

AS 2507:2025



Storage and Handling of Agricultural and Veterinary Chemicals



AS 2507:2025

This Australian Standard® was prepared by CH-009, Safe Handling Of Chemicals. It was approved on behalf of Standards Australia's Standards Development and Accreditation Committee on 07 April 2025.

This Standard was published on 23 May 2025.

The following are represented on Committee CH-009:

- Accord Australasia
- Australasian Explosives Industry Safety Group
- Australasian Fire and Emergency Service Authorities Council
- Australasian Institute of Dangerous Goods Consultants
- CSIRO
- Chemistry Australia
- ComCare (Commonwealth Government)
- Department of Energy, Mines, Industry Regulation and Safety Western Australia
- Institution of Chemical Engineers
- National Retail Association Australia
- National Transport Commission
- SafeWork NSW
- SafeWork SA

This Standard was issued in draft form for comment as DR AS 2507:2024.

Keeping Standards up-to-date

Ensure you have the latest versions of our publications and keep up-to-date about Amendments, Rulings, Withdrawals, and new projects by visiting:

www.standards.org.au

Storage and Handling of Agricultural and Veterinary Chemicals

Originated as AS 2507—1981.
Previous edition 1998.
Fourth edition 2025.

Standards Australia Ltd 2025

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, unless otherwise permitted under the Copyright Act 1968 (Cth).

How to read this Standard

This page explains the meaning of the language and structure of this Standard.

Refer to Standards Australia's Standardisation Guide 006 for more details about drafting rules.

Australian and Australian/New Zealand Standards are voluntary unless they are referenced in legislation or called up in contracts.

Requirements

To conform to a Standard, all requirements in the Standard need to be met.

A requirement is any statement in the Standard which uses the word "shall".

Recommendations, permissions and possibilities

The following words are commonly used in Standards, but statements using them do not have to be followed to conform to the Standard:

- (a) "should" means that something is recommended.
- (b) "may" means that something is permitted.
- (c) "can" means that something is possible.

Structure of Standards

A Standard always has the following parts:

- (i) The Preface states who developed the Standard, what the Standard is aiming to do, and how it relates to other documents.
- (ii) The Scope states what the Standard is about, what it covers and what it does not cover.
- (iii) The Normative references clause lists other documents that are referenced in the Standard as part of requirements.
- (iv) The Terms and definitions clause defines important terms to help with understanding the Standard.

A Standard may also include other parts, such as the following:

- (1) A normative appendix sets additional requirements that need to be conformed to.
- (2) An informative appendix provides additional information or guidance. They usually do not contain requirements. If an informative appendix does contain requirements, the Standard will explain when those requirements apply
- (3) A Bibliography lists documents referenced in the Standard but not as part of requirements.

Many Standards include notes. Notes provide recommendations and/or guidance only. They never contain requirements.

Preface

This Standard was prepared by Standards Australia Committee CH-009, Safe Handling of Chemicals to supersede AS 2507—1998.

This document specifies requirements and recommendations for the storage and handling of agricultural and veterinary (AgVet) chemicals in —

- (a) packages up to 500 kg or 500 L; and
- (b) intermediate bulk containers of up to 1.6 m³ capacity which are classified as —
 - (i) dangerous goods under the Australian Dangerous Goods Code (ADG Code) (Classes 2.1, 3, 4.1, 4.3, 5.1 (excluding ammonium nitrate), 6.1, 8 and 9);
 - (ii) environmentally hazardous under the ADG Code;
 - (iii) hazardous chemicals under the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) as per Safe Work Australia; or
 - (iv) scheduled poisons by the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

This document also applies to hazardous chemicals and dangerous goods which are stored with AgVet chemicals in packages up to 500 kg or 500 L and intermediate bulk containers of up to 1.6 m³ capacity.

This document has been drafted to be consistent with the risk management principles of the Safe Work Australia Codes of Practice, GHS, SUSMP and relevant regulations.

The major changes in this edition are as follows:

- (i) Shift in terminology from hazardous substances to hazardous chemicals.
- (ii) References to National Occupational Health and Safety Commission (NOHSC) replaced with references to Safe Work Australia.
- (iii) Scope updated to include forestry as an example end user.
- (iv) Expanded guidance on when to use alternative Standards.
- (v) New section added to establish concessions for minor storage.
- (vi) Added information on fencing and gates to new Appendix A.
- (vii) Added information on the use of forklift trucks and vehicles not rated for hazardous areas in flammable liquids package stores in new Appendix B.
- (viii) Updated information on health hazards and first aid in Appendix D.

