



Australian/New Zealand Standard<sup>®</sup>

**Portable fire extinguishers—  
Aerosol type**



## AS/NZS 4353:1995

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This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee FP/3, Fire Extinguishers. It was approved on behalf of the Council of Standards Australia on 30 August 1995 and on behalf of the Council of Standards New Zealand on 4 September 1995. It was published on 5 December 1995.

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The following interests are represented on Committee FP/3:

Australian Construction Service—Department of the Arts and Administrative Services  
Australian Fire Authorities Council  
Australian Fire Protection Association  
Commonwealth Fire Board  
Department of Consumer Affairs, N.S.W.  
Department of Defence, Australia  
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New Zealand Fire Equipment Association  
Office of Fair Trading and Business Affairs, Vic.  
Western Australian Fire Brigade Board  
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Additional interests participating in preparation of Standard:

Aerosol Association of Fiji  
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STANDARDS AUSTRALIA  
1 The Crescent,  
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STANDARDS NEW ZEALAND  
Level 10, Standards House,  
155 The Terrace,  
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## PREFACE

This Standard was prepared by the Standards Australia/Standards New Zealand Committee FP/3 on Fire Extinguishers as a Joint Standard.

This Standard has been written with the aim of producing a specification for a relatively inexpensive, small, disposable fire extinguisher for household use with an acceptable minimum level of performance. This type of extinguisher is intended for use only in situations where fires of limited proportions are anticipated because of the nature of some process or activity where the possibility of fire spreading to other material is remote or where people may be present at the likely times of risk.

The Standard therefore is unlikely to meet the requirements of the various specifying authorities for more comprehensive protection. These extinguishers are not intended to supplant the more robust higher performance extinguishers which should still be regarded as the principal type to meet the need of various authorities.

In order to minimise hindrance to developments in design, the general emphasis is on performance requirements rather than on dimensional requirements.

The term 'normative' has been used in this Standard to define the application of the appendix to which it applies. A 'normative' appendix is an integral part of a Standard.

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## CONTENTS

|                                            | <i>Page</i> |
|--------------------------------------------|-------------|
| <b>SECTION 1 SCOPE AND GENERAL</b>         |             |
| 1.1 SCOPE .....                            | 5           |
| 1.2 APPLICATION .....                      | 5           |
| 1.3 REFERENCED DOCUMENTS .....             | 5           |
| 1.4 DEFINITIONS .....                      | 5           |
| 1.5 CLASSIFICATION AND RATING .....        | 6           |
| <b>SECTION 2 MATERIALS OF CONSTRUCTION</b> |             |
| 2.1 GENERAL .....                          | 7           |
| 2.2 STABILITY .....                        | 7           |
| 2.3 EXPOSED NON-METALLIC COMPONENTS .....  | 7           |
| 2.4 EXTINGUISHER INTERIOR .....            | 7           |
| 2.5 EXTERNAL SURFACES .....                | 7           |
| <b>SECTION 3 DESIGN</b>                    |             |
| 3.1 GENERAL .....                          | 8           |
| 3.2 CONTAINER .....                        | 8           |
| 3.3 ACTUATING MECHANISM .....              | 8           |
| 3.4 PRESSURE INDICATOR .....               | 8           |
| 3.5 SUPPORT FITTING .....                  | 8           |
| <b>SECTION 4 METHOD OF OPERATION</b>       |             |
| 4.1 GENERAL .....                          | 8           |
| 4.2 ANTI-DISCHARGE DEVICE .....            | 8           |
| <b>SECTION 5 CHARGE</b>                    |             |
| 5.1 GENERAL .....                          | 9           |
| 5.2 MATERIALS .....                        | 9           |
| 5.3 MASS OR VOLUME .....                   | 9           |
| <b>SECTION 6 PERFORMANCE REQUIREMENTS</b>  |             |
| 6.1 GENERAL .....                          | 10          |
| 6.2 INTERMITTENT DISCHARGE .....           | 10          |
| 6.3 EFFECTIVE DISCHARGE .....              | 10          |
| 6.4 PRESSURE RETENTION .....               | 10          |
| 6.5 GAS LEAKAGE .....                      | 10          |
| 6.6 EXTERNAL CORROSION .....               | 10          |
| 6.7 STORAGE AND CORROSION .....            | 10          |
| 6.8 POWDER COMPACTION .....                | 10          |
| 6.9 SUPPORT FITTING .....                  | 11          |
| 6.10 EXTINGUISHER OPERATION .....          | 11          |
| 6.11 OPERATION HEAD OR VALVE .....         | 11          |
| 6.12 SIPHON TUBE ASSEMBLY .....            | 11          |
| 6.13 EXTINGUISHER DISCHARGE .....          | 11          |
| 6.14 COMPONENTS OF PLASTICS MATERIAL ..... | 11          |

