



BSI Standards Publication

## Fire performance of external cladding systems

Part 1: Test method for non-load bearing external cladding systems fixed to, and supported by, a masonry substrate

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# Contents

	Page
<b>Foreword</b>	<b>ii</b>
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Principle	2
5 Test apparatus	3
5.1 General	3
<i>Figure 1 — Schematic of test apparatus</i>	3
5.2 Masonry test wall	4
5.3 Main test apparatus wall (main face)	4
5.4 Return wall (wing)	4
5.5 Combustion chamber	4
5.6 Timber crib heat source	4
5.7 Thermocouples	4
<i>Figure 2 — Location of thermocouples for a cladding test</i>	6
5.8 Early test termination reference line	6
5.9 Data acquisition system	6
5.10 Audio-visual equipment	7
5.11 Environmental test condition monitoring equipment	7
5.12 Timing device	7
6 Test specimen	7
6.1 General	7
6.2 Dimensions and details of the test specimen	7
7 Conditioning	8
8 Procedure	8
8.1 Environmental test conditions	8
8.2 Data acquisition	9
8.3 Fuel source	9
8.4 Test observations	9
8.5 Test duration	9
8.6 Early test termination criteria	9
9 Post-test examination	9
10 Test report	10
<b>Annex A</b> (normative) <b>Timber crib source</b>	<b>12</b>
<i>Figure A.1 — Side elevation and plan of the combustion chamber and position of crib (fire load)</i>	13
<b>Bibliography</b>	<b>14</b>

## Summary of pages

This document comprises a front cover, and inside front cover, pages i to iv, pages 1 to 14, an inside back cover and a back cover.

# 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 2020. 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BS 8414-1:2020 supersedes BS 8414-1:2015+A1:2017, which is withdrawn.

## Relationship with other publications

BS 8414 is published in two parts:

- Part 1: *Test method for non-loadbearing external cladding systems fixed to, and supported by, a masonry substrate*; 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 part of BS 8414 was developed from BRE Fire Note 9 [1].

This is a full revision of the standard, and introduces the following principal changes:

- clarification of the scope;
- amendments to [Clause 6](#); and
- expansion and clarification of [Clause 9](#) and [Clause 10](#).

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## 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.*

Where words have alternative spellings, the preferred spelling of the Shorter Oxford English Dictionary is used (e.g. “organization” rather than “organisation”).

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

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## 1 Scope

This part of BS 8414 provides a test method for determining the fire performance characteristics of non-loadbearing external cladding systems, rainscreen overcladding systems and external wall insulation systems when fixed to, and supported by, a masonry substrate and exposed to an external fire under controlled conditions. The peak fire exposure is intended to be representative of an external fire source or a fully developed (post-flashover) fire in a room venting from an aperture that exposes the cladding to the effects of external flames.

This part of BS 8414 is solely intended to give an indication of fire spread across or within an external cladding system. The purpose of the test is to provide data to enable evaluation of the fire performance of the components when combined to form a complete cladding system.

This part of BS 8414 does not cover the performance of glass or its supporting frame intended for glazed window openings.

This part of BS 8414 does not test the total configuration of a construction incorporating additional windows, doors, balconies or ancillary penetrations.

This part of BS 8414 does not cover exposure to radiant heat from a fire in an adjacent building.

*NOTE 1* Performance criteria and classification methodology for the external fire performance can be found in references such as Report BR 135 [2].

*NOTE 2* Further information on the application of results from BS 8414-1 is given in BS 9414.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes provisions of this document.<sup>1)</sup> 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*<sup>2)</sup>

## 3 Terms and definitions

For the purposes of this part of BS 8414, the terms and definitions given in BS EN ISO 13943 and the following apply.

### 3.1 cavity barrier

any construction provided to seal a cavity against the penetration of fire and smoke or to restrict its movement within the cavity

### 3.2 collapse

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

<sup>1)</sup> Documents that are referred to solely in an informative manner are listed in the Bibliography.

<sup>2)</sup> This standard also gives an informative reference to BS EN ISO 13943:2017.