

Australian Standard™

Portable fire extinguishers and fire blankets—Selection and location

Building Code of Australia
Primary referenced Standard



This Australian Standard was prepared by Committee FP-003, Fire Extinguishers. It was approved on behalf of the Council of Standards Australia on 26 October 2001 and published on 9 November 2001.

The following interests are represented on Committee FP-003:

Australasian Fire Authorities Council
Australian Association of Certification Bodies
Australian Building Codes Board
Australian Competition and Consumer Commission
Australian Institute of Building Surveyors
Consumer and Business Affairs Victoria
Department of Defence
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Portable fire extinguishers and fire blankets—Selection and location

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee FP-003, Fire Extinguishers, to supersede AS 2444—1995.

This Standard is the result of a consensus among Australian and New Zealand representatives on the Joint Committee to produce it as an Australian Standard.

Criteria for the selection of extinguishers are based on extinguisher classification. The requirements for the location and distribution of extinguishers take account of extinguisher classification and rating, travel distance and floor area and hazard classification.

For some time it has been a requirement that portable fire extinguishers carry a classification and rating which indicates the size of fire against which the extinguisher has been successfully tested.

Certain regulations require fire extinguishers to comply with the relevant Australian Standard. In a number of areas, regulations nominate extinguishers of specific types and sizes for certain applications. In other circumstances, building configuration or occupancy may preclude adherence to travel distances specified in the Standard. In this event, the extinguishers may require to be grouped in banks at appropriate intervals and locations, e.g. hydrant points.

It should be noted that extinguishers with body-stamped dates from 1976 to 1981 (inclusive) may be found to be labelled with either a C or (E) classification denoting suitability for use on electrical hazards, e.g. 2A:10B:C. Such extinguishers were produced to comply with earlier editions of AS 1850, and may be selected and located in accordance with this Standard.

With the introduction of a C classification for fires involving flammable gases, these extinguishers should be relabelled to prevent confusion.

This Standard also includes a section on the selection and location of fire blankets manufactured to the requirements of AS/NZS 3504, *Fire blankets*.

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

Australian Standard

Portable fire extinguishers and fire blankets—Selection and location

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard sets out criteria for the selection of portable fire extinguishers and specifies requirements for their application, location and distribution.

It includes a section which sets out criteria for the selection of fire blankets and specifies requirements for their location and distribution.

NOTE: This Standard presumes a basic level of user competence and the adequate maintenance of the equipment in accordance with AS 1851.1.

1.2 APPLICATION

This Standard will be referenced in the Building Code of Australia by way of BCA Amendment 10 to be published by 1 January 2002, thereby superseding AS 2444—1995, which will be withdrawn 12 months from the date of publication of this Standard.

NOTE: The BCA reference applies only to Sections 1, 2, 3, and 4 of this Standard.

1.3 REFERENCED AND RELATED DOCUMENTS

1.3.1 Referenced documents

The following documents are referred to in this Standard:

AS

- 1603 Automatic fire detection and alarm systems
- 1603.5 Part 5: Manual call points
- 1851 Maintenance of fire protection equipment
- 1851.1 Part 1: Portable fire extinguishers and fire blankets
- 2118 Automatic fire sprinkler systems (series)
- 2700 Colour standards for general purposes
- 4214 Gaseous fire extinguisher systems (series)

AS/NZS

- 1841 Portable fire extinguishers
- 1841.1 Part 1: General requirements
- 1850 Portable fire extinguishers—Classification, rating and performance testing
- 3000 Electrical Installations (known as the Australian/New Zealand Wiring Rules).
- 3504 Fire blankets

1.3.2 Related documents

Attention is drawn to the following related documents:

AS/NZS

- 1841 Portable fire extinguishers
- 1841.1 Part 1: General requirements

AS/NZS

- 1841.2 Part 2: Water type
- 1841.3 Part 3: Wet chemical type
- 1841.4 Part 4: Foam type
- 1841.5 Part 5: Powder type
- 1841.6 Part 6: Carbon dioxide type
- 1841.7 Part 7: Vaporizing-liquid type
- 1841.8 Part 8: Non-rechargeable type
- 3676 Portable fire extinguishers — Guide to servicing
- 4353 Portable fire extinguishers — Aerosol type

1.4 DEFINITIONS

For the purpose of this Standard, the definitions below apply.

1.4.1 Aerosol fire extinguisher

A non-rechargeable fire extinguisher in which the expellant gas is stored under pressure with the extinguishant in an aerosol container.