|                                                 | <i>Page</i> |
|-------------------------------------------------|-------------|
| SECTION 7 TEST REQUIREMENTS                     |             |
| 7.1 GENERAL . . . . .                           | 12          |
| 7.2 INTERMITTENT DISCHARGE . . . . .            | 12          |
| 7.3 EFFECTIVE DISCHARGE TEST . . . . .          | 12          |
| 7.4 PRESSURE TEST . . . . .                     | 12          |
| 7.5 GAS LEAKAGE TEST . . . . .                  | 12          |
| 7.6 EXTERNAL CORROSION TEST . . . . .           | 12          |
| 7.7 STORAGE AND CORROSION . . . . .             | 13          |
| 7.8 POWDER COMPACTION TEST . . . . .            | 13          |
| 7.9 SUPPORT FITTING TESTING . . . . .           | 14          |
| 7.10 EXTINGUISHER DROP TEST . . . . .           | 14          |
| 7.11 OPERATING HEAD IMPACT TEST . . . . .       | 14          |
| 7.12 SIPHON TUBE TEST . . . . .                 | 14          |
| 7.13 CLEAR PASSAGE TEST . . . . .               | 14          |
| 7.14 TEST FOR PLASTIC MATERIALS . . . . .       | 14          |
| SECTION 8 IDENTIFICATION . . . . .              | 15          |
| SECTION 9 INSTRUCTIONS AND MARKINGS             |             |
| 9.1 GENERAL . . . . .                           | 16          |
| 9.2 MARKINGS . . . . .                          | 16          |
| 9.3 SIZE OF LETTERING AND PICTOGRAPHS . . . . . | 16          |
| 9.4 OPERATION . . . . .                         | 16          |
| 9.5 IDENTIFICATION . . . . .                    | 19          |
| 9.6 LABELLING . . . . .                         | 20          |
| 9.7 EXPORT EXTINGUISHERS . . . . .              | 20          |
| SECTION 10 PACKAGING . . . . .                  | 21          |
| APPENDICES                                      |             |
| A EXTERNAL CORROSION TEST . . . . .             | 22          |
| B OPERATING HEAD IMPACT TEST . . . . .          | 23          |

## STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

**Australian/New Zealand Standard****Portable fire extinguishers—Aerosol type**

## SECTION 1 SCOPE AND GENERAL

**1.1 SCOPE** This Standard specifies the requirements for portable stored-pressure fire extinguishers of the aerosol type.

## NOTES:

- 1 A portable non-rechargeable, stored-pressure fire extinguisher of the aerosol type is generally referred to in this Standard as 'an extinguisher' or 'the extinguisher.'
- 2 *Production Certification* Users for this Australian/New Zealand Standard are advised to consider the desirability of third party certification of product conformity with this Standard based on testing and continuing surveillance, which may be coupled with assessment of a supplier's quality systems.

**1.2 APPLICATION** Portable aerosol, stored-pressure fire extinguishers shall comply with the requirements of this Standard.

The extinguishers are designed for one use only, not to be refilled and to be discarded after any use, or depressurised and discarded before the expiry date shown on the label.

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

## AS

1850 Portable fire extinguishers—Classification, rating and performance testing

2278 Metal aerosol containers

2700 Colour standards for general purposes

## NZS

4507 Specification for fire testing and rating of portable fire extinguishers

5807 Code of practice for industrial identification by colour, wording or other coding

**1.4 DEFINITIONS** For the purpose of this Standard, the definitions below apply.

**1.4.1 Actuating mechanism**—the mechanism which sets in train an action which unseals, releases, pierces or fractures a valve, seal or frangible tip to initiate a discharge or enables a discharge to be commenced by the operation of any flow control nozzle.