The following Standards presently cover the storage and handling of dangerous goods:

AS 1894, The storage and handling of non-flammable cryogenic and refrigerated liquids

AS 1940, The storage and handling of flammable and combustible liquids

AS 2714, The storage and handling of organic peroxides

AS 2927, The storage and handling of liquefied chlorine gas

AS 3780, The storage and handling of corrosive substances

AS 3961, The storage and handling of liquefied natural gas

AS 4326, *The storage and handling of oxidizing agents*

AS 4332, *The storage and handling of gases in cylinders*

AS/NZS 1596, *The storage and handling of LP Gas*

AS/NZS 2022, *Anhydrous ammonia—Storage and handling*

AS/NZS 3833, *The storage and handling of mixed classes of dangerous goods, in packages and intermediate bulk containers*

AS/NZS 4081, *The storage and handling of liquid and liquefied polyfunctional isocyanates*

AS/NZS 4452, *The storage and handling of toxic substances*

The terms “normative” and “informative” are used in Standards to define the application of the appendices to which they apply. A “normative” appendix is an integral part of a Standard, whereas an “informative” appendix is only for information and guidance.

Contents

Preface	iii
Section 1 Scope and general	1
1.1 Scope	1
1.2 Exclusions	1
1.3 Application	2
1.4 Normative references	2
1.5 Terms and definitions	4
1.6 Which Standard should be used?	13
Section 2 Minor storage	15
2.1 Scope of section	15
2.2 Criteria for classification as minor storage	15
2.3 Minor storage requirements	15
2.3.1 Construction of the minor storage area	15
2.3.2 Separation of the minor storage area	16
2.3.3 Housekeeping	16
2.3.4 Handling precautions	16
2.3.5 Class 4.3 dangerous goods	16
2.3.6 Outdoor minor storage	17
Section 3 Retail package sizes and storage quantities	18
3.1 Scope	18
3.2 Package sizes	18
3.3 Retail packages	18
3.4 Segregation of retail packages	20
3.5 Inspection of stock	20
Section 4 Transit storage	21
4.1 Scope of section	21
4.2 Delineation of transit storage areas	21
4.3 Requirements for transit storage	21
4.4 Separation and segregation	22
Section 5 Loading and unloading areas	23
5.1 Scope of section	23
5.2 Specifications for loading and unloading areas	23
Section 6 Storage and handling of packages and IBCs	24
6.1 Scope of section	24
6.2 Types of storage area	24
6.3 Planning and design	24
6.4 Location of storage areas	25
6.4.1 General	25
6.4.2 Exits	25
6.5 Separation	25
6.5.1 Separation distances for stores	25
6.5.2 Separation to protected places on adjoining properties	26
6.5.3 Separation to property boundary and ignition sources	27
6.5.4 Separation to on-site protected places	27
6.6 Construction requirements	27
6.6.1 General	27
6.6.2 Outdoor storage areas	27
6.6.3 Security	28
6.6.4 Electrical installations and equipment	28
6.6.5 Storage	28
6.6.6 Ventilation	29
6.6.7 Spillage containment	35

6.6.8	Racks and shelves.....	36
6.6.9	Lighting.....	36
6.6.10	Safety showers.....	37
6.6.11	Eyewash facilities.....	37
6.7	Security of storage areas.....	37
6.8	Storage in stacks.....	38
6.9	Storage of intermediate bulk containers.....	38
6.10	Offices within stores.....	38
Section 7	Segregation.....	39
7.1	Restricted co-storage with other goods.....	39
7.2	Segregation.....	39
7.3	Segregation of AgVet chemicals from foodstuffs.....	40
7.4	Additional segregation for flammable materials.....	41
7.5	Storage of compatible AgVet chemicals in segregation spaces.....	41
Section 8	Operational and personnel safety.....	42
8.1	General.....	42
8.1.1	Scope.....	42
8.1.2	General precautions.....	42
8.2	Operating procedures.....	43
8.2.1	General requirements.....	43
8.2.2	Operating procedures.....	43
8.2.3	Construction and maintenance procedures.....	44
8.2.4	Emergency procedures.....	44
8.2.5	Conformance with procedures.....	44
8.3	Control of ignition sources.....	44
8.3.1	General.....	44
8.3.2	Hot work.....	45
8.3.3	Electrical equipment.....	45
8.3.4	Shrink wrapping.....	45
8.3.5	Battery charging.....	45
8.3.6	Forklift trucks.....	45
8.4	Housekeeping.....	45
8.4.1	General.....	45
8.4.2	Site upkeep.....	46
8.4.3	Stock rotation.....	46
8.4.4	Labelling.....	46
8.4.5	Inspection for damage and leakage.....	47
8.5	Effluent control.....	47
8.6	Job knowledge and training.....	47
8.6.1	General.....	47
8.6.2	Training.....	47
8.6.3	Contractors.....	48
8.7	Construction and maintenance work.....	48
8.7.1	General.....	48
8.7.2	Work permit.....	48
8.7.3	Preparation of the work site.....	49
8.7.4	Management of change.....	49
8.8	Personal hygiene.....	50
8.9	Personal protective equipment (PPE).....	50
8.9.1	General.....	50
8.9.2	Emergency PPE.....	51
8.9.3	Care and maintenance of PPE.....	51
8.10	First aid equipment.....	51
Section 9	Emergency management.....	53
9.1	Scope of section.....	53
9.2	Planning for emergencies.....	53
9.2.1	Considerations in designing premises.....	53

