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STN	**Skúšky reakcie podlahových krytín na oheň Časť 1: Určovanie správania sa pri horení s použitím zdroja sálavého tepla (ISO 9239-1: 2025)**	**STN EN ISO 9239-1** 92 0212

Reaction to fire tests for floorings - Part 1: Determination of the burning behaviour using a radiant heat source (ISO 9239-1:2025)

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 10/25

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English Version

Reaction to fire tests for floorings - Part 1: Determination of the burning behaviour using a radiant heat source (ISO 9239-1:2025)

Essais de réaction au feu des revêtements de sol - Partie 1: Détermination du comportement au feu à l'aide d'une source de chaleur rayonnante (ISO 9239-1:2025)

Prüfungen zum Brandverhalten von Bodenbelägen - Teil 1: Bestimmung des Brandverhaltens bei Beanspruchung mit einem Wärmestrahler (ISO 9239-1:2025)

This European Standard was approved by CEN on 29 June 2025.

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CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

This document (EN ISO 9239-1:2025) has been prepared by Technical Committee ISO/TC 92 "Fire safety " in collaboration with 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of an identical text or by endorsement, at the latest by January 2026, and conflicting national standards shall be withdrawn at the latest by January 2026.

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

This document supersedes EN ISO 9239-1:2010.

Any feedback and questions on this document should be directed to the users’ national standards body/national committee. A complete listing of these bodies can be found on the CEN website.

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Endorsement notice

The text of ISO 9239-1:2025 has been approved by CEN as EN ISO 9239-1:2025 without any modification.

International Standard

ISO 9239-1

Reaction to fire tests for floorings —

Part 1: Determination of the burning behaviour using a radiant heat source

Essais de réaction au feu des revêtements de sol —

Partie 1: Détermination du comportement au feu à l'aide d'une source de chaleur rayonnante

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ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 92, *Fire Safety,* Subcommittee SC 1, *Fire initiation and growth,* in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 127, Fire safety in buildings, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This fourth edition cancels and replaces the third edition (ISO 9239-1:2010), which has been technically revised.

The main changes compared to the previous edition are as follows:

— change in definition of HF-E/CHF (3.2, 3.3, 3.4)

— change in definition of tiles (size) (3.11)

— adding information about generic adhesives (6.3)

— defining securing method for edges of tiles (6.5)

— securing of loose laid flooring (6.6)

— calculation is now made from HF-E and/or HF-30 values (8.2.6)

— reporting of values in the HF-E and/or HF-30 values, and calculate mean CHF from these (9.2)

— adding of explanation of what to do if sample re-ignites after extinguishment (9.3)

— adding references to LED light sources (A.3.2.)

— adding of Annex D “Example of report template”

A list of all parts in the ISO 9239 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user’s national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

The measurements in the test method in this document provide a basis for estimating one aspect of fire exposure behaviour of floorings. The imposed radiant flux simulates the thermal radiation levels likely to impinge on the floor of a corridor whose upper surfaces are heated by flames or hot gases or both, during the early stages of a developing fire in an adjacent room or compartment under wind-opposed flame-spread conditions.

International Standard **ISO 9239-1:2025(en)**

Reaction to fire tests for floorings —

Part 1: Determination of the burning behaviour using a radiant heat source

WARNING — The possibility of a gas-air fuel explosion in the test chamber should be recognized. Suitable safeguards consistent with sound engineering practice should be installed in the panel fuel supply system. These should include at least the following:

— **a gas-feed cut-off which is immediately activated when air and/or gas supply fail;**

— **a temperature sensor or a flame detection unit directed at the panel surface that stops fuel flow when the panel flame goes out.**

The attention of all persons concerned with managing and carrying out this test is drawn to the fact that fire testing can be hazardous and that there is a possibility that toxic and/or harmful gases can be evolved during the test. Operational hazards can also arise during the testing of specimens, such as the possibility of an explosion, and during the disposal of test residues.

An assessment of all the 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 should be given to relevant personnel. Laboratory personnel shall ensure that they follow written instructions at all times.

1 Scope

This document specifies a method for assessing the wind-opposed burning behaviour and spread of flame of horizontally mounted floorings exposed to a heat flux radiant gradient in a test chamber, when ignited with pilot flames. Annex A gives details of assessing the smoke development, when required.

This method is applicable to all types of flooring, e.g. textile carpet, cork, wood, rubber and plastics coverings as well as coatings. Results obtained by this method reflect the reaction to fire performance of the flooring, including any substrate if used. Modifications of the backing, bonding to a substrate, underlay or other changes of the flooring can affect test results. It cannot be used alone to describe or appraise the fire hazard or fire risk of floorings under actual fire conditions.

Information on the precision of the test method is given in Annex B.

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 554, *Standard atmospheres for conditioning and/or testing — Specifications*

ISO 3182, *Light measuring system for smoke emission testing*

ISO 13943, *Fire safety — Vocabulary*

ISO 14697, *Reaction-to-fire tests — Guidance on the choice of substrates for building and transport products*

ISO 14934-2, *Fire tests — Calibration and use of heat flux meters — Part 2: Primary calibration methods*

ISO 14934-3, *Fire tests — Calibration and use of heat flux meters — Part 3: Secondary calibration method*

ISO/TS 19850, *Fire tests — Use of LED (light-emitting diode) as an alternative to white light for measuring smoke parameters*

EN 13238, *Reaction to fire tests for building products — Conditioning procedures and general rules for selection of substrates*

IEC 60584-1, *Thermocouples — Part 1: EMF specifications and tolerances*