

Australian/New Zealand Standard™

Respiratory protective devices



AS/NZS 1716:2003

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee SF-010, Occupational Respiratory Protection. It was approved on behalf of the Council of Standards Australia on 3 October 2003 and on behalf of the Council of Standards New Zealand on 19 November 2003.

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Australian/New Zealand Standard™

Respiratory protective devices

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PREFACE

This Standard was prepared by the Joint Australian/New Zealand Standards Committee SF-010, Occupational Respiratory Protection to supersede AS/NZS 1716:1994.

This Standard incorporates Amendment No. 1 (November 2005). The changes required by the Amendment are indicated in the text by a marginal bar and amendment number against the clause, note, table, figure or part thereof affected.

This Standard was revised with the objective of incorporating some improvements but keeping these to a minimum, in light of current work under way by ISO (International Organization for Standardization) in the field of respiratory protective devices.

The changes that have been made are mostly editorial or to clarify and improve existing testing procedures. Significant changes include:

- (a) Addition of new definitions clarifying some terms used in the Standard and aligning these terms with those used in AS/NZS 1715, *Selection, use and maintenance of respiratory protective devices*.
- (b) Expansion of tests for chemical oxygen self-contained self-rescuers.
- (c) Changing the test vapour for Type A gas filters from carbon tetrachloride to cyclohexane (in view of carbon tetrachloride's known toxicity).

The SF-010 Committee recognizes that some sections of the Standard are very much in need of revision but that no consensus exists as to the extent or nature of these changes.

The major points of concern are:

- (i) The inadequacy of total inward leakage testing to accurately and reproducibly measure the quality of protection provided by a respirator as in a workplace.
- (ii) The lack of testing of all types of respirators at the very high breathing rates that have been found on experimental subjects doing sustained work.

Section 8, Air-hose and air-line respirators, for example, is unaltered although it is recognized that some, if not many, work conditions may render this sort of respirator not functioning in accordance with its intended use.

It is anticipated that a new series of ISO Standards will be published in the next few years that will incorporate major developments that will address most, if not all, of these concerns. When such ISO Standards are published, they will be adopted as the next revision of AS/NZS 1716. The Committee plans to monitor this international standardization process and review this decision in the next two years.

Advice on the selection, use and maintenance of respiratory protective equipment is not covered by the Standard but given in AS/NZS 1715.

The terms 'normative' and 'informative' have been used in this Standard to define the application of the appendix to which they apply. A 'normative' appendix is an integral part of a Standard, whereas an 'informative' appendix is only for information and guidance.

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STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

Australian/New Zealand Standard
Respiratory protective devices

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard specifies requirements for respiratory protective devices (respirators) intended to provide, according to type, varying degrees of protection against atmospheres containing substances which may be harmful if breathed; also, with certain types, to provide protection against atmospheres which may be deficient in oxygen. It does not purport to give guidance on the selection, use and maintenance of respirators. This is covered in AS/NZS 1715.

The Standard specifies requirements, performance and testing criteria to be observed in the manufacture of respirators.

The Standard does not apply to respirators for use in aircraft, for operations under water (see AS/NZS 2299 series), or for life support respirators used for medical purposes or resuscitation (see AS 2488).

1.2 OBJECTIVE

The objective of this Standard is to provide minimum performance and testing criteria to be observed in the manufacture of respiratory protective devices.

1.3 APPLICATION

Every respirator shall comply with the general requirements of Sections 2, 3 and 12, and with the specific requirements of the particular section applicable to the respirator type, as follows:

Particulate filter respirators.....	Section 4
Gas and vapour filter respirators	Section 5
Powered air-purifying respirators	Section 6
Escape respirators—filtration type	Section 7
Air-hose and air-line respirators.....	Section 8
Compressed air self-contained breathing apparatus	Section 9
Compressed oxygen self-contained breathing apparatus	Section 10
Chemical oxygen self-contained self-rescuers.....	Section 11