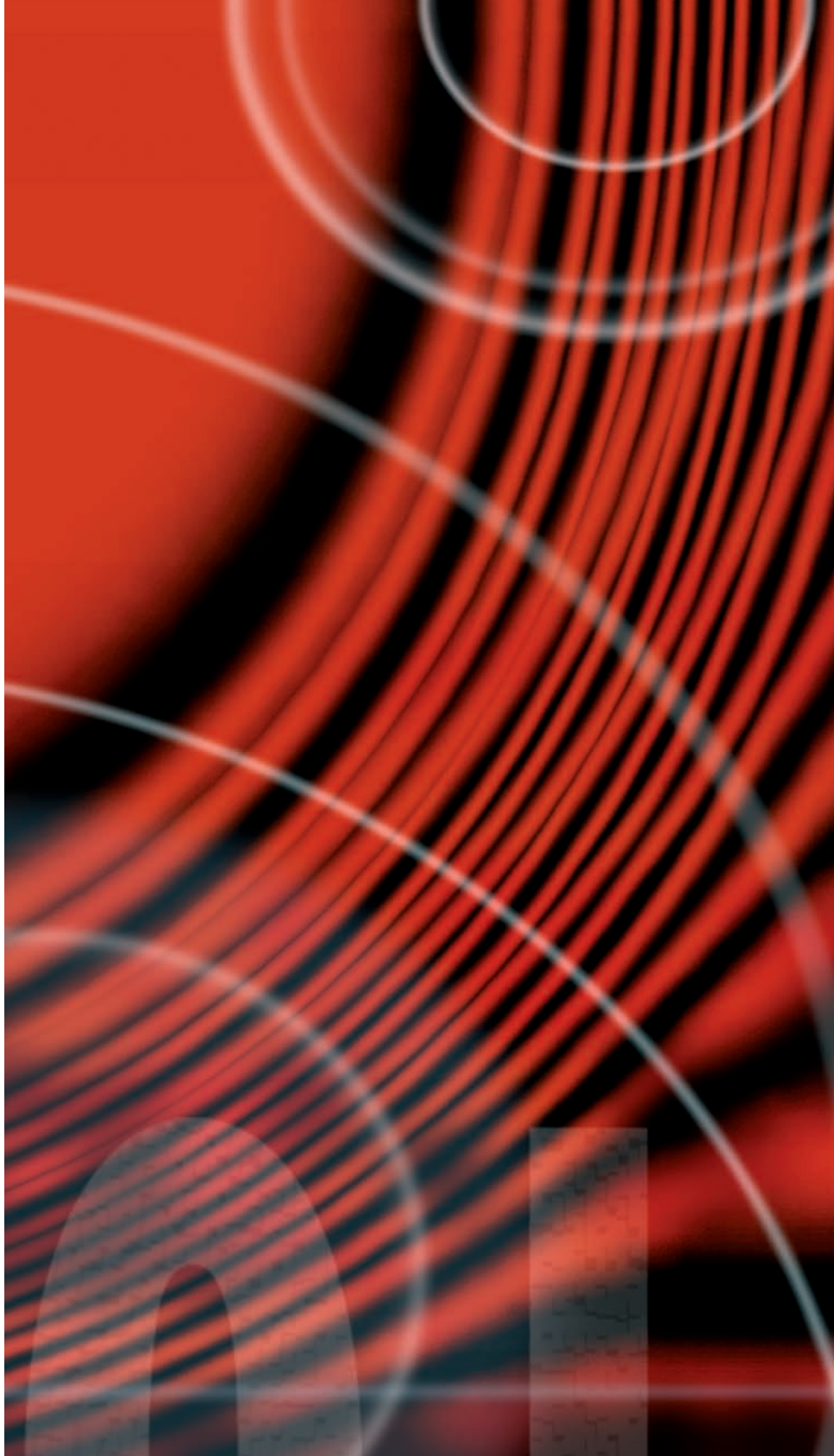


New Zealand Standard

Hand Operated Fire-fighting Equipment

Supersedes NZS 4503:1993 (12 months
from the date of publication of this Standard)



COMMITTEE REPRESENTATION

This Standard was prepared under the supervision of the Hand Operated Fire-fighting Equipment Committee (P 4503) for the Standards Council established under the Standards Act 1988.

The committee consisted of representatives of the following:

Building Research Association of New Zealand (BRANZ)
Fire Protection Association of New Zealand (FPANZ)
Fire Protection Inspection Services (FPIS)
Hand Operated Fire-fighting Equipment Community of Interest
Institution of Fire Engineers
Insurance Council of New Zealand Inc.
Maritime Safety Authority of New Zealand
New Zealand Fire Equipment Association
New Zealand Fire Service
New Zealand Retailers' Association

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AMENDMENTS

No.	Date of issue	Description	Entered by, and date
1	April 2006	Amends the force required to detach the maintenance record tag and corrects a descriptor in Appendix F.	Incorporated in this edition.

