

**SUPERSEDED BY:** AS/NZS 1905.1:1997

AS 1905.1—1990

~~REFERENCE COPY  
INFORMATION CENTRE  
STANDARDS AUSTRALIA~~

Australian Standard®

---

**Components for the protection of  
openings in fire-resistant walls**

**Part 1: Fire-resistant doorsets**

---



This Australian Standard was prepared by Committee BD/19, Fire Doors. It was approved on behalf of the Council of Standards Australia on 20 October 1989 and published on 12 March 1990.

---

The following interests are represented on Committee BD/19:

Australian Uniform Building Regulations Coordination Council  
Australian Assembly of Fire Authorities  
Board of Fire Commissioners of New South Wales  
Building Owners and Managers Association of Australia  
Commonwealth Fire Board  
Confederation of Australian Industry  
CSIRO, Division of Building, Construction and Engineering  
Fire Protection Industry Association of Australia  
Insurance Council of Australia  
Metal Trades Industry Association of Australia  
Royal Australian Institute of Architects

Additional interests participating in the preparation of this Standard:

Telecom Australia

---

*Review of Australian Standards.* To keep abreast of progress in industry, Australian Standards are subject to periodic review and are kept up-to-date by the issue of amendments or new editions as necessary. It is important therefore that Standards users ensure that they are in possession of the latest edition, and any amendments thereto.

Details of all Australian Standards and related publications will be found in the Standards Australia Catalogue of Publications; this information is supplemented each month by the magazine 'The Australian Standard', which subscribing members receive, and which gives details of new publications, new editions and amendments, and of withdrawn Standards.

Suggestions for improvements to Australian Standards, addressed to the head office of Standards Australia, are welcomed. Notification of any inaccuracy or ambiguity found in an Australian Standard should be made without delay in order that the matter may be investigated and appropriate action taken.

---

Australian Standard®

---

**Components for the protection of  
openings in fire-resistant walls**

**Part 1: Fire-resistant doorsets**

---

✓  
First published as AS CA57, Part 1—1972.  
Revised and redesignated AS 1905.1—1976.  
Second edition 1982.  
Third edition 1984.  
Fourth edition 1990.

## PREFACE

This Standard was prepared by the Standards Australia Committee on Fire Doors to supersede AS 1905.1—1984.

In this edition the requirements related to doorset installation have been revised to emphasize the intent of the Standard. Design requirements and installation requirements are also more clearly defined.

In addition, a non-integral appendix has been included, setting out a series of tests against which the physical capacity of the fire door may be measured.

The requirements for maintenance of fire-resistant doorsets are covered in AS 1851, *Maintenance of fire protection equipment, Part 7: Fire-resistant doorsets*.

### © Copyright — STANDARDS AUSTRALIA

Users of Standards are reminded that copyright subsists in all Standards Australia publications and software. Except where the Copyright Act allows and except where provided for below no publications or software produced by Standards Australia may be reproduced, stored in a retrieval system in any form or transmitted by any means without prior permission in writing from Standards Australia. Permission may be conditional on an appropriate royalty payment. Requests for permission and information on commercial software royalties should be directed to the Head Office of Standards Australia.

Standards Australia will permit up to 10 percent of the technical content pages of a Standard to be copied for use exclusively in-house by purchasers of the Standard without payment of a royalty or advice to Standards Australia.

Standards Australia will also permit the inclusion of its copyright material in computer software programs for no royalty payment provided such programs are used exclusively in-house by the creators of the programs.

Care should be taken to ensure that material used is from the current edition of the Standard and that it is updated whenever the Standard is amended or revised. The number and date of the Standard should therefore be clearly identified.

The use of material in print form or in computer software programs to be used commercially, with or without payment, or in commercial contracts is subject to the payment of a royalty. This policy may be varied by Standards Australia at any time.

## CONTENTS

	<i>Page</i>
<b>SECTION 1. SCOPE AND GENERAL</b>	
1.1 SCOPE .....	4
1.2 APPLICATION .....	4
1.3 REFERENCED DOCUMENTS .....	4
1.4 DEFINITIONS .....	4
<b>SECTION 2. DESIGN REQUIREMENTS</b>	
2.1 GENERAL .....	9
2.2 SIDE-HUNG DOORS .....	9
2.3 DOUBLE-ACTING DOORSETS .....	9
2.4 HORIZONTALLY SLIDING DOORSETS .....	9
<b>SECTION 3. DETERMINATION OF FIRE-RESISTANCE</b>	
3.1 GENERAL .....	11
3.2 TEST MOUNTING .....	11
3.3 EXPOSURE TO FIRE .....	11
<b>SECTION 4. VARIATION FROM PROTOTYPE</b>	
4.1 GENERAL .....	12
4.2 SIZE .....	12
4.3 DOOR LEAF .....	12
4.4 DOOR FRAMES .....	12
4.5 HARDWARE .....	12
4.6 GLAZING .....	13
<b>SECTION 5. INSTALLATION</b>	
5.1 GENERAL .....	14
5.2 DOOR SILL .....	14
5.3 FIXING OF DOOR FRAMES .....	14
5.4 ALLOWABLE VARIATIONS FOR FIXING OF DOOR FRAMES	14
5.5 HINGES .....	14
5.6 CLEARANCES .....	14
5.7 HARDWARE AND FURNITURE .....	14
5.8 FINAL CHECK .....	15
<b>SECTION 6. MARKING AND OTHER DOCUMENTATION</b>	
6.1 MARKING OF FIRE-RESISTANT DOORSETS .....	17
6.2 MARKING OF LATCHSETS AND CLOSERS FOR USE ON FIRE-RESISTANT DOORSETS .....	17
6.3 LOGBOOK .....	17
6.4 EVIDENCE OF COMPLIANCE .....	18
<b>APPENDICES</b>	
A PHYSICAL TESTING OF FIRE-RESISTANT DOORSETS .....	19
B INFORMATION TO BE SUPPLIED WITH ENQUIRIES AND ORDERS .....	21
C SUPPLEMENTARY NOTES ON THE SELECTION OF DOOR CLOSERS FOR FIRE-RESISTANT DOORSETS .....	23
D METHODS FOR FIXING FIRE-RESISTANT DOOR FRAMES TO EXISTING WALLS OF CONCRETE OR MASONRY .....	24
E TYPICAL COMPLETED LOGBOOK DETAILS .....	28

