

Australian Standard[®]

**The storage and handling of oxidizing
agents**



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 26 June 2008. This Standard was published on 29 August 2008.

The following are represented on Committee CH-009:

- ACCORD Australasia
- Australasian Fire Authorities Council
- Australian Paint Manufacturers Federation
- AGSAFE
- Consumers' Federation of Australia
- Department of Environment and Climate Change, NSW
- Department of Consumer and Employment Protection, WA
- Department of Emergency Services, Qld
- Department of the Premier and Cabinet, SA
- Engineers Australia
- New Zealand Chemical Industry Council
- Plastics and Chemicals Industries Association
- TRANZ
- Victorian WorkCover Authority

Additional Interests:

- Australian Explosives Industry and Safety Group
 - Department of Mines and Energy, Qld
 - NSW Fire Brigades
 - Manufacturers and suppliers of dangerous goods of Division 5.1
-

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**The storage and handling of oxidizing
agents**

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee CH-009, Safe Handling of Chemicals, to supersede AS 4326—1995. 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 oxidizing agents that are classified as dangerous goods of Division 5.1, as classified in the UN *Recommendations on the Transport of Dangerous Goods—Model Regulations*.

Revision of this Standard was commenced following the committee's decision that the series of Standards relating to the storage and handling of dangerous goods needed to be reviewed and updated to reflect changes in regulatory requirements and control philosophies.

In June 2004, the Council of Australian Governments (COAG) introduced principles for the storage of ammonium nitrate which have been adopted by the states and territories. Because of some differences in the regulatory requirements between the states (e.g. in terms of security, separation distances), regulatory advice must be sought regarding the location, operation and security of a store for ammonium nitrate. Over time, as the explosive properties of ammonium nitrate are researched further, standardized separation distances will be developed. In the meantime, advice regarding the siting of new facilities can be found in various guidance notes prepared and published by State and Territory regulatory authorities.

The purpose of this Standard is to promote the safety of persons and property where oxidizing agents are stored and handled, by providing requirements and recommendations based on industry good practice.

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 the Standard, i.e. its requirements are mandatory, whilst an 'informative' appendix provides information and guidance only.

Statements expressed in mandatory terms in notes and footnotes to tables are requirements of this Standard. Notes that appear in the main text of this Standard provide information only.

The series of Standards for the storage, handling and transport of dangerous goods presently comprises the following publications:

HB 76	Dangerous goods—Initial emergency response guide
AS	
1678	Emergency procedure guide—Transport (series)
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
2508	Safe storage and handling information card (series)
2714	The storage and handling of hazardous chemical materials—Class 5.2 substances (organic peroxides)
2809	Road tank vehicles for dangerous goods (series)
3780	The storage and handling of corrosive substances

- 3846 The handling and transport of dangerous cargoes in port areas
- 3961 The storage and handling of liquefied natural gas
- 4332 The storage and handling of gases in cylinders
- 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

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STANDARDS AUSTRALIA

Australian Standard

The storage and handling of oxidizing agents

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard sets out requirements and recommendations for the safe storage and handling of oxidizing agents that meet the Division 5.1 classification criteria of the ADG Code.

This Standard also applies to other dangerous goods that are assigned a Division 5.1 Subsidiary Risk by the ADG Code, except where they are of Class 2, or where more stringent requirements apply under another relevant Australian Standard or applicable regulation.

This Standard provides safety requirements for storage areas, operating procedures, emergency planning and fire protection for stores in which oxidizing agents are kept. It provides technical guidance to assist in the storage and handling of oxidizing agents in accordance with the risk management requirements of NOHSC:1015 and regulations drawing on that document.

NOTES:

- 1 A discussion of the hazards presented by oxidizing agents is given in Appendix A.
- 2 Specific properties and hazards of ammonium nitrate are discussed in Appendix B.

1.2 APPLICATION

1.2.1 Where this Standard applies

This Standard applies in locations that are generally industrial, commercial or rural in nature. Its requirements apply in conjunction with, but do not take precedence over, any government regulations that apply in any area.

NOTES:

- 1 An installation may come under the regulatory control of several authorities having differing areas of responsibility, and an agreement from one authority does not necessarily constitute an agreement from others.
- 2 Any regulatory requirements take precedence over the requirements of this Standard.
- 3 Cognizance of the relevant requirements of the *Building Code of Australia* (BCA) is necessary for all matters relating to building works.
- 4 The transfer of oxidizing agents between a ship and an onshore storage is controlled by the relevant port authority and is addressed in AS 3846.

1.2.2 Where this Standard does not apply

This Standard does not apply to the following:

- (a) Gases having a Division 5.1 Subsidiary Risk, e.g. oxygen, chlorine, nitrous oxide.
- (b) Forms and concentrations of ammonium nitrate that are not Division 5.1 dangerous goods.
- (c) The transport of oxidizing agents, which is dealt with in the ADG Code.
- (d) The manufacture of oxidizing agents.