AS 1716—1991

Australian Standard®

Respiratory protective devices

STANDARDS AUSTRALIA

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The following interests are represented on Committee SF/10:

Australian Assembly of Fire Authorities
Australian Institute of Petroleum
Australian Mines and Metal Association
Composites Institute of Australia
Confederation of Australian Industry
County Fire Authority
Department of Defence
Department of Minerals and Energy, N.S.W.
Department of Labour, Victoria
Electricity Supply Association of Australia
Gas and Fuel Corporation, Victoria
Metal Trades Industry Association
Safety Institute of Australia
Water Board, Sydney—Illawarra—Blue Mountains
Workcover Authority of N.S.W.

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PREFACE

This Standard was prepared by the Standards Australia Committee on Industrial Respiratory Protection to supersede AS 1716—1984.

This edition of the Standard has been prepared to reflect the increasing diversity of respiratory protective equipment and the more performance-based approach of contemporary Australian and overseas Standards, particularly those being drafted by the European Committee for Standardization (CEN).

This has given rise to a radical change in format in comparison to the superseded edition. The emphasis on performance criteria has necessitated the classification of respirator types to be rationalized to the extent that the entire range of equipment currently available is now covered by broad generic groupings only.

Notable differences in terminology introduced for the first time to AS 1716 include those relating to particulate filters and gas filters. As well, the traditional distinction of filters based upon physical dimensions (i.e. cartridge, canister) has been dropped.

After considering the variability of quantitative test procedures and the incomplete CEN Standards, it was decided to retain qualitative facial fit testing from the last edition of AS 1716 and introduce testing of total inward leakage. It is envisaged that qualitative facial fit testing will be deleted when the relevant CEN Standards are published and a relationship between the two has been clearly established. This is expected to occur when the Standard is next revised.

Breathing simulation testing for accumulation of carbon dioxide in the breathing zone of the wearer has been included for all but half facepieces.

This Standard requires a sodium chloride particulate filter efficiency test method for type-testing purposes, but it is not the intention to require additional reference to an oil mist method as is currently proposed by CEN. The Standard adopts the filtration efficiency criteria for particulate filters currently proposed by CEN. However, it is intended that the use of these criteria be monitored during the currency of the Standard.

The reliance put on CEN material was felt to be justified because of the probable future adoption by the International Organization for Standardization (ISO) of CEN Standards relating to respiratory protective equipment, and thus the commensurate importance for this Australian Standard to be compatible as far as is possible.

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

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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.

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

It does not purport to give guidance on the selection, use and maintenance of respirators. Reference should be made to AS 1715 for such guidance and for determining the type of protection which should be provided for any particular condition.

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

1.2 APPLICATION Every respirator shall comply with the general requirements of Sections 2, 3 and 11, 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 type respirators	Section 7
Air-line and air-hose respirators	Section 8
Compressed-air self-contained breathing apparatus	Section 9
Oxygen self-contained breathing apparatus	Section 10

Assembled respirators shall be made up of components which have been tested as a system. Individual components shall not be claimed to comply with this Standard unless used as part of a system. The assembled respirator may not require the full range of testing where the attachments, breathing characteristics and weight distribution have been shown to be similar to those of other equipment already tested.

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

AS
1020 The control of undesirable static electricity
1259 Sound level meters
1337 Eye protectors for industrial applications
1349 Bourdon tube pressure and vacuum gauges
1715 Selection, use and maintenance of respiratory protective devices
1801 Industrial safety helmets
1944 Medical gas cylinder identification
2030 SAA Gas Cylinders Code
2030.1 Part 1: Cylinders for compressed gases other than acetylene
2299 Underwater air breathing operations
2380 Electrical equipment for explosive atmospheres—Explosion-protection techniques
2380.7 Part 7: Intrinsic safety i
2473 Valves for compressed gas cylinders (threaded outlet)
2480 Electrical equipment for explosive atmospheres—Flameproof enclosure—Type of protection d
2488 Resuscitators, resuscitator containers and resuscitator kits
2704 Portable cylinders for resuscitators and self-contained breathing apparatus (non-underwater)—Safety guide
3108 Approval and test specification—Isolating transformers and safety isolating transformers
MP42 Explosion-protected electrical equipment—Conditions and procedures for SAA certification

BS
2577 Methylene blue particulate test for respiratory canisters (obsolescent)