

საქართველოს სტანდარტი

სამშენებლო პროდუქციისა და სამშენებლო ელემენტების სახანძრო
კლასიფიკაცია-ნაწილი 2: გამოყენებული მონაცემების კლასიფიკაცია ცეცხლ
საწინააღმდეგო გამოცდების, გარდა სავენტილაციო მომსახურების

საქართველოს სტანდარტებისა და მეტროლოგიის
ეროვნული სააგენტო
თბილისი

სსტ ენ 13501-2:2016/2016

საინფორმაციო მონაცემები

1 დამტკიცებულია და შემოღებულია სამოქმედოდ საქართველოს სტანდარტებისა და მეტროლოგიის ეროვნული სააგენტოს 2016 წლის 2 ნოემბერი № 80 და 2016 წლის 25 ივლისის № 52 განკარგულებებით

2 მიღებულია გარეკანის თარგმნის მეთოდით სტანდარტიზაციის ევროპული კომიტეტის სტანდარტი ენ 13501-2:2016 „სამშენებლო პროდუქციისა და სამშენებლო ელემენტების სახანძრო კლასიფიკაცია-ნაწილი 2: გამოყენებული მონაცემების კლასიფიკაცია ცეცხლ საწინააღმდეგო გამოცდების, გარდა სავენტილაციო მომსახურების”

3 პირველად

4 რეგისტრირებულია საქართველოს სტანდარტებისა და მეტროლოგიის ეროვნული სააგენტოს რეესტრში: 2016 წლის 2 ნოემბრის №268-1.3-010149

აკრძალულია ამ სტანდარტის გადაცემა მესამე პირებისათვის ან/და მისი სხვა ფორმით გავრცელება

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.

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.

CEN members are the national standards bodies of 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 United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents

Page

European foreword.....	5
Introduction	6
1 Scope	7
2 Normative references	8
3 Terms and definitions	11
4 Fire scenarios	15
4.1 General	15
4.2 The standard temperature/time curve (post flash-over fire)	15
4.3 The slow heating curve (smouldering fire)	16
4.4 The 'semi-natural' fire	16
4.5 The external fire exposure curve	17
4.6 Constant temperature attack	17
5 Resistance to fire performance characteristics	17
5.1 General	17
5.2 Performance characteristics	17
5.2.1 R - Loadbearing capacity	17
5.2.2 E - Integrity	18
5.2.3 I - Thermal insulation	19
5.2.4 W - Radiation	20
5.2.5 M - Mechanical action	21
5.2.6 C - Self-closing	21
5.2.7 S - Smoke leakage	21
5.2.8 G - 'Soot fire' resistance	22
5.2.9 K - Fire protection ability	22
6 Declaration of fire resistance performance	23
6.1 Classification periods	23
6.2 Designatory letters	23
6.3 Declaration of performance	23
6.4 Combinations of classes	23
6.5 Particular classifications	24
6.5.1 Doors and shutters	24
6.5.2 Conveyor systems and their closures	24
6.6 Additional performance parameters	24
6.6.1 Optional performance parameters	24
6.6.2 Expansion of performance parameters	24
6.6.3 Particular performance parameters	25
6.7 Presentation of classification	25
6.8 Declaration of fire resistance classes in product specifications	25
7 Classification procedure for fire resistance	26
7.1 General	26
7.1.1 Procedure	26
7.1.2 General rules for deducing the number of standard temperature/time fire resistance tests	27

7.1.3	Field of application	29
7.2	Classification of loadbearing elements without a fire separating function	29
7.2.1	General	29
7.2.2	Classification of loadbearing walls without separating function	29
7.2.3	Classification of loadbearing floors and roofs without fire separating function	30
7.2.4	Classification of beams	31
7.2.5	Classification of columns	32
7.2.6	Classification of balconies, walkways and stairs	33
7.3	Classification of loadbearing elements with fire separating function	34
7.3.1	General	34
7.3.2	Classification of loadbearing walls with fire separating function	34
7.3.3	Classification of loadbearing floors and roofs with fire separating function	36
7.3.4	Classification of raised floors	37
7.4	Products and systems for protecting elements or parts of works	38
7.4.1	General	38
7.4.2	Tests to be carried out	39
7.4.3	Test methods	40
7.4.4	Performance criteria	40
7.4.5	Classes	40
7.4.6	Classification of protected structural members	40
7.5	Classification of non-loadbearing elements	44
7.5.1	General	44
7.5.2	Partitions	44
7.5.3	Classification of facades (curtain walling) and external walls (including glazed elements)	46
7.5.4	Classification of ceilings with independent fire resistance	47
7.5.5	Classification of fire doors and shutters including their closing devices	49
7.5.6	Classification of smoke control doors	51
7.5.7	Classification of closure and conveyor system assemblies	52
7.5.8	Classification of penetration seals	54
7.5.9	Classification of linear joint seals	55
7.5.10	Classification of service ducts and shafts	57
7.5.11	Classification of chimneys	59
7.6	Classification of wall and ceiling coverings for fire protection ability	60
7.6.1	General	60
7.6.2	Test method	61
7.6.3	Tests to be carried out	61
7.6.4	Performance criteria for fire protection ability	61
7.6.5	Classes	62
	Annex A (normative) Classification report	63
A.1	General	63
A.2	Content and format	63
A.3	Classification report format	64
	Annex B (informative) Presentation of characterization data and their field of application for products and systems for protecting elements or parts of work	68
B.1	General	68
B.2	Characterization data for protective vertical membranes	68
B.3	Characterization data for applied protection to concrete members	69

B.4	Characterization data for applied protection to steelwork.....	70
B.5	Characterization data for applied protection to concrete/profiled sheet steel composite members.....	72
B.6	Characterization data for applied protection to concrete filled hollow steel columns.....	73
B.7	Characterization data for applied protection to timber members	74
	Bibliography.....	79

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.