TECHNICAL SPECIFICATION

ISO/TS 17431

First edition
2006-06-15

Fire tests — Reduced-scale model box test

Essais au feu — Essai à échelle réduite utilisant une boîte

Reference number
ISO/TS 17431:2006(E)

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

Contents

Page

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.

In other circumstances, particularly when there is an urgent market requirement for such documents, a technical committee may decide to publish other types of normative document:

— an ISO Publicly Available Specification (ISO/PAS) represents an agreement between technical experts in an ISO working group and is accepted for publication if it is approved by more than 50 % of the members of the parent committee casting a vote;

— an ISO Technical Specification (ISO/TS) represents an agreement between the members of a technical committee and is accepted for publication if it is approved by 2/3 of the members of the committee casting a vote.

An ISO/PAS or ISO/TS is reviewed after three years in order to decide whether it will be confirmed for a further three years, revised to become an International Standard, or withdrawn. If the ISO/PAS or ISO/TS is confirmed, it is reviewed again after a further three years, at which time it must either be transformed into an International Standard or be withdrawn.

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/TS 17431 was prepared by Technical Committee ISO/TC 92, *Fire safety*, Subcommittee SC 1, *Fire initiation and growth*.

Introduction

This Technical Specification is intended to provide a test method for describing the fire behaviour of a product under fire conditions by simulating such fire conditions in a reduced scale under controlled laboratory conditions.

The test method can be used as part of a fire hazard assessment that takes into account all of the factors that are pertinent to an assessment of a particular type of fire hazard.

Fire tests — Reduced-scale model box test

WARNING — So that suitable precautions can be taken to safeguard health, the attention of all concerned in fire tests is drawn to the possibility that toxic or harmful gases can be evolved during combustion of test specimens.

The test procedures involve high temperatures and combustion processes from ignition to a fully developed fire. Therefore, hazards can exist for burns, ignition of extraneous objects or clothing. It is important that the operators use protective clothing, e.g. helmet, face-shield and equipment for avoiding exposure to toxic gases.

Means for extinguishing a fully developed fire should be available.

1 Scope

This Technical Specification specifies an intermediate-scale test method that simulates a fire that under well-ventilated conditions starts in a corner of a small room with a single doorway and can develop until the room is fully involved in the fire.

The method is primarily intended to evaluate the contribution to toxic hazard in, and potential for fire spread to, evacuation routes connected to the room of origin in which surface products are installed.

The method is especially suitable for products with which a full-scale room test has to be terminated before the full involvement of the room with fire because of the occurrence of flashover or any other safety reasons.

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 9705:1993, *Fire tests — Full-scale room test for surface products*

ISO 13943:2000, *Fire safety — Vocabulary*

3 Definitions

For the purpose of this document, the definitions given in ISO 13943 and the following shall apply.

3.1
exposed surface
surface of the product subjected to the heating conditions of the test

3.2
surface product
any part of a compartment that constitutes an exposed surface on the interior wall, ceiling and/or floor such as panels, tiles, boards, wall papers or coatings