

AS/NZS 1530.7:1998

AS/NZS 1530.7

Australian/New Zealand Standard™

Methods for fire tests on building materials, components and structures

Part 7: Smoke control door and shutter assemblies—Ambient and medium temperature leakage test procedure

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This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee BD/18, Fire Safety. It was approved on behalf of the Council of Standards Australia on 14 August 1998 and on behalf of the Council of Standards New Zealand on 28 August 1998. It was published on 5 November 1998.

The following interests are represented on Committee BD/18:

Australasian Fire Authorities Council
 Australian Building Codes Board
 Australian Chamber of Commerce and Industry
 Australian Institute of Building
 Australian Wool Testing Authority
 Building Research Association of New Zealand
 Bureau of Steel Manufacturers of Australia
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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee BD/18, Fire Safety.

This Standard is based on ISO/CD 5925-1, *Fire tests—Smoke control door and shutter assemblies, Part 1: Ambient and medium temperature leakage test procedure*.

A further test for high temperature testing is in abeyance.

This Standard is one of a series dealing with methods for fire tests on building materials, components and structures. To date, the series consists of the following:

AS

- 1503 Methods for fire tests on building materials, components and structures
- 1503.1 Part 1: Combustibility test for materials
- 1530.2 Part 2: Test for flammability of 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 building construction
- 1530.5 Part 5: Test for piloted ignitability
- 1530.7 Part 7: Smoke control door and shutter assemblies—Ambient and medium temperature leakage test procedure

The acceptable leakage rate for different situations will be specified by the regulations of the controlling authorities. The principle of the test is explained in Appendix A.

At the time of preparation of this Standard, no prescribed leakage rates appear to the relevant Building Acts, Building regulations or in technical provisions in either Australia or New Zealand.

Work is proceeding with an Applications Standard which may suggest certain performance criteria and may also be defined and based on fire safety engineering analysis. Reference may also be made to overseas codes, such as, NFPA 105—1993, *Installation of smoke control door assemblies*.

The term 'informative' has been used in this Standard to define the application of the appendix to which it applies. An 'informative' appendix is only for information and guidance.

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STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

Australian/New Zealand Standard

Methods for fire tests on building materials, components and structures**Part 7: Smoke control door and shutter assemblies—Ambient and medium temperature leakage test procedure**

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE This Standard sets out a method to measure the leakage of cold and warm smoke from one side of a door assembly to the other under the specified test conditions. The test can be applied to door and shutter assemblies of different types intended for purposes of controlling the passage of smoke in case of fire and of providing fire resistance.

1.2 APPLICATION This Standard applies to situations where there is a need to quantify the smoke leakage passing through a wall opening that is protected by a door or shutter assembly.

1.3 OBJECTIVES The objective of this Standard is to provide a method of test for determining the smoke leakage through doors and shutters.

1.4 REFERENCED DOCUMENTS The following documents are referred to in this Standard:

ISO/DIS

834 Fire-resistance tests—Elements of building construction

834-1 Part 1: General requirements for fire-resistance testing

ISO

3008 Fire-resistance tests—Door and shutter assemblies

1.5 DEFINITIONS For the purpose of this Standard the definitions below apply.

1.5.1 Door and shutter assembly—an assembly comprising a fixed part (the door frame), one or more movable parts (the door leaves) and its hardware. The purpose of the door assembly is to allow or prevent access of persons or goods. The term hardware includes such items as hinges, latches, door handles, locks, keyholes (excluding keys), letter plates, sliding gear, closing devices, electrical wiring and any other items that may influence the performance of the assembly being tested.

1.5.2 Smoke control door—a smoke control door is a door assembly that has the additional function of restricting the passage of smoke, when in a closed position, to prescribed limits.

1.5.3 Ambient temperature—an air temperature of $25 \pm 15^\circ\text{C}$.

1.5.4 Medium temperature—an average air temperature of $200 \pm 20^\circ\text{C}$.

1.5.5 Leakage rate—the rate of air flow, in cubic metres per hour, under specified pressure differential across a closed door corrected to normal temperature and pressure conditions (20°C , 101,325 Pa).