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SAA FIRE DOOR CODE Part 1—FIRE-RESISTANT DOORSETS



STANDARDS ASSOCIATION OF AUSTRALIA
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Board of Fire Commissioners of New South Wales
Building Owners and Managers Association of Australia Limited
Commonwealth Fire Board
Confederation of Australian Industry
Department of Local Government and Lands, N.S.W.
Experimental Building Station
Insurance Council of Australia
Metal Trades Industry Association of Australia
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AUSTRALIAN STANDARD

**COMPONENTS FOR THE PROTECTION
OF OPENINGS IN FIRE-RESISTANT
WALLS
known as the
SAA FIRE DOOR CODE
Part 1
FIRE-RESISTANT DOORSETS**

AS 1905, Part 1—1984

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PREFACE

This edition of this standard was prepared by the Association's Committee on Fire Doors. It supersedes AS 1905, Part 1 1982, Construction and Installation of Fire Doors, Fire Windows and Fire Shutters—Fire Doors.

Whereas there are no changes in technical content in this new edition, a number of other changes have been made, the principal ones being as follows:

- (a) The title of the standard is changed to emphasize the concept of doorsets.
- (b) The hardware requirements are made more specific (see Clause 5 and Appendix D).
- (c) Notes on fire doors for specific applications have reverted to advisory matters (see Appendix A).
- (d) The suggested text for the manufacturer's label is modified (see Clause 10.2).
- (e) A log-book is now implemented (see Clause 11 and Appendix F).
- (f) An appendix is added which gives guidance on the ordering and specifying of fire doors (see Appendix E).

The requirements for maintenance of fire doors are covered in AS 1851, Part 7, Maintenance of Fire Protection Equipment—Fire-resistant Doorsets.

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STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard

for

**COMPONENTS FOR THE PROTECTION OF OPENINGS IN FIRE-RESISTANT
WALLS
known as the SAA FIRE DOOR CODE**

PART 1—FIRE-RESISTANT DOORSETS

FOREWORD

Experience in the fire-testing of doorsets has emphasized the importance of compatibility between the doorset and the wall or partition in which it is mounted. A doorset which is mounted with its frame anchored to the floor slab above and below is structurally independent of the wall or partition. Its ability to prevent the passage of fire will depend, *inter alia*, on the lateral deflection of the door frame and the wall or partition being sufficiently similar as not to form a gap between these elements under fire conditions. A doorset which has demonstrated a fire resistance when mounted in an opening (so as to be dependent on the wall or partitioning around that opening for its lateral stability) will require support from a wall or partition during any subsequent fire exposure. Doorsets of this type should not be used in walls that are considered unlikely to provide the required support during exposure to fire. Information on the deflection of walls or partitions during the fire-resistance tests is normally contained in the report on the test.

A successful fire-resistance test on a prototype doorset may demonstrate its suitability for a particular application, but it does not necessarily establish its suitability for all applications.

S P E C I F I C A T I O N

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 required to resist the passage of fire.

This standard does not apply to transom panels above fire doors, nor does it apply to panels giving access to service shafts. These panels, whether hinged or not, are considered to be part of the wall and are therefore subject to the same fire-resistance requirements as the wall.

NOTES:

1. Guidance on information that should be supplied with an enquiry or order is given in Appendix E.
2. Requirements governing lift-landing doors are given in AS 1735, Part 11.

2 APPLICATION. This standard is intended to complement the fire-protection requirements of an appropriate building code and provides only minimum requirements.

NOTE: Fire doors for specific applications are discussed in Appendix A.

3 REFERENCED DOCUMENTS. The following standards are referred to in this standard:

- AS 1530 Methods for Fire Tests on Building Materials and Structures
Part 1—Combustibility Test for Materials
Part 3—Test for Early Fire Hazard Properties of Materials
Part 4—Fire-resistance Test of Structures
- AS 1735 SAA Lift Code
Part 11—Fire-rated Landing Doors
- AS 1851 Maintenance of Fire Protection Equipment
Part 7—Fire-resistant Doorsets
- AS 1890 Thermally-released Links
- AS 2270 Plywood and Blockboard for Interior Use
- AS 2271 Plywood and Blockboard for Exterior Use
- AS B194 Tapping and Metallic Drive Screws

4 DEFINITIONS. For the purpose of this standard, the terms used in describing fire doors shall be as defined hereunder and in Figs 1, 2 and 3.

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

4.2 Automatic—applied to a fire door, means designed to close automatically through operation of an approved sensing device integral with the doorset.

4.3 Combustible—deemed combustible when tested in accordance with AS 1530, Part 1.

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

4.5 Doorset—a complete assembly comprising—

- (a) the door leaf or leaves with glazing, if any, and hardware or other inbuilt features;
- (b) the door frame, if any, with its fixings to the wall and, for a sliding fire door, with all guides and their respective fixings to the lintel, wall or sill;
- (c) the door closer or door closing mechanism; and

- (d) for an automatic fire door, the approved heat-actuated device(s) and the closing mechanism.

4.6 Double-acting door (also called 'pivot-swung door')—a doorset whose leaf swings around one vertical side and is equally capable of opening in either direction.

4.7 Finished floor—applied to the sill of a fire door, means the final level of the sill including floor covering not deemed combustible when tested in accordance with AS 1530, Part 1, if any. (See Clauses 5.2.2 and 5.3.3.)

4.8 Fire-isolated escape route—a fire-isolated stairway, fire-isolated ramp or a fire-isolated passageway, whether used individually or in combination, which provides egress from a storey or space in the nature of a storey to a road or open space.

4.9 Fire door—a doorset, single or multileaf, which, except when varied as permitted by this standard, is identical in assembly, construction and installation with a prototype that has been submitted to the standard fire-resistance test and has fulfilled all the relevant test requirements.

NOTE: Fire-resistant doorsets are commonly referred to as 'fire doors'.

4.10 Heat-actuated device—a device which operates to effect the closure of an automatic fire door.

4.11 Regulatory authority—an authority administering Acts of Parliament or Regulations under such Acts.

4.12 Required—required by any government Act, Regulation, By-law or Statutory Rule, or by any Regulatory Authority.

4.13 Self-closing—applied to a fire door, means equipped with an approved device designed to bring the door leaf to the fully closed and latched position immediately after each opening.

4.14 Standard fire-resistance test—the fire-resistance test specified in the edition of AS 1530, Part 4 current at the time of testing of the prototype doorset.

5 DESIGN REQUIREMENTS.

5.1 General.

5.1.1 Self-closure. The doorset shall be self-closing. Automatic doorsets shall be self-closing when the hold-open device becomes inoperative.

5.1.2 Plywood facings. All plywood for use as facings shall comply with AS 2270 or AS 2271, as appropriate. Chemically treated plywood shall comply with AS 2270 or AS 2271, as appropriate, after treatment and reconditioning.

5.1.3 Hardware and furniture.

5.1.3.1 Quality. All hardware and furniture shall be of commercial quality.

5.1.3.2 Attachment. All hardware and furniture shall be attached by means of screws anchoring in metal plates, metal members, metal thread anchors, expanding thread inserts or through-screw fixing. Split-frame type expanding inserts shall not be used for fixing.