NZS 4503:2005

New Zealand Standard

**HAND OPERATED FIRE-
FIGHTING EQUIPMENT**

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REFERENCED DOCUMENTS

Reference is made in this Standard to the following:

NEW ZEALAND STANDARDS

NZS 4503: 1993 Code of practice for the distribution, installation and maintenance of hand operated fire-fighting equipment for use in buildings

JOINT AUSTRALIAN/NEW ZEALAND STANDARDS

AS/NZS 1221:1997	Fire hose reels
AS/NZS 1841:- - - -	Portable fire extinguishers
Part 1:1997	General requirements
Part 2:1997	Specific requirements for water type extinguishers
Part 3:1997	Specific requirements for wet-chemical type extinguishers
Part 4:1997	Specific requirements for foam type extinguishers
Part 5:1997	Specific requirements for powder type extinguishers
Part 6:1997	Specific requirements for carbon dioxide type extinguishers
Part 7:1997	Specific requirements for vaporizing-liquid type extinguishers
Part 8:1997	Specific requirements for non-rechargeable type extinguishers
AS/NZS 1850:1997	Portable fire extinguishers – Classification, rating and performance testing
AS/NZS 2845:- - - -	Water supply – Backflow prevention devices
Part 1:1998	Materials, design and performance requirements
AS/NZS 3000:2000	Electrical installations (known as the Australian/New Zealand Wiring Rules)
AS/NZS 3013:1995	Electrical installations – Classification of the fire and mechanical performance of wiring systems
AS/NZS 3500:- - - -	National plumbing and drainage
Part 1:2003	Water services
AS/NZS 3504:1995	Fire blankets
AS/NZS 4353:1995	Portable fire extinguishers – Aerosol type

AUSTRALIAN STANDARDS

AS 1851:- - - -	Maintenance of fire protection equipment
Part 1:1995	Portable fire extinguishers and fire blankets
AS 2337:- - - -	Gas cylinder test stations
Part 1:2004	General requirements, inspections and tests – Gas cylinders
AS 2700:1996	Colour standards for general purposes
AS 4265:1995	Wheeled fire extinguishers

OTHER PUBLICATIONS

Approved Documents for the New Zealand Building Code
 New Zealand Building Code Handbook

NEW ZEALAND LEGISLATION

Fire Safety and Evacuation of Buildings Regulations 1992

Hazardous Substances (Compressed Gases) Regulations 2004

Hazardous Substances (Emergency Management) Regulations 2001

Hazardous Substances and New Organisms Act 1996

Health and Safety in Employment Act 1992

Land Transport Rule 31001 – Passenger Service Vehicles 1999

Maritime Rules

Part 42B Safety Equipment – Fire Appliances – Performance Standards

Part 80 Marine Craft Used for Adventure Tourism

Maritime Transport Act 1994

Ozone Layer Protection Act and Regulations 1996

LATEST REVISIONS

The users of this Standard should ensure that their copies of the above-mentioned New Zealand Standards and referenced overseas Standards are the latest revisions or include the latest amendments. Such amendments are listed in the annual *Standards New Zealand Catalogue* which is supplemented by lists contained in the monthly magazine *Standards*, issued free of charge to committee and subscribing members of Standards New Zealand.

REVIEW OF STANDARDS

Suggestions for improvement of this Standard will be welcomed. They should be sent to the Chief Executive, Standards New Zealand, Private Bay 2439, Wellington.

FOREWORD

Hand operated fire-fighting equipment includes fire hose reels, portable fire extinguishers and fire blankets. This equipment is necessary as a first defence against small fires, even if the hazard is already covered with fixed fire protection systems or other fire safety precautions. It is noted further that fire blankets often form a useful supplement to fire hose reels and extinguishers.

NZS 4503 was last revised in 1993 and since then both operating environments and technology have changed. Comparable international Standards have been progressively updated to reflect these global changes. Accordingly this revision updates the selection, installation, distribution and maintenance of hand operated fire-fighting equipment suitable for use by one person.

The related joint Australian/New Zealand hand operated fire-fighting equipment manufacturing and extinguisher rating Standards (i.e. in the main AS/NZS 1221, AS/NZS 1841, AS/NZS 1850 and AS/NZS 3504) have been taken into account in this revision. Portable fire extinguishers in Australia are serviced and maintained in accordance with AS 1851.1. However in New Zealand it is intended that such equipment will be maintained in accordance with NZS 4503 – a New Zealand-only Standard. Similar logic applies in respect of inspection and maintenance of fire hose reels and fire blankets.

