International Standard

ISO 9239-1

Fourth edition
2025-06

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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Foreword

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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.