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**BS EN 1634-1:2014**



**BSI Standards Publication**

# **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

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This British Standard is the UK implementation of EN 1634-1:2014. It supersedes BS EN 1634-1:2008 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee FSH/22/-/5, Fire resistance tests for doors.

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

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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## EUROPÄISCHE NORM

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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

Essais de résistance au feu et d'étanchéité aux fumées des portes, fermetures, fenêtres et éléments de quincailleries - Partie 1: Essais de résistance au feu des portes, fermetures et fenêtres

Feuerwiderstandsprüfungen und Rauchschutzprüfungen für Türen, Tore, Abschlüsse, Fenster und Baubeschläge - Teil 1: Feuerwiderstandsprüfungen für Türen, Tore, Abschlüsse und Fenster

This European Standard was approved by CEN on 29 December 2012.

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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EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
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**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

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## Foreword

This document (EN 1634-1:2014) 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 July 2014, and conflicting national standards shall be withdrawn at the latest by July 2014.

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 supersedes EN 1634-1:2008.

The following changes have been made since the previous edition (not exhaustive):

- definitions updated to include Operable fabric curtain;
- removal of requirement for sponsor declaration on gap values;
- changes to gap measuring requirements in Clause 7;
- increased reference to Extended Application;
- modifications to unexposed face thermocouples in Clause 9;
- redefined temperature measurement requirements in Clause 11 for the normal procedure;
- inclusion of openable windows and operable fabric curtains in Direct Application;
- changes to extended application for gaps in Direct Application;
- changes to figures.

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

EN 1634, "Fire resistance and smoke control tests for door and shutter assemblies, openable windows and elements of building hardware" consists of the following parts:

- *Part 1: Fire resistance test for door and shutter assemblies and openable windows* (the present document);
- *Part 2: Fire resistance characterisation test for elements of building hardware*;
- *Part 3: Smoke control test for door and shutter assemblies*.

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, 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.

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## **Introduction**

### **Caution**

The attention of all persons concerned with managing and carrying out this fire resistance test is drawn to the fact that fire testing may be hazardous and that there is a possibility that toxic and/or harmful smoke and gases may be evolved during the test. Mechanical and operational hazards may also arise during the construction of the test elements or structures, their testing and disposal of test residues.

It is imperative that an assessment of all potential hazards and risks to health is made and that safety precautions are identified and provided. Written safety instructions need to be issued. Appropriate training should be given to relevant personnel. Laboratory personnel should ensure that they follow written safety instructions at all times.

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## 1 Scope

This European Standard specifies a method for determining the fire resistance of door and shutter assemblies and openable windows designed for installation within openings incorporated in vertical separating elements, such as:

- a) hinged and pivoted doors;
- b) horizontally sliding and vertically sliding doors including articulated sliding doors and sectional doors;
- c) folding doors, sliding folding doors /shutters;
- d) tilting doors;
- e) rolling shutter doors;
- f) openable windows;
- g) operable fabric curtains.

This European Standard is used in conjunction with EN 1363-1.

The testing of fire dampers is covered by EN 1366-2.

The testing of closures for conveyor systems is covered by EN 1366-7.

By prior agreement with the test sponsor, additional information may be gained for individual elements of building hardware in order to fulfil the performance criteria identified in EN 1634-2. Based on the observations recorded during the test, the results may be presented in a separate report which should be in accordance with the requirements of EN 1634-2.

## 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 1363-1:2012, *Fire resistance tests - Part 1: General Requirements*

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

EN 12519:2004, *Windows and pedestrian doors - Terminology*

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

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

EN 15269 (all parts), *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 ISO 13943:2010, *Fire safety - Vocabulary (ISO 13943:2008)*