1.4.2 Emergency services switchboard

A switchboard which sustains emergency equipment operating in the emergency mode.

1.4.3 Fire blanket

A flexible sheet of material intended to be used to extinguish fires by smothering.

1.4.4 Fire classification

The various types of fires are classified as follows:

- (a) *Class A*—fires involving carbonaceous solids.
- (b) *Class B*—fire involving flammable and combustible liquids.
- (c) *Class C*—fires involving flammable gases.
- (d) *Class D*—fires involving combustible metals.
- (e) *Class E*—fires involving energized electrical equipment.
- (f) *Class F*—fires involving cooking oil and fats.

NOTE: Specialist advice should be sought in areas where doubt exists, or where combustible metals are present.

1.4.5 Fire point

A grouping of fire extinguishers, not necessarily of a common type, for ease of location in industrial premises.

1.4.6 Hazard

A source of potential harm or a situation with a potential to cause loss. Hazards are classified as follows:

- (a) *Light hazard* where the amount and type of combustibles present are such that fires of only small initial size may be expected. Typical light hazards include the following:
 - (i) Premises such as domestic/residential, offices, schoolrooms, relocatable buildings, churches and assembly halls which constitute a Class A fire risk.
 - (ii) Areas where flammable liquids are stored in containers not exceeding 5 L in capacity, and the total quantity stored in any one fire compartment does not exceed 25 L, which constitute a Class B fire risk.

- (b) *Ordinary hazard* Where the amount and type of combustibles present are such that fires of only moderate initial size may be expected. Typical ordinary hazards include the following:
 - (i) Mercantile storage and display areas, showrooms and workshops which constitute a Class A fire risk.
 - (ii) Areas where flammable liquids are stored in open-top containers in which the exposed surface area of the liquid does not exceed 2 m², or in container storage, not exceeding a total of 250 L in containers each not greater than 20 L, which constitute a Class B fire risk.
- (c) *High hazard* Where the amount and type of combustibles present are such that fires of large initial size may be expected. Typical high hazards include the following:
 - (i) Woodworking areas, warehouses with high-piled storage in excess of 4.5 m, foam plastics processing and storage which constitute a Class A fire risk.
 - (ii) Flammable liquids stored in open-top containers where the exposed surface area of the liquid exceeds 2 m² or in container storage exceeding a total of 250 L, which constitute a Class B fire risk.

NOTES:

- 1 For further information on the description of hazard classification, the definitions used in AS 2118 may be used for guidance.
- 2 Special consideration should be given to occupancies which, because of their high-fuel load, may more correctly be allocated a higher hazard classification.

1.4.7 Human torch

A fire in the clothing being worn by a person.

1.4.8 Portable fire extinguisher

A first-attack firefighting appliance which is designed to be carried and operated by hand and which, when charged to design capacity, has a gross mass of not greater than 23 kg.

1.4.9 Significant switchboard

A switchboard that is—

- (a) located within a required exit;
- (b) neither constructed nor installed in accordance with the requirements of AS 3000—1970 or later edition.
- (c) an emergency service switchboard;
- (d) connected to 3-phase power; or
- (e) vertically aligned and servicing a floor in a building of two or more storeys.

1.4.10 Small craft

Waterborne craft of such size and configuration as is exempt from marine survey requirements.

SECTION 2 SELECTION OF PORTABLE FIRE EXTINGUISHERS

2.1 GENERAL

The most effective extinguishant for any given fire situation is usually some form of compromise. Careful consideration must be given to operator competence and all risks that are present. Flammable liquids or gases in inaccessible locations (e.g. inside cabinets), clothing fires and energized electrical equipment, all present their own specific risks. Risks are shown against preferred extinguishants in Table B1.

NOTE: For further information on extinguisher selection and extinguishing agent suitability see Appendices A and B.

2.2 CLASSIFICATION AND RATING

Fire extinguishers complying with Australian Standards are marked with a fire classification and rating, determined in accordance with AS/NZS 1850, which indicates the class and size of fire for which they have been successfully tested. An extinguisher shall be selected for its capability for use on the fire risk that is to be protected.

SECTION 3 LOCATION OF PORTABLE FIRE EXTINGUISHERS

3.1 GENERAL

Extinguishers shipped empty or partially dismantled shall be fully assembled and charged strictly in accordance with the manufacturer's instructions. The extinguisher shall be commissioned and installed in accordance with AS 1851.1, and located in accordance with this Section.

