

Australian Standard<sup>®</sup>

**The storage and handling of organic  
peroxides**



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 July 2008. This Standard was published on 21 October 2008.

---

The following are represented on Committee CH-009:

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

Standards Australia wishes to acknowledge the participation of the expert individuals that contributed to the development of this Standard through their representation on the Committee.

---

### **Keeping Standards up-to-date**

Australian Standards® are living documents that reflect progress in science, technology and systems. To maintain their currency, all Standards are periodically reviewed, and new editions are published. Between editions, amendments may be issued.

Standards may also be withdrawn. It is important that readers assure themselves they are using a current Standard, which should include any amendments that may have been published since the Standard was published.

Detailed information about Australian Standards, drafts, amendments and new projects can be found by visiting [www.standards.org.au](http://www.standards.org.au)

Standards Australia welcomes suggestions for improvements, and encourages readers to notify us immediately of any apparent inaccuracies or ambiguities. Contact us via email at [mail@standards.org.au](mailto:mail@standards.org.au), or write to Standards Australia, GPO Box 476, Sydney, NSW 2001.

---

Australian Standard<sup>®</sup>

## The storage and handling of organic peroxides

Originated as AS 2714—1984.  
Previous edition 1993.  
Third edition 2008.

### **COPYRIGHT**

© Standards Australia

All rights are reserved. No part of this work may be reproduced or copied in any form or by any means, electronic or mechanical, including photocopying, without the written permission of the publisher.

Published by Standards Australia GPO Box 476, Sydney, NSW 2001, Australia  
ISBN 0 7337 8877 7

## PREFACE

This Standard was prepared by the Australian members of Standards Australia/Standards New Zealand Committee CH-009, Safe Handling of Chemicals, to supersede AS 2714—1993, *The storage and handling of hazardous chemical materials—Class 5.2 substances (organic peroxides)*. It deals with the storage and handling of organic peroxides of Division 5.2, Types B, C, D, E and F, as defined in the ADG Code.

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 has been revised to align with the other Standards in the series on the storage and handling of dangerous goods, which presently comprises the following:

## 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
- 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
- 4081 The storage, handling and transport of liquid and liquefied polyfunctional isocyanates
- 4326 The storage and handling of oxidizing agents
- 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
- 4452 The storage and handling of toxic substances
- 4681 The storage and handling of Class 9 (miscellaneous) dangerous goods and articles

The purpose of this Standard is to promote the safety of persons, property and the environment where organic peroxides 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 way appendices are intended to apply. A ‘normative’ appendix is an integral part of the Standard, whereas an ‘informative’ appendix provides guidance only.

Statements expressed in mandatory terms (‘shall’) in notes that accompany tables are requirements of this Standard. Notes that appear in the main text of Standard provide information only.

## CONTENTS

	<i>Page</i>
SECTION 1 SCOPE AND GENERAL	
1.1 SCOPE .....	5
1.2 APPLICATION .....	5
1.3 REFERENCED DOCUMENTS .....	6
1.4 DEFINITIONS .....	6
1.5 CLASSIFICATION OF ORGANIC PEROXIDES .....	11
SECTION 2 MINOR STORAGE	
2.1 SCOPE OF SECTION .....	12
2.2 MINOR STORAGE QUANTITIES AND PACKAGE SIZES.....	12
2.3 SAMPLE QUANTITIES .....	12
2.4 GENERAL REQUIREMENTS FOR MINOR STORAGE .....	12
2.5 REFRIGERATED MINOR STORAGE OF ORGANIC PEROXIDES.....	13
SECTION 3 TRANSIT STORAGE	
3.1 SCOPE OF SECTION .....	14
3.2 DELINEATION OF TRANSIT STORAGE AREAS.....	14
3.3 REQUIREMENTS FOR TRANSIT STORAGE.....	14
3.4 SEPARATION DISTANCES FOR TRANSIT STORAGE .....	15
SECTION 4 STORAGE AND HANDLING OF PACKAGES	
4.1 SCOPE OF SECTION .....	16
4.2 TYPES OF PACKAGE STORES .....	16
4.3 RESTRICTIONS ON STORAGE.....	16
4.4 SEPARATION AND SEGREGATION .....	17
4.5 CONSTRUCTION.....	18
4.6 ADDITIONAL REQUIREMENTS FOR INDOOR STORAGE CABINETS .....	19
4.7 ADDITIONAL REQUIREMENTS FOR INDOOR OR ATTACHED STORAGE ROOMS AND COMPARTMENTS.....	20
4.8 ADDITIONAL REQUIREMENTS FOR ISOLATED STORAGE .....	22
4.9 STORAGE OF IBCs.....	22
SECTION 5 DISPENSING OF ORGANIC PEROXIDES	
5.1 SCOPE OF SECTION .....	23
5.2 GENERAL .....	23
5.3 MAXIMUM STORAGE QUANTITY.....	23
5.4 CONSTRUCTION.....	23
5.5 LOCATION.....	23
5.6 HANDLING TECHNIQUES.....	23
SECTION 6 OPERATIONAL AND PERSONNEL SAFETY	
6.1 SCOPE OF SECTION .....	25
6.2 GENERAL PRECAUTIONS.....	25
6.3 PLACARDING.....	27
6.4 HOUSEKEEPING .....	27
6.5 OPERATING PROCEDURES .....	28
6.6 EFFLUENT CONTROL.....	29
6.7 CONSTRUCTION AND MAINTENANCE WORK .....	29
6.8 PERSONNEL TRAINING .....	31

