SLOVENSKI STANDARD
SIST EN 15725:2010

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Poročila za razširjeno uporabo, ki se nanašajo na ognjevarne lastnosti gradbenih proizvodov in elementov stavb

Extended application reports on the fire performance of construction products and building elements

Berichte zum erweiterten Anwendungsbereich bezogen auf das Brandverhalten von Bauprodukten und Bauarten

Rapports d'application étendue des performances au feu des produits et éléments de construction

Ta slovenski standard je istoveten z: **EN 15725:2010**

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13.220.50	Požarna odpornost gradbenih materialov in elementov	Fire-resistance of building materials and elements

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Berichte zum erweiterten Anwendungsbereich bezogen auf das Brandverhalten von Bauprodukten und Bauarten

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Foreword

This document (EN 15725:2010) 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of an identical text or by endorsement, at the latest by December 2010, and conflicting national standards shall be withdrawn at the latest by December 2010.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.

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, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

Introduction

A construction product and a building element may be placed on the market with different thicknesses, densities, fixing conditions, substrates, etc. It is not practicable to test all combinations of different product parameters for the reaction to fire performance or fire resistance or external fire exposure performance, although these parameters may substantially influence the test result.

NOTE A building element is understood to be a defined construction component, e.g. wall, partition, floor, roof, beam or column.

Fire test methods may not include any information on direct application, the result obtained in the test is that which is reported. In a separate exercise it is possible to extend the field of application of the individual test results to a variation of the values of the different product parameters. This process of extended application uses rules which are essentially based on a worst case scenario and interpolation techniques. All information on extended field of application of reaction to fire results is given in CEN/TS 15117.

There are a number of practical limitations on the size and design of elements that can be tested by the standard methods of test for fire resistance. When these elements are larger, or are of a modified design, there is a necessity to be able to confirm their performance, i.e. whether the classification(s) given in the classification report in relation to the relevant criteria are maintained, without the ability of being able to test them. To achieve this, extended application standards for the various elements are under development.

Rules for extended application of results from external fire exposure to roof tests are also under development.

1 Scope

This European Standard gives the procedures for preparing reports on the extended application process using the results of reaction to fire tests, fire resistance tests and external fire exposure to roof tests undertaken for fire classification of products and product families in accordance with the various parts of EN 13501.

This standard makes reference to 'extended application standards' throughout; wherever this term is used it refers to either a standard prepared by CEN/TC 127 'Fire safety in buildings' or the relevant product standard which includes information on extended application. In some cases, where a standard is not yet published, relevant bodies may issue recommendations for use by Notified Bodies in attestation procedures for CE marking under the Construction Products Directive (CPD), http://ec.europa.eu/enterprise/newapproach/nando/.

The European system currently permits extended application rules to be included in technical specifications. CEN Technical Committees and EOTA Working groups producing these rules are asked to seek the guidance of CEN/TC 127 to ensure that their rules comply with standards prepared by CEN/TC 127. In cases where extended application rules in harmonised EN product standards and ETAs do not comply with standards prepared by CEN/TC 127 the CEN BT should be informed.

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

EN 13501-1:2007+A1:2009, *Fire classification of construction products and building elements — Part 1: Classification using data from reaction to fire tests*

EN 13501-2:2007+A1, *Fire classification of construction products and building elements — Part 2: Classification using data from fire resistance tests, excluding ventilation services*

EN 13501-3:2005+A1, *Fire classification of construction products and building elements — Part 3: Classification using data from fire resistance tests on products and elements used in building service installations: fire resisting ducts and fire dampers*

EN 13501-4:2007+A1, *Fire classification of construction products and building elements — Part 4: Classification using data from fire resistance tests on components of smoke control systems*

EN 13501-5:2005+A1, *Fire classification of construction products and building elements — Part 5: Classification using data from external fire exposure to roofs tests*

CEN/TS 15117:2005*, Guidance on direct and extended application*

CEN/TS 15447, *Mounting and fixing in reaction to fire tests under the Construction Products Directive*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply:

3.1
classification
process defined in EN 13501, whereby the fire performance parameters obtained from the results of one test, or a set of tests, or from a process of extended application, are compared with limiting values for those parameters that are set as criteria for achieving a certain classification

NOTE The relevant classes and related criteria are specified in the following Commission Decisions:

a) Resistance to fire:

1) EC Decision 2000/367/EC (OJEU L 133 of 6.6.2000) as amended by EC Decision 2003/629/EC (OJEU L 218 of 30.8.2003);

b) Reaction to fire:

1) EC Decision 2000/147/EC (OJEU L 50 of 23.2.2000) as amended by EC Decision 2003/632/EC (OJEU L 220 of 3.9.2003) and by EC Decision 2006/751/EC (OJEU L 305 of 4.11.2006);

c) External fire performance for roofs:

1) EC Decision 2001/671/EC (OJUE L 235 of 4.9.2001) as amended by EC Decision 2005/823/EC (OJEU L 307 of 25.11.2005).