3.2 EXTINGUISHER LOCATION

Each extinguisher shall be located in a conspicuous and readily accessible position. Extinguishers shall not be located in positions where access could present a hazard to the potential user. Where practicable, extinguishers shall be located along normal paths of travel and near exits.

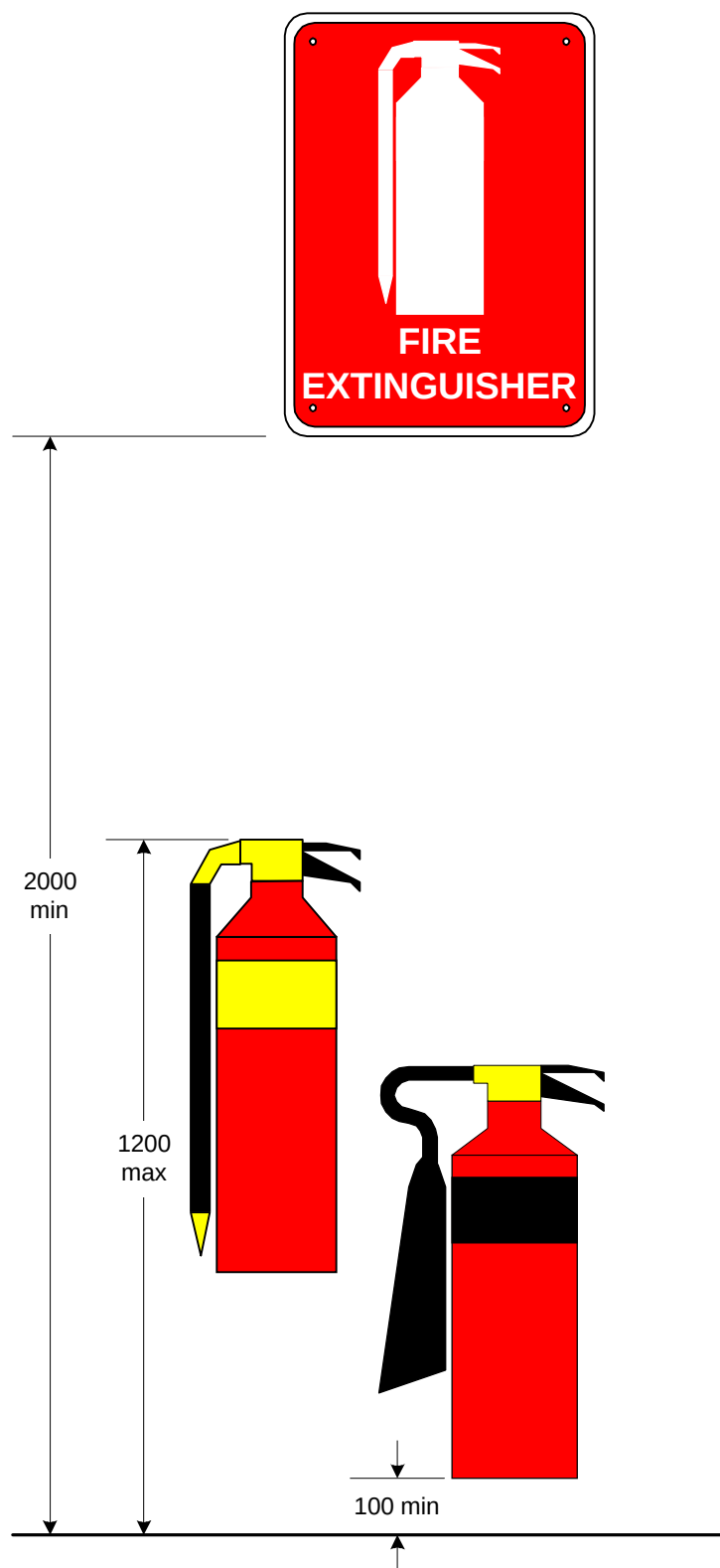
For all installations, extinguishers in and around buildings shall comply with Items (a) and (b) below. Domestic installation, defined as Class 1a building in the Building Code of Australia, is exempt.

Extinguishers shall—

- (a) have their locations clearly indicated by placement of the location sign as shown in Figure 3.1; and
- (b) be mounted at the appropriate height shown in Figure 3.2 and varied only where there is a possibility of dislodgment and then only where ready accessibility is maintained.



FIGURE 3.1 TYPICAL EXTINGUISHER LOCATION SIGN



DIMENSIONS IN MILLIMETRES

FIGURE 3.2 MOUNTING HEIGHTS FOR PORTABLE FIRE EXTINGUISHERS AND LOCATION SIGNS