

Australian Standard[®]

Wheeled fire extinguishers

This Australian Standard was prepared by Committee FP/3, Fire Extinguishers. It was approved on behalf of the Council of Standards Australia on 7 November 1994 and published on 5 March 1995.

The following interests are represented on Committee FP/3:

Aerosol Association of Australia
Asset Services Department of Administrative Services, Australia
Australian Fire Authorities Council
Australian Fire Protection Association
Commonwealth Fire Board
Department of Consumer Affairs, N.S.W.
Department of Defence, Australia
Federal Bureau of Consumer Affairs
Fire Protection Industry Association of Australia
Fire Trainers Association of Australia
Insurance Council of Australia
New Zealand Fire Equipment Association
Office of Fair Trading and Business Affairs Vic.
Telecom Australia
Western Australian Fire Brigade Board
WorkCover Authority, N.S.W.

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.

Full 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which subscribing members receive, and which gives details of new publications, new editions and amendments, and of withdrawn Standards.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.

This Standard was issued in draft form for comment as DR 93062.

Australian Standard[®]

Wheeled fire extinguishers

First published as AS 4265—1995.

PUBLISHED BY STANDARDS AUSTRALIA
(STANDARDS ASSOCIATION OF AUSTRALIA)
1 THE CRESCENT, HOMEBUSH, NSW 2140

ISBN 0 7262 9466 7



Documents

Document Sharing Hub

PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee FP/3 on Fire Extinguishers, and covers wheeled fire extinguishers using metal cylinders.

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

The object of this Standard is to provide specific requirements for wheeled fire extinguishers in which the extinguishant can be expelled either by gas stored under pressure in the cylinder of the extinguisher or by the release of gas from a compressed gas container. The Standard refers to materials, methods of manufacture and performance of the extinguisher and any associated compressed gas container.

In New Zealand, pressure testing of all fire extinguisher over 500 mL in water capacity must be carried out at an approved test station in accordance with the *NZ Dangerous Goods (Class 2-gases) Regulations* and the *Department of Labour—Guide to gas cylinders*. The testing revolves around a five-yearly test cycle once the extinguisher is five years of age and has been discharged. This rule also applies to compressed gas containers.

The classification and rating of fire extinguishers in New Zealand for Class A and Class B risks is determined from the results of performance tests set out in NZS 4507:1978, *Specification for fire testing and rating of portable fire extinguishers*.

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.

© 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>
SECTION 1 SCOPE AND GENERAL	
1.1 SCOPE	4
1.2 REFERENCED DOCUMENTS	4
1.3 DEFINITIONS	5
1.4 INTERPRETATION IN ACCORDANCE WITH THE ROUNDING METHOD ..	6
1.5 CLASSIFICATION AND RATING	6
SECTION 2 DESIGN AND CONSTRUCTION	
2.1 SIZE	8
2.2 METHOD OF OPERATION	8
2.3 CHARGE AND RECHARGE	8
2.4 CYLINDERS	10
2.5 ANTI-CORROSION TREATMENT	10
2.6 OPERATING HEAD	11
2.7 ACTUATING MECHANISM	11
2.8 SEALING DEVICE	11
2.9 CARRIAGE ASSEMBLY	12
2.10 PRESSURE-INDICATING DEVICE	12
2.11 DISCHARGE FITTINGS	12
SECTION 3 PERFORMANCE REQUIREMENTS	
3.1 DISCHARGING AND FIRE RATING	13
3.2 RATING STATEMENT	13
3.3 VERTICAL TILTING	13
3.4 MANOEUVRING FORCE	13
3.5 EXTINGUISHER STABILITY	13
SECTION 4 TESTING	
4.1 DISCHARGE TEST	14
4.2 STANDARD PRESSURE TEST	14
4.3 CLEAR PASSAGE TEST	14
4.4 GAS LEAKAGE TESTS	14
SECTION 5 INSTRUCTIONS, MARKING AND PACKAGING	
5.1 GENERAL	16
5.2 IDENTIFICATION COLOUR	16
5.3 PERMANENT MARKING	16
5.4 MARKING	16
5.5 SERVICE INFORMATION	19
5.6 EXPORT EXTINGUISHERS	19
5.7 PACKING FOR SHIPMENT	19
SECTION 6 COMPRESSED GAS CONTAINERS	
6.1 GENERAL	21
6.2 HIGH-PRESSURE COMPRESSED GAS CONTAINERS	21
6.3 LEAKAGE TESTS	21
6.4 PROTECTIVE FINISH	21
APPENDIX A EXTINGUISHER STABILITY TEST	22

STANDARDS AUSTRALIA

Australian Standard

Wheeled fire extinguishers

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE This Standard specifies the requirements for wheeled fire extinguishers in which the extinguishant can be expelled by either gas stored under pressure in the cylinder of the extinguisher or by pressure of gas released from a compressed gas container. This Standard refers to materials, methods of manufacture and performance of the extinguisher and any associated compressed gas container; and also to instructions and markings.