3.2
product
material, element or component about which information is required

[EN 13501-1:2007+A1:2009]

3.3
product family
range of products within defined limits of variability (defined by the manufacturer or a technical specification) of the product parameters and, if relevant, end use parameters, for which the fire performance remains unchanged (i.e. does not get worse)

3.4
product parameter
aspect of a product (for example thickness, composition, density) which may vary and which may or may not have an influence on the product's fire performance

3.5
end use application
where in the building the product is to be used, e.g. wall lining, flooring

3.6
end use condition
way the product is incorporated into the building, e.g. jointing, fixing and position with respect to adjacent products

NOTE The mounting and fixing conditions for testing reflect the end use conditions.

3.7
test result
outcome of a testing process and its associated procedures detailed within a specific test standard (which may include some processing of the results from the testing of a number of specimens) and expressed in terms of one or more fire performance parameter(s)

3.8
direct field of application of test results
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

3.9
extended field of application of test results
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

3.10
extended application report
document reporting extended application results, including all details of the process leading to those results

3.11
calculation
method that can be applied to one or more parameters of a result of a test which is based on existing physical laws or which has been empirically validated and which forms part of the process of defining the extended application

3.12
agreed expert opinion
results of a dialogue between a group of experts who are accepted by their peers as being knowledgeable in a particular fire test and the performance of products in that test. Such dialogue shall take place within a recognised and properly constituted forum, such as CEN/TC 127. These agreed expert opinions are then transformed into rules that may form the basis of extended application. Agreed expert opinion will lead notified bodies to a classification, suitable for the application of CE-marking.

3.13
expert judgement
view of a recognised expert in a particular fire test, and performance of products in that test, that may be used for the purpose of interpreting or applying results of that test in connection with the application of the particular product into parts of works for the purposes of satisfaction of national regulations

NOTE Expert judgement cannot form any part of extended application for CE marking, but may be obtained by manufacturers as a voluntary judgement outside of CE-marking.

3.14
constructional parameter
design and construction that may be varied and which may result in a change in the fire resistance performance, e.g. in a stud framed separating element a change in the dimensions of a stud

3.15
thermal and mechanical parameters
conditions of a test that may influence the classification given, e.g. the pressure differential that will exist at the top of a larger element than existed at the top of the specimen when tested

