
**Fire-resistance tests — Door and shutter
assemblies**

Essais de résistance au feu — Assemblages porte et volet



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Published in Switzerland

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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

ISO 3008 was prepared by Technical Committee ISO/TC 92, *Fire safety*, Subcommittee SC 2, *Fire containment*.

This third edition cancels and replaces the second edition (ISO 3008:2006), which has been technically revised, specifically with changes to the wording of the Note to Figure 17, to 9.1.2.5 and to the list in 9.2.5, and minor editorial changes to improve consistency of style and clarity.

Introduction

This document contains specific requirements for fire-resistance testing which are unique to the elements of building construction described as doors and shutters. The requirements for these doors and shutters are intended to be applied in appropriate conjunction with the detailed and general requirements contained in ISO 834-1.

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Fire-resistance tests — Door and shutter assemblies

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.

An assessment of all potential hazards and risks to health shall be made and safety precautions shall be identified and provided. Written safety instructions shall be issued. Appropriate training shall be given to relevant personnel. Laboratory personnel shall ensure that they follow written safety instructions at all times.

1 Scope

This International Standard, used in conjunction with ISO 834-1, specifies a method for determining the fire resistance of door and shutter assemblies designed primarily for installation within openings incorporated in vertical separating elements, such as

- hinged and pivoted doors,
- horizontally sliding and vertically sliding doors, including articulated sliding doors and sectional doors,
- steel single-skin folding shutters (un-insulated),
- other sliding, folding doors,
- tilting doors,
- rolling shutter doors,
- removable panels in walls.

This method can also be used to determine the fire resistance of non-loadbearing horizontal doors by analogy. However, these are not specifically addressed here and the field of direct application given in Clause 13 is not valid for horizontally oriented doors.

No requirements are included for mechanical conditioning, e.g. “shakedown” or durability as these are included in the relevant product standard or for smoke leakage testing of doors and shutters; for the latter, see ISO 5925-1.

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.

ISO 834-1:1999, *Fire-resistance tests — Elements of building construction — Part 1: General requirements*

ISO 834-8, *Fire-resistance tests – Elements of building construction — Part 8: Specific requirements for non-loadbearing vertical separating elements*

ISO 13943, *Fire safety — Vocabulary*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 834-1, ISO 13943 and the following apply.

3.1 **associated supporting construction**

specific construction in which the door or shutter assembly is installed as intended for use in practice and which is used to close off the furnace and provide the levels of restraint and thermal heat transfer to be experienced in normal use

3.2 **cill**

member that spans between two frame jambs at the base, which might or might not be set into the floor, and that remains visible

3.3 **door assembly** **door set**

complete assembly, consisting of pivoted, hinged or sliding door leaves or leaf including any frame that is provided for closing of permanent openings in separating elements

NOTE This includes all side panels, vision panels or transom panels. The assembly shall be complete with grilles and louvers together with the door hardware and any fire seals, smoke seals, draught seals, acoustic seals that are used in the assembly.

3.4 **door hardware**

items such as hinges, handles, locks, panic bar(s), escutcheons, letter plates, kick plates, sliding gear, closing devices, electrical components, wiring, etc., that are, or can be, used in the door or shutter assembly

3.5 **double action**

action of a fire door leaf that opens in both directions

3.6 **fire seal**

seal fitted to the frame or to the leaf edge for the purpose of extending the period of integrity of the assembly

3.7 **floor**

upper surface of the horizontal element on which the door or shutter assembly is mounted and which extends from the exposed face to the unexposed face of the assembly

3.8 **flush over panel**

fixed panel fitted within the head and jambs above the door leaf without a transom fitted

3.9 **gap**

clearance between two nominally adjacent surfaces and/or edges, e.g. between the edge of a leaf and the frame or face of the leaf and the frame stop