Where gases are used as a propellant or to facilitate leak detection that may have ozone depleting properties, consideration should be given to the compliance with the provisions of the Commonwealth Ozone Protection Act 1989 and its regulations.

This Standard applies to the following types of wheeled fire extinguishers:

- (a) Water (gas container).
- (b) Water (stored pressure).
- (c) Wet chemical (stored pressure).
- (d) Foam (gas container).
- (e) Foam (stored pressure).
- (f) Powder (gas container).
- (g) Powder (stored pressure).
- (h) Carbon dioxide type.
- (i) Vapourizing liquid type (stored pressure)

NOTE: A wheeled fire extinguisher is generally referred to in this Standard as 'an extinguisher' or 'the extinguisher'.

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

AS

- | | |
|--------|---|
| 1777 | Aluminium cylinders for compressed gases—Seamless 0.1 kg to 130 kg |
| 1841 | Portable fire extinguishers |
| 1841.1 | Part 1: General requirements |
| 1850 | Portable fire extinguishers—Classification, rating and performance testing |
| 2030 | The approval, filling, inspection, testing and maintenance of cylinders for the storage and transport of compressed gases (known as the SAA Gas Cylinders Code) |
| 2030.1 | Part 1: Cylinders for compressed gases other than acetylene |
| 2337 | Gas cylinder test stations |
| 2470 | Steel cylinders for compressed gases—Welded—11 kg to 150 kg |

- AS
- 2484 Fire—Glossary of terms
- 2484.2 Part 2: Fire protection and firefighting equipment
- 2613 Safety devices for gas cylinders
- 2700 Colour standards for general purposes
- 2706 Numerical values—Rounding and interpretation of limiting values
- 2971 Serially produced pressure vessels
- 3676 Portable fire extinguishers—Guide to servicing
- 4077 Fire protection—Fire extinguishing media—Halogenated hydrocarbons
- 4077.1 Part 1: Specifications for halon 1211 and halon 1301
- 4077.2 Part 2: Code of practice for safe handling and transfer procedures of halon 1211 and halon 1301
- 4078 Fire protection—Fire extinguishing media—Carbon dioxide

1.3 DEFINITIONS For the purpose of this Standard, the definitions given in AS 2484.2 and those below apply. For typical mobile fire extinguisher components see Figure 1.1.

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

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

1.3.3 Anti-overfill device—a device which, when fitted, ensures a specific ullage.

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

1.3.5 Cap—a cylinder closure.

1.3.6 Control nozzle—a discharge nozzle incorporating a control mechanism by which the discharge can be interrupted.

1.3.7 Cylinder—an extinguishant container with attachments.

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

1.3.9 Discharge hose assembly—a flexible hose assembly incorporating a hose attachment device with seals and a discharge control nozzle.

1.3.10 Extinguishant—an agent used to control fire.

1.3.11 Extinguisher size—the designed mass or volume of the charge of extinguishant within the extinguisher.

1.3.12 Gas container type—an extinguisher in which the extinguishant is expelled by pressure released from a compressed gas container.

1.3.13 Maximum developed pressure—the pressure developed by the contents of a cylinder in equilibrium at the maximum service temperature (see AS 2030.1).

1.3.14 Maximum service temperature—the maximum temperature to which an extinguisher will be subjected in normal service, to be taken as 65°C (see AS 2030.1).

1.3.15 Neck ring—that portion of the body designed to accept the operating head or cap.

1.3.16 Operating head—the component or assembly which pressurizes, breaks, pierces, ruptures or opens the primary seal allowing discharge of the extinguishant.

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

1.3.18 Pressure release vents (extinguishers other than carbon dioxide type)—vents so positioned that when removing the operating head or cap, pressure release occurs when not less than two full threads remain engaged to prevent separation of the operating head and cylinder.

1.3.19 Safety device—a device, including the approach channel, the operating part, and the discharge channel, intended to protect a gas cylinder against over pressure or bursting.