## STANDARDS AUSTRALIA

## Australian Standard

## Components for the protection of openings in fire-resistant walls

## Part 1: Fire-resistant doorsets

## SECTION 1. SCOPE AND GENERAL

**1.1 SCOPE.** This Standard specifies requirements for the construction and installation of fire-resistant doorsets, other than lift-landing doors, used to protect openings in walls and partitions which are required to resist the passage of fire.

The Standard does not apply to transom panels above fire-resistant doorsets, nor does it apply to panels, whether hinged or not, giving access to service shafts (see Note 5).

## NOTES:

- Where it is intended to install the fire-resistant doorset in high traffic areas, it is recommended that it be tested in accordance with Appendix A and that it complies with the requirements set out therein.
- Guidance on the introduction and maintenance of suitable quality systems can be found in AS 3900 to AS 3904.
- Guidance on information that should be supplied with an enquiry or order is given in Appendix B.
- Requirements governing lift-landing doors are given in AS 1735.11.
- Transom panels are considered as being part of the wall and are subject to different thermal insulation requirements from fire-resistant doorsets. Requirements applicable to these panels are dealt with in Building Regulations.

**1.2 APPLICATION.** This Standard is intended to complement the fire-protection requirements of the Building Code of Australia, and provides only minimum requirements.

**1.3 REFERENCED DOCUMENTS.** The following documents are referred to in this Standard:

AS	
1530	Methods for fire tests on building materials, components and structures
1530.1	Part 1: Combustibility test for materials
1530.3	Part 3: Simultaneous determination of ignitability, flame propagation, heat release and smoke release
1530.4	Part 4: Fire resistance tests of elements of construction
1603	Thermal detectors in fire alarm installations
1735	SAA Lift Code
1735.11	Part 11: Fire-rated landing doors
1851	Maintenance of fire protection equipment
1851.1	Part 1: Fire-resistant doorsets
1852	Thermally-released links
1905	SAA Fire Door Code
1905.1	Part 1: Fire-resistant doorsets
	Supplement 1: Logbook for the maintenance of fire-resistant doorsets
2118	SAA Code for Automatic Fire Sprinkler Systems
2270	Plywood and blockboard for interior use
2271	Plywood and blockboard for exterior use
2484	Fire—Glossary of terms relating to fire tests

3900	Quality systems—Guide to selection and use
3901	Quality systems for design/development, production, installation and servicing
3902	Quality systems for production and installation.
3903	Quality systems for final inspection and test
3904	Quality systems—Guide to quality management and quality systems elements
B194	Tapping and metal drive screws

**1.4 DEFINITION.** For the purpose of this Standard, definitions given in AS 2484 and those below apply. (See also Figures 1.4.1, 1.4.2, 1.4.3, and 1.4.4.)

**1.4.1 Approved**—approved by the Regulatory Authority or other authority concerned.

**1.4.2 Automatic**—where applied to a fire-resistant doorset, designed to operate when activated by an approved heat, smoke, or fire-sensing device.

**1.4.3 Combustible**—deemed combustible when tested in accordance with AS 1530.1.

**1.4.4 Door stop**—that part of a door frame against which the door leaf stops.

**1.4.5 Doorset**—a complete assembly comprising—

- the door leaf or leaves with glazing, if any, door hinges, door hardware and other inbuilt features if any;
- the door frame, if any, with its fixings to the wall and, for a sliding fire-resistant doorset, with all guides and their respective fixings to the lintel, wall or sill;
- the door closer or door-closing mechanism; and
- for an automatic fire-resistant doorset, the approved sensing device(s) and the closing mechanism.

**1.4.6 Double-acting doorset**—doorset whose leaf swings around one vertical side and is equally capable of opening in either direction.

**1.4.7 Finished floor**—where applied to the sill of a fire-resistant doorset, means the final level of the structural floor including any topping that is not deemed to be combustible.

**1.4.8 Fire-resistance level (FRL)**—the grading period in minutes for—

- structural adequacy;
- integrity; and
- insulation;

for a fire-resistant doorset as established in the standard fire test which was current at the time the door was tested.