

Australian Standard[®]

**The storage and handling
of oxidizing agents**

This Australian Standard was prepared by Committee CH/9, Safe Handling of Chemicals. It was approved on behalf of the Council of Standards Australia on 13 June 1995 and published on 5 September 1995.

The following interests are represented on Committee CH/9:

Australian Chemical Specialties Manufacturers Association
Australian Conservation Foundation
Australian Council of Trade Unions
Australian Fire Authorities Council
Australian Government Analytical Laboratories
Australian Institute of Petroleum
Australian Paint Manufacturers Federation
Department for Industrial Affairs, S.A.
Department of Defence
Department of Minerals and Energy, W.A.
Environment Protection Authority (New South Wales)
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Plastics and Chemicals Industry Association
Railways of Australia Committee
Tasmania Development and Resources
Work Health Authority, N.T.
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Additional interests participating in preparation of Standard:

Manufacturers, distributors and industrial users of oxidizing agents

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**The storage and handling
of oxidizing agents**

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PREFACE

This Standard was prepared by the Standards Australia Committee on Safe Handling of Chemicals. Preparation of the Standard was commenced following a request from the Australian Chemical Industry Council for the preparation of a series of Standards on the storage and handling of dangerous goods; subsequently the Competent Authorities of various States and Territories have expressed their intentions of using such standards as Codes of practice. Such Codes of practice may not be mandatory if an occupier can achieve an outcome equal to or better than that specified in the relevant Code of practice.

This Standard deals with Class 5.1 substances, as classified in the ADG Code.

Attention is drawn to those cards of AS 1678, *Emergency procedure guide—Transport* that relate to Class 5.1 substances, such cards being among those having the initial sub-designation digit '5'.

The series of Standards planned, published or being developed, for the storage and handling of dangerous goods presently comprises, in addition to AS 1678 cited above, the following Standards:

AS

- 1596 LP gas—Storage and handling
- 1894 Code of practice for the safe handling of cryogenic fluids
- 1940 The storage and handling of flammable and combustible liquids
- 2022 Anhydrous ammonia—Storage and handling (known as the SAA Anhydrous Ammonia Code)
- 2507 The storage and handling of pesticides
- 2714 The storage and handling of hazardous chemical materials—Class 5.2 substances (organic peroxides)
- 2927 The storage and handling of liquefied chlorine gas
- 2931 Selection and use of emergency procedure guides for the transport of dangerous goods
- 3780 The storage and handling of corrosive substances
- 3961 Liquefied natural gas—Storage and handling
- 4081 The storage, handling and transport of liquid and liquefied polyfunctional isocyanate

The storage and handling of gases in cylinders, to be part of the above series, is in the course of preparation.

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 to tables are deemed to be requirements of this Standard.

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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, i.e. substances that meet the Class 1 classification criteria of the ADG Code.

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

This Standard applies in locations that are generally industrial, commercial or rural in nature, including laboratories where the provisions of this Standard are additional to those of AS 2243.10. Where there is conflict between the requirements of this Standard and those of AS 2243.10, this Standard shall take precedence.

The Standard does not apply to—

- (a) gases having a Class 5.1 Subsidiary Risk, e.g. oxygen, chlorine, nitrous oxide;
- (b) the transport of oxidizing agents, which is dealt with in the ADG Code; or
- (c) emulsions and slurries based on ammonium nitrate and fuels with or without other oxidizing agents, cross-linkers, pH buffer and water. (These mixtures are widely used in the explosives industry but do not meet the criteria for Class 1 dangerous goods. Examples of these are UN No. 1479 and 3139.)

NOTE: A discussion of the hazards presented by oxidizing agents is provided in Appendix A.

1.2 APPLICATION The requirements of the Standard apply in conjunction with, but do not take precedence over, any government regulations that apply in any area. Where it is found that compliance with the requirements of this Standard is not possible, it is necessary to seek the advice of the relevant regulatory authority.

NOTES:

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

For minor storage of oxidizing agents (as defined in Clause 1.4.17), only Sections 1, 2 and 11 of this Standard apply. Sections 8, 9 and 10 of this Standard deal with safety matters that may be pertinent to minor storage but which, for the purposes of such, may be regarded as advisory.

For transit storage of oxidizing agents (as defined in Clause 1.4.35), only Sections 1, 3, 8, 9 and 11 apply.