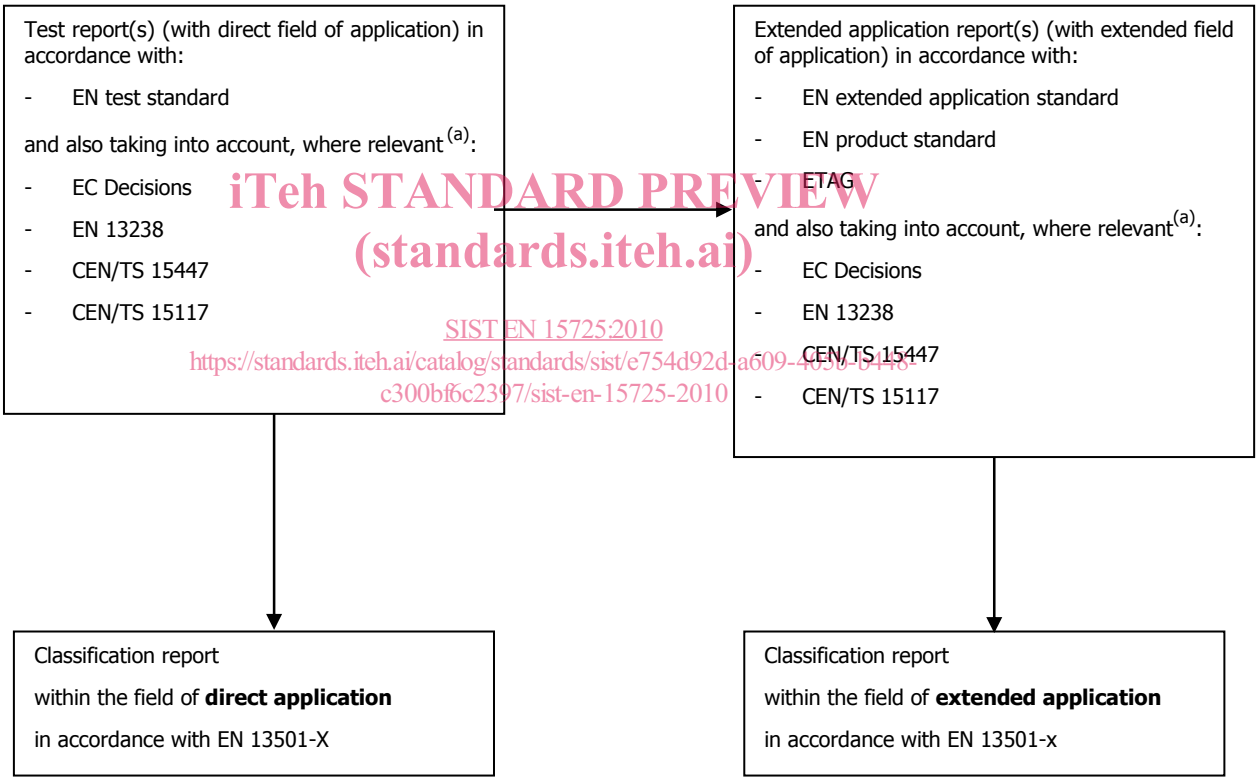
3.16
factor
variation that may be applied to a parameter, e.g. a change in the stiffness as a result of a dimensional change in the stud

3.17
factor influence
potential cause of a change in the fire resistance when the factor is changed, e.g. an increase in the loadbearing capacity R as a result of an increase in stiffness

4 Role of extended application in the classification process

There are two possible routes to obtaining a fire classification. The first one is to undertake fire tests in accordance with the relevant EN fire test methods given in one of the parts of EN 13501. From the test report(s) obtained, a classification report can be prepared. Secondly an extended application can be undertaken using test reports and other relevant data, and carried out in accordance with the relevant EN extended application standard. From this process an extended application report is prepared in conformity with this standard.

An extended application report is equivalent to a test report in that it then forms the basis for preparing a classification report. This process is illustrated in Figure 1.



[a] In some cases, where a standard is not yet published, relevant bodies may issue recommendations, available for use by Notified Bodies in attestation procedures for CE marking under the Construction Products Directive. (http://ec.europa.eu/enterprise/newapproach/nando/).

Figure 1 — Role of extended application in the fire classification process

5 Principles of establishing the field of application

5.1 General

Following a fire test there are two fields of application that can be derived from the result, direct field of application and extended field of application.

5.2 Direct field of application

5.2.1 Reaction to fire

Direct application of results from reaction to fire tests is undertaken in accordance with EN 13501-1:2007+A1 using results from the relevant EN classification test methods and taking into account information on substrates given in EN 13238 and information in CEN/TS 15117 and any other relevant European Technical Specification.

5.2.2 Fire resistance

The rules governing the direct field of application of results from fire resistance tests are given in the individual test methods.

5.2.3 External fire exposure to roofs

The rules governing the direct field of application of results from external fire exposure to roof tests are given in EN 13501-5:2005+A1.

5.3 Extended field of application

5.3.1 General principles

Extended application shall be undertaken by the laboratory which has carried out the relevant fire tests. If test results are to be used from more than one laboratory, then the extended application shall be undertaken by one of these laboratories and consultation should be made with the other laboratories.

NOTE When extended application is intended to be used for CE marking purposes the intervention of a Notified Body is mandatory.

When a Notified Body is requested to produce an EXAP Report which requires the consideration of evidence from third parties (e.g. test reports, DIRAP reports, other EXAP reports, etc.), such evidence shall only be used when permission has been obtained from the original sponsor/owner of that evidence.

Extended application shall be undertaken in accordance with the relevant EN extended application standard. Extended application shall be based on test methods in accordance with the relevant European standards or ETAG, which may be supplemented by:

— documents mentioned in Figure 1

5.3.2 Reaction to fire

Information on undertaking extended application from the results of reaction to fire tests and an explanation of the influence of product and end use parameters on reaction to fire performance is given in CEN/TS 15117.