**1.4.2 Aerosol container**—a non-refillable container designed to hold its intended contents at a pressure greater than atmospheric, the pressure being provided by means of propellant, and designed to dispense those contents by means of a valve.

**1.4.3 Aerosol fire extinguisher**—a non-rechargeable fire extinguisher in which the expellant gas is stored under pressure with the extinguishant in an aerosol container.

**1.4.4 Anti-discharge device**—a device designed to prevent accidental discharge of the extinguisher.

**1.4.5 Anti-tamper seal**—a device which visually indicates that an attempt has been made to actuate the extinguisher.

**1.4.6 Discharge fittings**—the system through which the extinguishant is discharged and may include a siphon tube.

**1.4.7 Extinguishant**—agent used to control fire.

**1.4.8 Extinguisher size**—the mass or volume of extinguishant with which the extinguisher was fire-rated.

**1.4.9 Maximum developed pressure**—the pressure developed by the contents of a cylinder in equilibrium at the maximum service temperature.

**1.4.10 Maximum service temperature**—the maximum temperature to which an extinguisher will be subjected to in normal service, to be taken as 65°C.

**1.4.11 Operating head, (stored pressure type)**—the component which breaks, ruptures or opens the primary seal.

**1.4.12 Portable fire extinguisher**—an appliance containing an extinguishant which can be discharged onto a fire by the action of internal pressure. A portable fire extinguisher is designed to be carried and operated by hand and has a gross mass which does not exceed 23 kg.

**1.4.13 Pressure indicator**—a device which indicates the pressure status of the extinguisher.

**1.4.14 Siphon tube**—a tube through which the extinguishant is conveyed to the operating head.

**1.4.15 Support fitting**—a quick-release bracket or hook which, when fixed to a surface, retains the extinguisher.

**1.4.16 Visible length**—the length of the container which is visible when the operating head or anti-discharge device is fitted.

**1.4.17 Working pressure**—the internal pressure of the extinguisher in kilopascals at  $23 \pm 2^\circ\text{C}$ .

**1.5 CLASSIFICATION AND RATING** Classification and rating of extinguishers shall be determined from the results of test fires set out in AS 1850 or NZS 4507.

When an extinguisher is rated for more than one class of fire, the full rating shall be expressed as the rating for A class fires first, then for B class and F class, e.g. 1A:5B:1F.

In addition to its classification and rating, a fire extinguisher which is suitable for use on flammable gas fires bears the letter 'C', following the classification and rating, e.g. 1A:5B:1F:C.

Also, where an extinguisher is suitable for use on fires involving energised electrical equipment it shall bear the letter 'E' in brackets, following the classification and rating, e.g. 1A:5B:1F:C:(E).

## SECTION 2 MATERIALS OF CONSTRUCTION

**2.1 GENERAL** All components of an extinguisher shall be of a corrosion-resistant material or shall be suitably treated to resist corrosion.

The manufacturer shall ensure that the materials of construction are compatible with the extinguishant and expellant gas so that corrosion does not occur when they contact the aerosol container or its attachments. All materials used in the container assembly shall be mutually compatible.

**2.2 STABILITY** When tested in accordance with Clause 7.7, materials in contact with the extinguishant or expellant gas shall—

- (a) be resistant to degradation by the extinguishant and expellant gas; and
- (b) be capable of retaining their dimensional stability to the extent that the performance of the extinguisher is not adversely affected.

**2.3 EXPOSED NON-METALLIC COMPONENTS** Materials used in the manufacture of non-metallic components that may be exposed to ultraviolet light in the field shall be UV-stabilised.

**2.4 EXTINGUISHER INTERIOR** The extinguisher interior shall be clean and free from contaminants at the commencement of filling.

**2.5 EXTERNAL SURFACES** The extinguisher shall pass the external corrosion test (see Clause 7.6).