
**Fire resistance tests — Elements of
building construction —**

**Part 12:
Specific requirements for separating
elements evaluated on less than full
scale furnaces**

Essais de résistance au feu — Éléments de construction —

*Partie 12: Exigences spécifiques pour éléments de séparation évalués
dans des fours de dimensions réduites*



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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 834-12 was prepared by Technical Committee ISO/TC 92, *Fire safety*, Subcommittee SC 2, *Fire containment*.

ISO 834 consists of the following parts, under the general title *Fire resistance tests — Elements of building construction*:

- *Part 1: General requirements*
- *Part 2: Guidance on measuring uniformity of furnace exposure on test samples* [Technical Report]
- *Part 3: Commentary on test method and guide to the application of the outputs from the fire-resistance test* [Technical Report]
- *Part 4: Specific requirements for loadbearing vertical separating elements*
- *Part 5: Specific requirements for loadbearing horizontal separating elements*
- *Part 6: Specific requirements for beams*
- *Part 7: Specific requirements for columns*
- *Part 8: Specific requirements for non-loadbearing vertical separating elements*
- *Part 9: Specific requirements for non-loadbearing ceiling elements*
- *Part 12: Specific requirements for separating elements evaluated on less than full scale furnaces*

The following parts are under preparation:

- *Part 10: Specific requirements to determine the contribution of applied fire protection materials to structural elements*
- *Part 11: Specific requirements for the assessment of fire protection to structural steel elements*

Introduction

This part of ISO 834 contains specific requirements for fire resistance testing which are unique to the elements of construction described as separating non-loadbearing elements both horizontal and vertical. The requirements for these non-loadbearing elements are intended to be applied in appropriate conjunction with the detailed and general requirements contained in ISO 834-1.

Fire resistance tests — Elements of building construction —

Part 12:

Specific requirements for separating elements evaluated on less than full scale furnaces

1 Scope

This part of ISO 834 specifies the procedures to be followed for determining the fire resistance of non-load-bearing separating elements when exposed to heating on one face when the specimen size is such that a less than full scale fire resistance furnace is justified. This condition is particularly found in the testing of separating elements in transport applications since the end-use dimensions of the barrier products are often smaller than those specified in other parts of ISO 834. Specimen sizes requiring less than full size resistance furnaces are also found when testing elements to be fitted into a separating element, such as pipe penetration systems, ducts, dampers and cable transits.

The test is not appropriate for the evaluation of curtain walls (non-load-bearing external walls suspended from the ends of floor slabs) or walls containing doors or glazing. Tests of walls containing doors are covered by ISO 3008; tests of walls containing glazing are covered by ISO 3009.

The application of this test to other untested forms of construction is acceptable when the construction complies with the direct field of application as given in this part of ISO 834 or when it is subjected to a field of extended application analysis in accordance with ISO/TR 12470.

NOTE Since ISO/TR 12470 gives only general guidelines, specific extended application analyses are to be performed only by experts in fire resistant constructions.

Caution — Attention 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.

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 13943, *Fire tests — Vocabulary*

ISO 834-1, *Fire resistance tests — Elements of building construction — Part 1 — General requirements for fire resistance testing*

3 Terms and definitions

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