

EHITUSTOODETE JA -ELEMENTIDE  
TULEOHUTUSALANE KLASSIFIKATSIOON. OSA 2:  
KLASSIFIKATSIOON TULEPÜSIVUS- JA/VÕI  
SUITSUPIDAVUSKATSETE ALUSEL, VÄLJA ARVATUD  
VENTILATSIOONISÜSTEEMID

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

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

See Eesti standard EVS-EN 13501-2:2023 sisaldab Euroopa standardi EN 13501-2:2023 ingliskeelset teksti.	This Estonian standard EVS-EN 13501-2:2023 consists of the English text of the European standard EN 13501-2:2023.
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 and Accreditation.
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Standard on kättesaadav Eesti Standardimis-ja Akrediteerimiskeskusest.	The standard is available from the Estonian Centre for Standardisation and Accreditation.

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English Version

Fire classification of construction products and building  
elements - Part 2: Classification using data from fire  
resistance and/or smoke control 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 et/ou de contrôle  
des fumées à l'exclusion des produits utilisés dans les  
systèmes de ventilation

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

This European Standard was approved by CEN on 27 February 2023.

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 CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists 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 CEN-CENELEC Management Centre has the same status as the official versions.

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CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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## European foreword

This document (EN 13501-2:2023) 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 2023 and conflicting national standards shall be withdrawn at the latest by November 2023.

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

This document supersedes EN 13501-2:2016.

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 of the first edition. In comparison with the previous edition, the following technical modifications have been made:

- in 7.5.2.1: adding reference to new EXAP standards;
- in all paragraphs concerned: introduction of proposal from CEN/TC 166 for chimney;
- in all paragraphs concerned: introduction of proposal for air transfer grilles;
- in all paragraphs concerned: introduction of EN 15882-5;
- in all paragraphs concerned: update on criterion description for load bearing elements (EN 1363-1);
- in 7.3.2: modification related to EN 1365-1;
- in 7.5.2.1: introduction of EN 15254-3;
- in 7.3.4.4: modification of classification table;
- in 7.5.9.4: modification of classification table.
- in 7.5.5.3.4: improvement and clarification on  $S_a$  to answer concerns/request from different national standardisation bodies.

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 and/or smoke control tests, excluding ventilation services*
- *Part 3: Classification using data from fire resistance tests on products and elements used in building service installations: fire resisting ventilation ducts and fire dampers and/or power, control and communication cables (under revision)*
- *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 power, control and communication cables*

Any feedback and questions on this document should be directed to the users' national standards body. A complete listing of these bodies can be found on the CEN website.

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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.



## Introduction

The aim of this document is to define a harmonized procedure for the classification for fire resistance 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 document is prepared in support of the second basic requirement for construction works, in the REGULATION (EU) No 305/2011 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 9 March 2011 and is detailed in the Interpretative Document number 2 (ID2): Safety in case of fire (OJC62 Vol 37). It reflects the Commission Decision (EU) 2000/367/EC of 3 May 2000 amended by 2003/629/EC of 27 August 2003 and 2011/232/EC of 11 April 2011 as regards the classification of the resistance to fire performance of construction products, construction works and parts thereof.

CEN, CENELEC and EOTA committees preparing technical specifications which contain performance requirements against fire resistance tests are expected to refer to the fire resistance classification given in this document and not refer directly to any specific fire test method.

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

This document 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 (Direct field of application) 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 document specifies the procedure for classification of construction products and building elements using data from fire resistance and/or smoke leakage/control tests and/or mechanical 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 document.

This document 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 resisting doorsets, shutter assemblies and openable windows and their closing devices;

- smoke control doorsets and shutter assemblies and their closing devices;
  - conveyor systems and their closures;
  - penetration seals;
  - linear joint seals;
  - combined penetration seals;
  - service ducts and shafts;
  - air transfer grilles;
  - 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 document. 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 construction products are listed in Clauses 2 and 7.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 1191, *Windows and doors — Resistance to repeated opening and closing — Test method*

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

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

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

EN 1364-2, *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 1364-5, *Fire resistance tests for non-loadbearing elements — Part 5: Air transfer grilles*

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

EN 1365-2, *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, *Fire resistance tests for service installations — Part 7: Conveyor systems and their closures*
- EN 1366-13, *Fire resistance tests for service installations — Part 13: Chimneys*
- EN 1443:2019, *Chimneys — General requirements*
- EN 1634-1, *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, *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 12604, *Industrial, commercial and garage doors and gates — Mechanical aspects — Requirements and test methods*
- 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*
- EN 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 14135, *Coverings — Determination of fire protection ability*

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 — Non-loadbearing walls — Part 4: Glazed constructions*

EN 15254-3, *Extended application of results from fire resistance tests — Non-loadbearing walls — Part 3: Lightweight partitions*

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 (all parts)<sup>1</sup>, *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*

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 15882-5, *Extended application of results from fire resistance tests for service installations — Part 5: Combined penetration seals*

EN 16034, *Pedestrian doorsets, industrial, commercial, garage doors and openable windows — Product standard, performance characteristics — Fire resisting and/or smoke control characteristics*

EN 17020 (all parts), *Extended application of test results on durability of self-closing for fire resistance and/or smoke control doorsets and openable windows*

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

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<sup>1</sup> EN 15269-4 and EN 15269-6 are under preparation.