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

1.3.21 Skirt—a protective ring attached to the bottom of the extinguisher cylinder.

1.3.22 Stored pressure type—an extinguisher in which the extinguishant is expelled by gas stored under pressure in the cylinder.

1.3.23 Wheeled fire extinguisher—a manually manoeuvred fire extinguisher mounted on wheels.

1.4 INTERPRETATION IN ACCORDANCE WITH THE ROUNDING METHOD For the purpose of assessing compliance with this Standard, the specified limiting values herein shall be interpreted in accordance with the 'rounding method' described in AS 2706, i.e. the observed or calculated value shall be rounded to the same number of figures as in the specified limiting value and then compared with the specified limiting value. For example, for specified limiting values of 2.5, 2.50, and 2.500, the observed or calculated value would be rounded respectively to the nearest 0.1, 0.01, or 0.001.

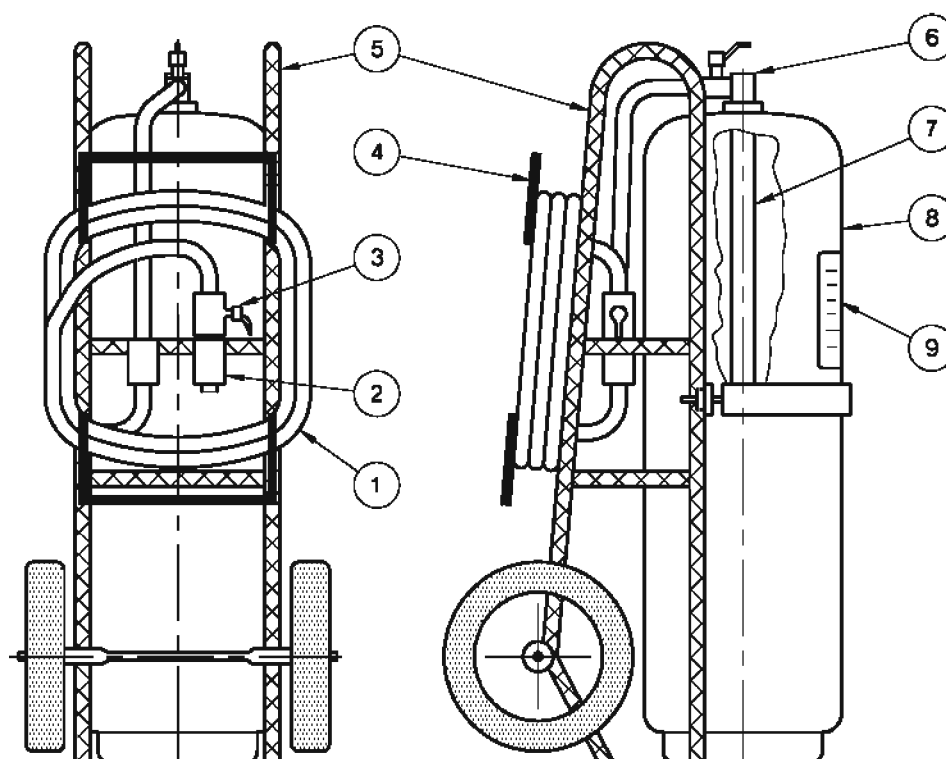
1.5 CLASSIFICATION AND RATING Classification and rating of extinguishers shall be determined by either of the following methods:

- (a) Subject a quantity of the same extinguishant (see Clause 3.1.1) as used in the mobile extinguisher to the relevant performance test set out in AS 1850, and place a rating statement (see Clause 5.3.3.6) on the front label of the mobile extinguisher.
- (b) Conduct performance tests as set out in AS 1850.

When a fire extinguisher is rated for more than one class of fire, it is expressed as a rating for A class fires first, followed by the rating for B class fires, e.g. 10A:80B.

In addition to its classification and rating, a fire extinguisher that is suitable for use on flammable gas fires bears the letter 'C' in brackets, following the classification and rating, e.g. 10A:80B:(C).

Also, where an extinguisher is suitable for use on fires involving energized electrical equipment, it bears the letter 'E' in brackets, following the classification and rating, e.g. 10A:80B:(C):(E).



LEGEND:

- 1 Hose
- 2 Control nozzle retainer
- 3 Control nozzle
- 4 Hose retainer
- 5 Carriage assembly
- 6 Operating head
- 7 Siphon tube assembly
- 8 Cylinder
- 9 Label

FIGURE 1.1 WHEELED FIRE EXTINGUISHER COMPONENTS