

AS 4452:2025



STANDARDS  
Australia



# The storage and handling of toxic substances

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## AS 4452:2025

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 14 July 2025.

This Standard was published on 25 July 2025.

The following are represented on Committee CH-009:

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

This Standard was issued for comment as DR AS 4452:2025

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ISBN: 978 1 76175 315 2

Australian Standard®

# The storage and handling of toxic substances

First published as AS/NZS 4452:1997.  
Revised and redesignated as AS 4452:2025.

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## 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 the Australian members of the Joint Standards Australia/Standards New Zealand Committee CH-009, Safe Handling of Chemicals, to supersede AS/NZS 4452:1997, *The storage and handling of toxic substances*.

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

The objective of this document is to provide users of toxic substances with such requirements and recommendations for the storage and handling of those substances for the interests of people and the environment.

This document applies to dangerous goods of Class 6.1, as classified in the ADG Code.

The major changes in this edition are the following:

- (a) Alignment of dangerous goods terminology with that of the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG).
- (b) Inclusion of the Globally Harmonized System of Classification and Labeling (GHS) in [Appendix F](#).
- (c) Inclusion of recommendations and controls for non-acute toxicity hazards.
- (d) Alignment of this document with other Australian storage and handling Standards.
- (e) Inclusion of sensitive use as in AS 2927 in relation to separation distances and off-site risk receptors.
- (f) Inclusion of new sections for loading and unloading areas, storage and handling tanks, and storage and handling of solids.
- (g) Update of requirements for operational and personnel safety.
- (i) Update of requirements for construction and maintenance.
- (j) [Appendix D](#) amended.
- (k) Addition of new [Appendix I](#) for GHS hazards and labels.
- (l) New [Appendix G](#) added.

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 for information and guidance only.

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## Introduction

The Standards covering the storage and handling of dangerous goods currently consists of the following:

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

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

AS 2022, *Anhydrous ammonia — Storage and handling*

AS 2507, *The storage and handling of agricultural and veterinary chemicals*

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

AS 3846, *The handling and transport of dangerous cargoes in port areas*

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

AS/NZS 4681, *The storage and handling of Class 9 (miscellaneous) dangerous goods and articles*

AS/NZS 5026, *The storage and handling of Class 4 dangerous goods*