9.2.2	Emergency plan	53
9.3	Manifest of stored chemicals	55
9.4	Placarding	55
9.5	Management of leaks and spills	55
9.5.1	General	55
9.5.2	Hazards	55
9.5.3	Equipment	55
9.5.4	Action in the event of leak or spill	56
9.6	Dealing with damaged packaging	57
Section 10	Fire protection	58
10.1	Scope of section	58
10.2	Fire hazards	58
10.3	Fire protection measures	58
10.3.1	General	58
10.3.2	Design	59
10.3.3	Heat protection	59
10.3.4	Compatibility	59
10.3.5	Location	60
10.3.6	Weather protection	60
10.3.7	Labelling of firefighting equipment	60
10.3.8	Fixed fire protection and detection systems	60
10.3.9	Fire alarm systems	61
10.3.10	Fire blankets	61
10.3.11	Portable fire extinguishers	61
10.4	Wheeled fire extinguishers	62
10.5	Fire hose reels	62
10.6	Fire hydrants	63
10.7	Monitors	63
10.8	Automatic sprinkler systems	63
10.9	Water supply	63
10.10	Retention of fire water	64
10.11	Fire protection requirements	64
10.12	Action in the event of a fire	65
10.13	Action in the event of a fire	65
Section 11	Waste disposal and decontamination of containers	66
11.1	Scope of section	66
11.2	Hazards	66
11.3	Methods of disposal	66
11.4	Industry schemes	66
Appendix A	(normative) Fence and gate – Type 1 R-L/P-T (Rail-less/Plain Top)	67
Appendix B	(normative) Forklifts and trucks	71
Appendix C	(informative) Classification and identification of AgVet chemicals	75
Appendix D	(informative) Health hazards and first aid	81
Appendix E	(informative) Issues to be considered in a risk assessment	86
Appendix F	(informative) Emergency services requirements	89
Appendix G	(informative) Action in the event of fire	91
Appendix H	(informative) Container rinsing and disposal	92
Appendix I	(informative) Design and construction of storage areas where packages are opened	94
Appendix J	(informative) Placarding, marking, labelling and signage	97
Bibliography	99

NOTES

Australian Standard®

Storage and Handling of Agricultural and Veterinary Chemicals

Section 1 Scope and general

1.1 Scope

This document specifies requirements and recommendations for the storage and handling of AgVet chemicals in packages up to 500 kg or 500 L and intermediate bulk containers of up to 1.6 m³ capacity, which are classified as —

- (a) dangerous goods under the ADG Code (Classes 2.1, 3, 4.1, 4.3, 5.1 (excluding ammonium nitrate), 6.1, 8 and 9);
- (b) environmentally hazardous under the ADG Code;
- (c) hazardous chemicals under the Globally Harmonized System of Classification and Labelling of Chemicals (GHS); or
- (d) scheduled poisons under the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

This document also applies to hazardous chemicals and dangerous goods within the classifications listed above, which are stored with AgVet chemicals in packages up to 500 kg or 500 L and intermediate bulk containers of up to 1.6 m³ capacity.

This document is intended for use in relation to the storage and handling of unopened packages by AgVet retailers; consumer retailers; distribution centres; and commercial end user industries, including pest control, horticulture, floriculture, farms and other rural industries, forestry, recreation (including parks and gardens maintenance) and National Parks.

NOTE 1 Classification and identification systems for dangerous goods and scheduled poisons are outlined in Appendix C.

NOTE 2 Information about health hazards presented by AgVet chemicals, and suitable first aid procedures are provided in Appendix D.

1.2 Exclusions

This document does not apply to —

- (a) the manufacture of AgVet chemicals;
- (b) the use of AgVet chemicals;
- (c) the storage and handling of liquid AgVet chemicals in individual tanks (including IBCs of capacity greater than 1.6m³) or of solid (powdered, granulated etc.) AgVet chemicals in FIBCs of capacity greater than 1.6m³ or silos etc. (refer to applicable Standard);
- (d) package filling lines;
- (e) the transport of AgVet chemicals;
- (f) the following GHS categories —
 - (i) acute toxicity — oral — category 5;
 - (ii) acute toxicity — dermal — category 5;
 - (iii) acute toxicity — inhalation — category 5;