resistance and smoke leakage tests which are within the direct field of application of the relevant test method. Classification on the basis of extended application of test results is also included in the scope of this European Standard.

This European Standard deals with:

- a) loadbearing elements without a fire separating function:
 - walls;
 - floors;
 - roofs;
 - beams;
 - columns;
 - balconies;
 - walkways;
 - stairs.
- b) loadbearing elements with a fire separating function, with or without glazing, services and fixtures:
 - walls;
 - floors;
 - roofs;
 - raised floors.
- c) products and systems for protecting elements or parts of the works:
 - ceilings with no independent fire resistance;
 - fire protective coatings, claddings and screens;
- d) non-loadbearing elements or parts of works, with or without glazing, services and fixtures:
 - partitions;
 - facades (curtain walls) and external walls;
 - ceilings with independent fire resistance;
 - raised floors;
 - fire doors and shutters and their closing devices;

- smoke control doors;
 - conveyor systems and their closures;
 - penetration seals;
 - linear joint seals;
 - service ducts and shafts;
 - chimneys.
- e) wall and ceiling coverings with fire protection ability.
- f) lift landing doors which are tested according to EN 81-58 are excluded from this European Standard. Lift landing doors which are tested in accordance with EN 1634-1, are classified in accordance with 7.5.5.

Relevant test methods which have been prepared for these elements are listed in Clauses 2 and 7.

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

EN 1364-1:2015, *Fire resistance tests for non-loadbearing elements - Part 1: Walls*

EN 1364-2:1999, *Fire resistance tests for non-loadbearing elements - Part 2: Ceilings*

EN 1364-3, *Fire resistance tests for non-loadbearing elements - Part 3: Curtain walling - Full configuration (complete assembly)*

EN 1364-4, *Fire resistance tests for non-loadbearing elements - Part 4: Curtain walling - Part configuration*

EN 1365-1:2012, *Fire resistance tests for loadbearing elements - Part 1: Walls*

EN 1365-2:2014, *Fire resistance tests for loadbearing elements - Part 2: Floors and roofs*

EN 1365-3, *Fire resistance tests for loadbearing elements - Part 3: Beams*

EN 1365-4, *Fire resistance tests for loadbearing elements - Part 4: Columns*

EN 1365-5, *Fire resistance tests for loadbearing elements - Part 5: Balconies and walkways*

EN 1365-6, *Fire resistance tests for loadbearing elements - Part 6: Stairs*

EN 1366-3, *Fire resistance tests for service installations - Part 3: Penetration seals*

EN 1366-4, *Fire resistance tests for service installations — Part 4: Linear joint seals*

EN 1366-5, *Fire resistance tests for service installations - Part 5: Service ducts and shafts*

EN 1366-6, *Fire resistance tests for service installations - Part 6: Raised access and hollow core floors*

EN 1366-7:2004, *Fire resistance tests for service installations - Part 7: Conveyor systems and their closures*

EN 1634-1:2014, *Fire resistance and smoke control tests for door and shutter assemblies, openable windows and elements of building hardware - Part 1: Fire resistance test for door and shutter assemblies and openable windows*

EN 1634-3:2004, *Fire resistance and smoke control tests for door and shutter assemblies, openable windows and elements of building hardware - Part 3: Smoke control test for door and shutter assemblies*

EN 13216-1, *Chimneys - Test methods for system chimneys - Part 1: General test methods*

EN 13381-1, *Test methods for determining the contribution to the fire resistance of structural members - Part 1: Horizontal protective membranes*

EN 13381-2, *Test methods for determining the contribution to the fire resistance of structural members - Part 2: Vertical protective membranes*

EN 13381-3, *Test methods for determining the contribution to the fire resistance of structural members - Part 3: Applied protection to concrete members*

EN 13381-4, *Test methods for determining the contribution to the fire resistance of structural members - Part 4: Applied passive protection to steel members*

EN 13381-5, *Test methods for determining the contribution to the fire resistance of structural members - Part 5: Applied protection to concrete/profiled sheet steel composite member*

EN 13381-6, *Test methods for determining the contribution to the fire resistance of structural members - Part 6: Applied protection to concrete filled hollow steel columns*

ENV 13381-7, *Test methods for determining the contribution to the fire resistance of structural members - Part 7: Applied protection to timber members*

EN 13381-8, *Test methods for determining the contribution to the fire resistance of structural members - Part 8: Applied reactive protection to steel members*

