

Fire classification of construction products and building elements —

**Part 1: Classification using data from
reaction to fire tests**

ICS 13.220.50

National foreword

This British Standard is the UK implementation of EN 13501-1:2007+A1:2009. It supersedes BS EN 13501-1:2007 which is withdrawn.

The start and finish of text introduced or altered by amendment is indicated in the text by tags. Tags indicating changes to CEN text carry the number of the CEN amendment. For example, text altered by CEN amendment A1 is indicated by **A1** ~~A1~~.

The UK participation in its preparation was entrusted to Technical Committee FSH/21, Reaction to fire tests.

A list of organizations represented on this committee can be obtained on request to its secretary.

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English Version

Fire classification of construction products and building elements - Part 1: Classification using data from reaction to fire tests

Classement au feu des produits et éléments de construction - Partie 1: Classement à partir des données d'essais de réaction au feu

Klassifizierung von Bauprodukten und Bauarten zu ihrem Brandverhalten - Teil 1: Klassifizierung mit den Ergebnissen aus den Prüfungen zum Brandverhalten von Bauprodukten

This European Standard was approved by CEN on 27 November 2006 and includes Amendment 1 approved by CEN on 17 July 2009.

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Foreword

This document (EN 13501-1:2007+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of an identical text or by endorsement, at the latest by March 2010, and conflicting national standards shall be withdrawn at the latest by March 2010.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 13501-1:2007.

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

In addition to editorial corrections this document includes the reaction to fire classification procedure for linear pipe thermal insulation products.

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

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

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 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 roofs 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

The aim of this European Standard is to define a harmonized procedure for the classification of reaction to fire of construction products. This classification is based on the test procedures listed in Clause 5 and the relevant field of application procedures.

This European Standard has been prepared in support of the second essential requirement in the EC Construction Products Directive (89/106/EEC) and as detailed in the Interpretative Document Number 2: Safety in case of fire (OJ C62 Vol. 37).

Background information on the Commission Decision regarding the classification of the reaction to fire performance of construction products is given in Annex A.

The European Commission has drawn up a list of products which, under specified conditions, can be considered to be class A1 without testing. This information is given in the Commission Decision 96/603/EC (OJ L 267 19.10.1966 p23) as amended by 2000/605/EC (OJ L 258 12.10.2000 p36) and 2003/424/EC (OJ L 144 12.6.2003 p9).

Additionally there is a procedure by which certain products can be assigned a particular fire classification without the need for testing. Such products have well established reaction to fire performance and have been agreed by the Standing Committee on Construction. Agreements relating to such products which may be 'classified without further testing' (CWFT) are published in the Official Journal of the EC and are listed on the Nando-CPD database on the EC website (<http://europa.eu.int/comm/enterprise/construction>).

Parts 2, 3 and 4 of this European Standard are concerned with classification resulting from fire resistance tests. Part 5 covers classification resulting from tests for external fire exposure to roofs.

NOTE 1 If the classification based on the tests and criteria given in Tables 1 and 2 is not appropriate, and or more reference scenarios (representative scale tests typifying agreed hazard scenarios) can be called upon within the context of a defined procedure. This procedure is intended to be the subject of a future European Standard or Commission Decision, on the basis of an agreement between the Commission and the Member States, in consultation with CEN/CENELEC and EOTA.

NOTE 2 Test reports constitute the basis for extended application reports as explained in prEN 15725.

1 Scope

This European Standard provides the reaction to fire classification procedure for all construction products, including products incorporated within building elements.

Products are considered in relation to their end use application.

This document applies to three categories, which are treated separately in this European Standard:

- construction products, excluding floorings and linear pipe thermal insulation products;
- floorings;
- linear pipe thermal insulation products.

NOTE The treatment of some families of products is still under review and can necessitate amendments to this European Standard (see European Commission Decision 2000/147/EC).

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 13823, *Reaction to fire tests for building products — Building products excluding floorings exposed to the thermal attack by a single burning item*

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

CEN/TS 15117, *Guidance on direct and extended application* **A1**

EN ISO 1182, *Reaction to fire tests for building products — Non-combustibility test (ISO 1182:2002)*

EN ISO 1716, *Reaction to fire tests for building products — Determination of the heat of combustion (ISO 1716:2002)*

EN ISO 9239-1, *Reaction to fire tests for floorings — Part 1: Determination of the burning behaviour using a radiant heat source (ISO 9239-1:2002)*

EN ISO 11925-2, *Reaction to fire tests — Ignitability of building products subjected to direct impingement of flame — Part 2: Single-flame source test (ISO 11925-2:2002)*

3 Terms, definitions and symbols

3.1 Terms and definitions

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

NOTE Where the definitions are identical to those in EN ISO 13943, this is indicated.