BS 8414-2:2015+A1:2017

BSI Standards Publication

# Fire performance of external cladding systems

Part 2: Test method for non-loadbearing external cladding systems fixed to and supported by a structural steel frame

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# Contents



**Summary of pages**
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# Foreword

## Publishing information

This part of BS 8414 is published by BSI Standards Limited, under licence from The British Standards Institution, and came into effect on 30 April 2015. It was prepared by Technical Committee FSH/21, *Reaction to Fire Tests*. A list of organizations represented on this committee can be obtained on request to its secretary.

## Supersession

BS 8414-2:2015 superseded BS 8414-2:2005, which has been withdrawn.

BS 8414-2:2015+A1:2017 supersedes BS 8414-2:2015, which is withdrawn.

## Relationship with other publications

BS 8414 is published in two parts:

- Part 1: *Test method for non-loadbearing external cladding systems applied to the masonry face of a building*; and
- Part 2: *Test method for non-loadbearing external cladding systems fixed to and supported by a structural steel frame*.

## Information about this document

This British standard was developed from BRE Fire Note 9 [1], following a recommendation by the then House of Commons Environment, Transport and Regional Affairs Committee [2] on the potential risk of fire spread in buildings via external cladding systems.

This was a full revision of the standard, and introduced the following principal changes:

- clarification and rewording of a number of requirements to align both parts of the standard (BS 8414-1 and BS 8414-2);
- removal of the option for using alternative fuel sources.

Text introduced or altered by Amendment No. 1 is indicated in the text by tags A1 A1. Minor editorial changes are not tagged.

## Hazard warnings

**WARNING.** This British standard calls for the use of substances and/or procedures that might be injurious to health if adequate precautions are not taken. It refers only to technical suitability and does not absolve the user from legal obligations relating to health and safety at any stage.

## Use of this document

It has been assumed in the preparation of this part of BS 8414 that the execution of its provisions will be entrusted to appropriately qualified and experienced people, for whose use it has been produced.

## Presentational conventions

The provisions of this standard are presented in roman (i.e. upright) type. Its methods are expressed as a set of instructions, a description, or in sentences in which the principal auxiliary verb is “shall”.

*Commentary, explanation and general informative material is presented in smaller italic type, and does not constitute a normative element.*

 

## Contractual and legal considerations

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

**Compliance with a British Standard cannot confer immunity from legal obligations.**

 

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## 1 Scope

This British standard provides a test method for determining the fire performance characteristics of non-loadbearing external cladding systems, such as curtain walling, glazed elements, infill panels and insulated composite panels, fixed to and supported by a structural steel frame when exposed to an external fire under controlled conditions. The fire exposure is representative of an external fire source or a fully-developed (post-flashover) fire in a room, venting through an opening such as a window aperture that exposes the cladding to the effects of external flames, or from an external fire source.

This British Standard does not apply to non-loadbearing external rainscreen overcladding systems or external wall insulation systems applied to the face of a building, the fire testing of which are covered in BS 8414-1.

This British Standard does not cover exposure to radiant heat from a fire in an adjacent building.

*NOTE Performance Criteria and Classification methodology of the external fire performance can be found in references such as Report BR 135: Fire performance of external thermal insulation for walls of multi-storey buildings [3].*

## 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

BS EN 60584-1:2013, *Thermocouples — Part 1:EMF specifications and tolerances*

BS EN ISO 13943, *Fire safety — Vocabulary*

## 3 Terms and definitions

For the purposes of this British Standard the terms and definitions given in BS EN ISO 13943 and the following apply.

### 3.1 collapse

any part of the cladding system which falls away and becomes detached

### 3.2 damaged area

total of those surface areas which have been affected permanently by fire under specified conditions

[SOURCE: BS EN ISO 13943]

*NOTE 1 Area is expressed in square metres.*

*NOTE 2 Users of this term should specify the types of damage to be considered. This includes loss of material, deformation, softening, melting, charring, combustion, pyrolysis or chemical attack.*

### 3.3 external cladding system

complete cladding assembly

*NOTE 1 This includes, for example, sheeting rails, fixings, cavities, insulation and membranes, coatings, flashings or joints.*

*NOTE 2 The limits of the cladding system are taken to be from the external weathering surface to the internal finished face of the structural frame.*

 