AS 4332—2004
(Incorporating Amendment No.1)

AS 4332—2004

Australian Standard™

The storage and handling of gases in cylinders

STANDARDS
Australia

This Australian Standard was prepared by Committee CH-009, Safe Handling of Chemicals. It was approved on behalf of the Council of Standards Australia on 10 March 2004. This Standard was published on 30 April 2004.

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Australasian Railways Association
Australian Consumer and Specialty Products Association
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Australian Industrial Gas Manufacturers Association
Australian Liquefied Petroleum Gas Association
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Australian Standard™

The storage and handling of gases in cylinders

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PREFACE

This Standard was prepared by the Australian members of the Joint Standards Australia/Standards New Zealand Committee CH-009, Safe Handling of Chemicals, to supersede AS 4332—1995. This revision was commenced following advice from the Australian Industrial Gas Manufacturers' Association that several technical and safety matters needed further consideration and revision.

This Standard incorporates Amendment No. 1 (August 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.

After consultation with stakeholders in both countries, Standards Australia and Standards New Zealand decided to develop this Standard as an Australian Standard, rather than an Australian/New Zealand Standard.

This Standard deals with Class 2 substances, as classified in the ADG Code.

The series of Standards covering the storage and handling of dangerous goods and gas systems presently comprises the following Standards:

AS

1894	The storage and handling of non-flammable cryogenic and refrigerated liquids
1940	The storage and handling of flammable and combustible liquids
2507	The storage and handling of agricultural and veterinary chemicals
2714	The storage and handling of hazardous chemicals—Class 5.2 substances (organic peroxides)
2931	Selection and use of emergency procedure guides for the transport of dangerous goods
3780	The storage and handling of corrosive substances
3846	The handling and transport of dangerous cargoes in port areas
3961	Liquefied natural gas—Storage and handling
4289	Oxygen and acetylene reticulation systems
4326	The storage and handling of oxidizing agents
4839	The safe use of portable and mobile oxy-fuel gas systems for welding, cutting, heating and allied processes

AS/NZS

1596	The storage and handling of LP Gas
2022	Anhydrous ammonia—Storage and handling
2927	The storage and handling of liquefied chlorine gas
3833	The storage and handling of mixed classes of dangerous goods in packages and intermediate bulk containers
4081	The storage and handling of liquid and liquefied polyfunctional isocyanates
4452	The storage and handling of toxic substances
4681	The storage and handling of Class 9 (miscellaneous) dangerous goods and articles

Attention is also drawn to the AS 2030 series, *The verification, filling, inspection, testing and maintenance of cylinders for storage and transport of compressed gases,* in particular Part 1: *Cylinders for compressed gases other than acetylene*.

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

Statements expressed in mandatory terms in notes and footnotes to tables are deemed to be requirements of this Standard.

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STANDARDS AUSTRALIA

Australian Standard
The storage and handling of gases in cylinders

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

1.1.1 General

This Standard sets out requirements and recommendations for the safe storage and handling, in cylinders, of gases that are classified as Class 2 substances in the ADG Code (i.e. gases that are compressed, liquefied or dissolved under pressure, including refrigerated liquefied gases, mixtures of one or more gases with vapours or liquids of substances of other classes, articles charged with a gas and aerosols having a capacity of greater than 1 L). The Standard applies to all locations; however, they will generally be industrial, commercial or rural in nature.

Residential premises storing less than 10% of the maximum quantities allowable for minor storage shall be exempt from the requirements of this Standard.

NOTES:

1 Advice supplementary to that provided in this Standard may need to be sought from the gas supplier.

2 A discussion of the hazards presented by gases in cylinders is provided in Appendix A.

For the purposes of this Standard, all cylinders are regarded as full unless gas-freed by the manufacturer or not containing a valve.

1.1.2 Where this Standard is intended to apply

This Standard applies to the following situations:

(a) The storage of gases in cylinders, where those cylinders are not connected to any system intended for the transport, filling or consumption of the gas, with the exception of minor storage (see Section 2).

(b) The storage of bundled (manifolded) cylinders if they are not connected to any point of use.

1.1.3 Where this Standard does not apply

This Standard does not apply to the following situations:

(a) Gases in dewar flasks, drums, or any containers not covered by the AS 2030 series of Standards.

(b) Cylinders in filling, testing or sorting areas.

(c) Cylinders that are connected for use, with the exception of minor storage (see Section 2).

NOTE: Many of the precautions given in this Standard may be applied to situations where gases in cylinders are connected for use.

(d) Cylinders of oxygen and acetylene that are connected to a reticulation system, in which case AS 4289 applies.

(e) Portable or mobile oxy-fuel gas systems, which are covered by AS 4839.

(f) Cylinders that form part of a fire extinguishment or fire suppression system.