AS 1530.8.2—2007

Australian Standard®

# Methods for fire tests on building materials, components and structures

## Part 8.2: Tests on elements of construction for buildings exposed to simulated bushfire attack—Large flaming sources

This Australian Standard® was prepared by Committee FP-018, Fire Safety. It was approved on behalf of the Council of Standards Australia on 27 June 2007.
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The following are represented on Committee FP-018:

- AWTA Textile Testing
- Australasian Fire Authorities Council
- Australian Building Codes Board
- Australian Industry Group
- Australian Institute of Building
- Building Research Association New Zealand (BRANZ)
- Bureau of Steel Manufacturers of Australia
- CSIRO Manufacturing and Materials Technology
- Fire Protection Association Australia
- Fire Protection Association New Zealand
- Plastics and Chemicals Industries Association
- Property Council of Australia

Additional Interests:

- Testing Interests (Australia)

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Standards Australia wishes to acknowledge the participation of the expert individuals that contributed to the development of this Standard through their representation on the Committee and through the public comment period.

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# PREFACE

## General

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee FP-018, Fire Tests on Building Components, Materials and Structures and drafted by FP-018-05.

After consultation with stakeholders in both countries, Standards Australia and Standards New Zealand decided to develop this Standard as an Australian Standard rather than an Australian/New Zealand Standard..

## Development

This Standard is based on Independent Fire Test Laboratories Test Procedure FSE 027 Part 1 Version 1.6 dated 24 October 2005. See also AS 1530.8.1, *Methods for fire tests on buildings, materials and structures*, Part 8.1: *Tests on elements of construction for buildings exposed to simulated bushfire attack—Radiant head and small flaming sources*.

## Referenced documents

This Standard references documents of both a normative and informative nature. Normative referenced documents are listed in Clause 6. Informative referenced documents are listed in Appendix B.

## Normative and informative

The terms ‘normative’ and ‘informative’ have been used in this Standard to define the application of the appendix to which they apply. A ‘normative’ appendix is an integral part of the Standard, whereas an ‘informative’ appendix is only for information and guidance.

## Notes

The use of Notes in this Standard is of an advisory nature only. They provide explanations and guidance on recommended design consideration or technical procedures, as well as an informative cross-reference to other documents or publications.

## Commentary

*This Standard incorporates a Commentary on some clauses. The Commentary directly follows the relevant clause is designated by ‘C’ preceding the clause number and is printed in italics in a panel. The Commentary is for information only and does not need to be followed for compliance with the Standard.*

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# Methods for fire tests on building materials, components and structures

## Part 8.2: Tests on elements of construction for buildings exposed to simulated bushfire attack—Large flaming sources

## 1 SCOPE

This Standard provides methods for determining the performance of external construction elements when exposed to direct flame impingement from the fire front.

NOTES:

1 The methods simulate exposure to direct flame impingement from the fire front or large burning items such as other burning buildings or adjacent isolated trees and shrubs by utilizing the Standard heating regime of AS 1530.4.

2 Flame contact from the fire front is expected to last less than 2 minutes but a 30 minute exposure period has been nominated to allow for potentially higher transient temperatures from the fire front. The 30 minute exposure also provides resistance to large burning items adjacent to the element of construction.

3 The results of the fire tests may be used to directly assess fire hazard, but it should be recognized that a single test method would not provide a full assessment of fire hazard under all fire conditions.

4 These fire tests provide data relating to the performance of the particular element and building system and do not provide a general assessment of the performance of a specific type of material for use in bushfire prone areas.

## 2 OBJECTIVE

The objective of this Standard is to provide building designers, manufacturers, test laboratories and regulatory authorities with a set of uniform requirements for heating conditions, test procedures, and criteria for the determination of the resistance to fire of a single building element or multiple building elements (in accordance with standard heating regime of AS 1530.4) to classify the performance of elements required to resist exposure to direct flame impingement from the fire front and large secondary fires.

## 3 PRINCIPLE

A representative element of construction or combination of elements is exposed to the standard heating regime of AS 1530.4.

Observations are made on the performance of the specimen while it is subjected to thermal and, where applicable, physical loading. The elapsed times at which various performance criteria are exceeded are recorded. The performance criteria are selected to address typical fire spread scenarios and to facilitate relatively safe movement around a property after the passage of the fire front.

 