This Standard does not consider the outcome of using hand operated fire-fighting equipment manufactured and rated to other than Australian or New Zealand Standards. However it is probable such equipment will only benefit from application of any relevant inspection and maintenance provisions contained in the new Standard.

Whilst guidance for equipment selection and deployment is given in depth, the specifics of training for use are excluded. Employers, building owners and occupants need to consider their responsibilities in this regard, as mandated by principal legislation. This includes the Health and Safety in Employment Act and the Fire Safety and Evacuation of Buildings Regulations.

It is emphasized that persons suitably trained in the use of hand operated fire-fighting equipment should attempt to fight a fire only if they can do so safely. However when considering what constitutes an acceptable degree of risk, it should be remembered that even the smallest of fires can present a much more significant hazard if allowed to develop. In addition, it is worth noting that the majority of small fires successfully extinguished by the use of hand operated fire-fighting equipment go largely unreported.

Significant emphasis is given to the distribution and maintenance of equipment to adequately protect properties, contents, outside plant and fixed equipment. Guidance is now given with respect to domestic use, and also, use on board those watercraft and vehicles not otherwise covered by the specific requirements of a Regulatory Authority.

It is important that the users of the new Standard carefully note and consider the following significant changes:

- Specific coverage of Class F fires, was required to address the significant limitations of dry powder extinguishants on fires involving cooking oils and fats;
- The introduction of three Hazard Classes, Light, Medium and High respectively;
- The requirement for 'specific to hazard' coverage for significant switchboards;
- Increased scope of documentation for maintenance records, together with the implementation of standardized maintenance record tags of improved durability;

- Revised travel distances and area coverage ratios:
 - Related to the degree of fire hazard (especially Class A and B)
 - Introduction of mobile fire points;
- Increased use of pictograms in accordance with current international signage trends;
- The provision of supplementary extinguisher cover within residential occupancies;
- Guidance for selection and deployment of fire extinguishers in vehicles, caravans and pleasure craft;
- Limitations on the use of the older 13 mm DN fire hose reel and introduction of the larger 25 mm DN hose reel;
- Recognition of the increasing use of fire hose reel pumps, together with guidance for their installation, commissioning, on-going inspection and maintenance; and
- Guidance for the selection, location and installation of fire blankets.

Finally, it is important that the sound underlying philosophy of NZS 4503:1993 is not lost at this juncture. Fire hose reels provide the most satisfactory basic cover for use in most types of occupancy. Their use is instinctive requiring little or no training and reliability is generally superior, as the units are less complex. Accordingly they are preferable to fire extinguishers, except where water is an inappropriate extinguishant. In such cases suitably rated fire extinguishers should be installed to provide cover 'specific to hazard'.

The exception is where water supplies are not adequate for hose reels. In such cases basic cover should be provided using suitably rated extinguishers. Again these should be supplemented with suitably rated units installed 'specific to hazard' as necessary.

NOTES

NEW ZEALAND STANDARD

HAND OPERATED FIRE-FIGHTING EQUIPMENT

1 GENERAL

1.1 Scope

1.1.1 Inclusions

This Standard covers the selection, installation, distribution and maintenance of hand operated fire-fighting equipment which can be used by one person, including:

- (a) Selection of hand operated fire-fighting equipment including:
 - (i) Portable and wheeled fire extinguishers
 - (ii) Fire hose reels
 - (iii) Fire blankets.
- (b) Specific requirements for their application, location and distribution;
- (c) Requirements for the regular inspection, testing and recharging and general servicing of hand operated fire-fighting equipment; and
- (d) Equipment installed on either a voluntary or mandatory basis.

1.1.2 Exclusions

The Standard does not cover:

- (a) The installation of hand operated fire-fighting equipment where specifically covered by Regulatory Authorities for use on board:
 - (i) Aircraft (Civil Aviation Authority)
 - (ii) Commercial ships and watercraft (Maritime Safety Authority), and
 - (iii) Vehicles (Land Transport New Zealand).
- (b) Instruction for use of hand operated fire-fighting equipment or training in such.

1.2 Objective

- 1.2.1 The objective of this Standard is to provide a mechanism to ensure that hand operated fire-fighting equipment is installed, inspected and maintained to an adequate level.
- 1.2.2 Hand operated fire-fighting equipment is often the first line of defence in protection from the effects of a fire. Small fires can be extinguished by the use of hand operated fire-fighting equipment, preventing the fire from spreading and growing larger, thus protecting lives and property.
- 1.2.3 The intent of this Standard is to ensure that hand operated fire-fighting equipment is suitably selected, placed and reliably maintained.



NZS 4503:2005 Hand operated fire-fighting equipment

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