	<i>Page</i>
6.9 RECORDS.....	32
6.10 PERSONAL PROTECTIVE EQUIPMENT .....	32
6.11 FIRST AID .....	33
 SECTION 7 EMERGENCY MANAGEMENT	
7.1 SCOPE OF SECTION .....	34
7.2 PLANNING FOR EMERGENCIES .....	34
7.3 MANIFEST .....	35
7.4 PLACARDING.....	35
7.5 SAFETY INFORMATION.....	35
7.6 MANAGEMENT OF LEAKS AND SPILLS .....	35
 SECTION 8 FIRE PROTECTION	
8.1 SCOPE OF SECTION .....	37
8.2 GENERAL CONSIDERATIONS .....	37
8.3 FIRE PROTECTION MEASURES .....	37
8.4 FIREFIGHTING SQUAD .....	38
8.5 ACTION IN THE EVENT OF FIRE .....	38
 SECTION 9 WASTE STORAGE AND DISPOSAL	
9.1 SCOPE OF SECTION .....	39
9.2 WASTE STORAGE FACILITIES.....	39
9.3 ITEMS FOR DISPOSAL.....	39
9.4 PRE-DISPOSAL TREATMENT OF EMPTY CONTAINERS.....	39
9.5 CONSULTATION ON DISPOSAL METHODS.....	40
9.6 METHODS OF DISPOSAL .....	40
 APPENDICES	
A PROPERTIES AND HAZARDS OF ORGANIC PEROXIDES .....	42
B LIST OF REFERENCED DOCUMENTS .....	44
C GUIDELINES FOR OPERATING, CONSTRUCTION AND MAINTENANCE PROCEDURES .....	46
D FIRST AID PROCEDURES.....	47
E EMERGENCY PLANNING AND MANAGEMENT .....	48

# STANDARDS AUSTRALIA

## Australian Standard

### The storage and handling of organic peroxides

#### SECTION 1 SCOPE AND GENERAL

##### 1.1 SCOPE

This Standard provides requirements and recommendations for the storage, handling, dispensing and disposal of dangerous goods of Division 5.2 (i.e. organic peroxides of Types B, C, D, E and F), as classified in the UN *Recommendations on the Transport of Dangerous Goods—Model Regulations* and listed in the ADG Code.

This Standard provides requirements for organic peroxides of Types B, C, D, E, and F. Organic peroxides of Types A and G are outside the scope of this Standard. Type A organic peroxides are not accepted by the ADG Code for transport in the packaging in which they are tested, because of their hazardous nature: specific requirements for the storage of such substances should be sought from the supplier and the regulatory authority. Type G organic peroxides are exempted from Division 5.2 in the ADG Code, due to their relatively low level of hazard.

##### NOTES:

- 1 Advice supplementary to that provided in this Standard should be sought from the supplier of the goods.
- 2 A discussion of the general properties and hazards presented by organic peroxides is provided in Appendix A.

This Standard provides minimum safety requirements for storage facilities, operating procedures, emergency planning and fire protection. It provides technical guidance that may assist in the storage and handling of organic peroxides in accordance with the risk management principles of NOHSC:1015 and legislation that draws upon that document.

##### 1.2 APPLICATION

###### 1.2.1 Where this Standard applies

This Standard applies to the storage and handling of packaged organic peroxides of Division 5.2 as described above and listed in the ADG Code. The requirements of this Standard apply in conjunction with, but do not take precedence over, any statutory regulations that apply in any area.

For the bulk storage of organic peroxides, advice needs to be sought from the supplier and the relevant authority.

Where the organic peroxide being kept has one or more Subsidiary Risks (subrisks), reference should be made to the Australian Standards relevant to the Classes or Divisions of those risks and the more stringent requirements shall apply.

##### NOTES:

- 1 An installation may come under the jurisdiction of several authorities having different areas of responsibility, and approval from one does not necessarily constitute approval from others.
- 2 The *Building Code of Australia* (BCA) should be consulted regarding any building works.