EN 13381-9, *Test methods for determining the contribution to the fire resistance of structural members - Part 9: Applied fire protection systems to steel beams with web openings*

EN 14135, *Coverings - Determination of fire protection ability*

EN 14600, *Doorsets and openable windows with fire resisting and/or smoke control characteristics — Requirements and classification*

EN 15080-8, *Extended application of results from fire resistance tests - Part 8: Beams*

EN 15080-12, *Extended application of results from fire resistance tests - Part 12: Loadbearing masonry walls*

EN 15254-2, *Extended application of results from fire resistance tests - Non-loadbearing walls - Part 2: Masonry and Gypsum Blocks*

EN 15254-4, *Extended application of results from fire resistance tests — Nonloadbearing walls — Part 4: glazed constructions*

EN 15254-5, *Extended application of results from fire resistance tests - Non-loadbearing walls - Part 5: Metal sandwich panel construction*

EN 15254-6, *Extended application of results from fire resistance tests - Non-loadbearing walls - Part 6: Curtain walling*

EN 15254-7, *Extended application of results from fire resistance tests - Non-loadbearing ceilings - Part 7: Metal sandwich panel construction*

EN 15269-1, *Extended application of test results for fire resistance and/or smoke control for door, shutter and openable window assemblies, including their elements of building hardware - Part 1: General requirements*

EN 15269-2, *Extended application of test results for fire resistance and/or smoke control for door, shutter and openable window assemblies, including their elements of building hardware - Part 2: Fire resistance of hinged and pivoted steel doorsets*

EN 15269-3, *Extended application of test results for fire resistance and/or smoke control for door, shutter and openable window assemblies, including their elements of building hardware - Part 3: Fire resistance of hinged and pivoted timber doorsets and openable timber framed windows*

EN 15269-5, *Extended application of test results for fire resistance and/or smoke control for door, shutter and openable window assemblies, including their elements of building hardware - Part 5: Fire resistance of hinged and pivoted metal framed glazed doorsets and openable windows*

prEN 15269-6, *Extended application of test results for fire resistance and/or smoke control for door, shutter and openable window assemblies, including their elements of building hardware - Part 6: Fire resistance of sliding timber doorsets*

EN 15269-7, *Extended application of test results for fire resistance and/or smoke control for door, shutter and openable window assemblies, including their elements of building hardware - Part 7: Fire resistance for steel sliding doorsets*

EN 15269-10, *Extended application of test results for fire resistance and/or smoke control for door, shutter and openable window assemblies including their elements of building hardware - Part 10: Fire resistance of steel rolling shutter assemblies*

prEN 15269-11, *Extended application of test results for fire resistance and/or smoke control for door, shutter and openable window assemblies, including their elements of building hardware — Part 11: Fire resistance for operable fabric curtains*

EN 15269-20, *Extended application of test results for fire resistance and/or smoke control for door, shutter and openable window assemblies, including their elements of building hardware - Part 20: Smoke control for hinged and pivoted steel, timber and metal framed glazed doorsets*

EN 15725, *Extended application reports on the fire performance of construction products and building elements*

EN 15882-3, *Extended applications of results from fire resistance tests for service installations - Part 3: Penetration seals*

EN 15882-4, *Extended application of results from fire resistance tests for service installations - Part 4: Linear joint seals*

EN ISO 13943:2010, *Fire safety - Vocabulary (ISO 13943:2008)*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN ISO 13943:2010 and the following apply.

3.1

element of building construction

defined part of a construction component, such as wall, partition, floor, roof, beam or column

Note 1 to entry: Element covers both individual products and elements made up of one or more products.

[SOURCE: EN 1363-1: 2012]

3.2

ceiling

non-loadbearing element of a building construction designed to provide horizontal fire separation

[SOURCE: EN 1364-2:1999]

3.3

self-supporting ceiling

ceiling with a span from wall to wall, without any additional suspension devices

[SOURCE: EN 1364-2:1999]

3.4

door or shutter assembly (doorset)

pedestrian doorset or industrial type doorset including any frame or guide, door leaf or leaves, rolling or folding curtain, etc; which is provided to give a fire resisting capability when used for the closing of permanent openings in fire resisting elements, which includes any side panel(s), flush over panel(s) transom panel(s) and/or glazing together with the building hardware and any seals (whether provided for the purpose of fire resistance or smoke control or for other purposes such as draught or acoustics) which form the assembly

[SOURCE: EN 1634-1: 2014]

3.5

floor

horizontal separating element of building construction which is loadbearing

[SOURCE: EN 1365-2: 2014]