

Australian Standard®

Respiratory protective devices

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Australian Mines and Metal Association
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Australian Standard®

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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This has given rise to a radical change in format in comparison to the superseded edition.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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CONTENTS

	<i>Page</i>
SECTION 1 SCOPE AND GENERAL	
1.1 SCOPE	5
1.2 APPLICATION	5
1.3 REFERENCED DOCUMENTS	5
1.4 DEFINITIONS	6
1.5 NOMINAL VALUES AND TOLERANCES	7
1.6 UNITS FOR GAS AND VAPOUR CONCENTRATIONS	7
SECTION 2 DESIGN AND CONSTRUCTION OF ASSEMBLED RESPIRATORS	
2.1 GENERAL REQUIREMENTS	8
2.2 FACIAL FIT	9
2.3 BREATHING AND CONNECTING TUBE	10
2.4 DEMAND VALVE	10
SECTION 3 FACEPIECES AND HEAD COVERINGS	
3.1 DESIGN REQUIREMENTS	11
3.2 PERFORMANCE REQUIREMENTS	11
SECTION 4 PARTICULATE FILTER RESPIRATORS	
4.1 DESIGN AND CONSTRUCTION	13
4.2 CLASSIFICATION AND COMPONENTS	13
4.3 PERFORMANCE REQUIREMENTS	13
SECTION 5 GAS FILTER RESPIRATORS	
5.1 DESIGN AND CONSTRUCTION	15
5.2 TYPES OF FILTER	15
5.3 CLASSIFICATION AND COMPONENT PARTS	15
5.4 PERFORMANCE REQUIREMENTS	16
SECTION 6 POWERED AIR-PURIFYING RESPIRATORS	
6.1 DESIGN AND CONSTRUCTION	19
6.2 COMPONENTS	19
6.3 PERFORMANCE REQUIREMENTS	19
SECTION 7 ESCAPE RESPIRATORS—FILTRATION TYPE	
7.1 DESIGN AND CONSTRUCTION	21
7.2 CLASSIFICATION	21
7.3 FILTER SELF-RESCUER (MINES)	21
7.4 SMOKE MASK	22
7.5 FILTER SELF-RESCUER (INDUSTRIAL)	23
SECTION 8 AIR-HOSE AND AIR-LINE RESPIRATORS	
8.1 DESIGN AND CONSTRUCTION	24
8.2 WAIST BELT OR BODY HARNESS	25
8.3 AIR HOSE AND AIR LINE	25
8.4 PERFORMANCE REQUIREMENTS	25
SECTION 9 COMPRESSED AIR SELF-CONTAINED BREATHING APPARATUS	
9.1 DESIGN AND CONSTRUCTION	29
9.2 NOMINAL EFFECTIVE LIFE	29
9.3 PRESSURE TUBES AND HOSES	30
9.4 COMPRESSED AIR SCBA—DEMAND FLOW TYPES	30
9.5 CONSTANT FLOW—ESCAPE TYPES	31
9.6 AUXILIARY AIR-LINE CONNECTION	31
9.7 CYLINDERS	31

	<i>Page</i>
9.8 CYLINDER VALVE	31
9.9 PRESSURE GAUGE	31
9.10 ISOLATING VALVE	32
9.11 PRESSURE INDICATOR	32
9.12 ACTIVE WARNING DEVICE	32
9.13 BODY HARNESS AND SECURING HARNESS	32
9.14 MASS	32
9.15 TESTING	32
9.16 REQUIREMENTS FOR AIR QUALITY (CYLINDERS) FOR SUPPLIED-AIR RESPIRATORS	33
SECTION 10 OXYGEN SELF-CONTAINED BREATHING APPARATUS	
10.1 DESIGN AND CONSTRUCTION	34
10.2 NOMINAL EFFECTIVE LIFE	35
10.3 INHALATION TEMPERATURE	35
10.4 RESISTANCE TO BREATHING	35
10.5 SIMULATED ROUGH USAGE	35
10.6 SIMULATED WORK TEST	35
10.7 DEMAND VALVE	35
10.8 CONSTANT FLOW VALVE	35
10.9 RELIEF VALVE	35
10.10 CARBON DIOXIDE ABSORBENT	35
10.11 BREATHING BAG	35
10.12 PRESSURE TUBES AND HOSES	35
10.13 PRESSURE GAUGE	36
10.14 PRESSURE GAUGE ISOLATING VALVE	36
10.15 BODY HARNESS AND SECURING HARNESS	36
10.16 MASS	36
10.17 CYLINDERS	36
10.18 CYLINDER VALVE	36
10.19 COMPRESSED OXYGEN (DRY BREATHING)	36
10.20 LEAK TIGHTNESS	36
SECTION 11 MARKING AND INSTRUCTIONS	
11.1 MARKING	37
11.2 INSTRUCTIONS FOR USE	39
APPENDICES	
A NOISE LEVEL TEST	40
B METHOD OF SELECTING PERSONNEL FOR ASSEMBLED RESPIRATOR TESTS	41
C RESISTANCE TO FLAME TEST	42
D TOTAL INWARD LEAKAGE OF ASSEMBLED RESPIRATORS—QUANTITATIVE SODIUM CHLORIDE TEST	44
E QUALITATIVE FACIAL FIT TEST—PARTICULATE CHALLENGE METHOD	47
F QUALITATIVE FACIAL FIT TEST—ORGANIC VAPOUR CHALLENGE METHOD	48
G BREATHING SIMULATOR TESTS	50
H EXHALATION VALVE LEAKAGE TEST	54
I BREATHING RESISTANCE TEST—NON-POWERED RESPIRATORS	56
J SIMULATED ROUGH USAGE TEST	58
K PARTICULATE FILTERS—TEST FOR FILTERING EFFICIENCY	60
L SUPPLIED-AIR RESPIRATORS—SIMULATED WORK TESTS	61
M CYLINDER VALVE REQUIREMENTS	63
N APPARATUS TO BE USED IN SODIUM CHLORIDE AEROSOL TESTS	64
O CONVERSION TABLE	69

STANDARDS AUSTRALIA

Australian 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.

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)