

Australian Standard<sup>®</sup>

**The storage and handling of flammable  
and combustible liquids**



This Australian Standard® was prepared by Committee ME-017, Flammable and Combustible Liquids. It was approved on behalf of the Council of Standards Australia on 2 September 2004.

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Australian Standard<sup>®</sup>

## The storage and handling of flammable and combustible liquids

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## PREFACE

This Standard was prepared by Standards Australia Committee ME-017, Flammable and Combustible Liquids, to supersede AS 1940—1993, *The storage and handling of flammable and combustible liquids*. This new edition is the result of a comprehensive review of the Standard.

*This Standard incorporates Amendment No. 1 (November 2004) and Amendment No. 2 (November 2006). The changes required by the Amendment are indicated in the text by a marginal bar and amendment number against the clause, note, table, figure or part thereof affected.*

This Standard deals with flammable liquids of dangerous goods Class 3, as classified in the UN *Recommendations on the Transport of Dangerous Goods—Model Regulations*, and combustible liquids. The objective of this Standard is to promote the safety of persons and property where flammable or combustible liquids are stored or handled, by providing requirements and recommendations that are based on industry best practices.

This new edition of the Standard has been aligned with the current needs of regulatory authorities, emergency services and environmental authorities, and the various publications of the National Occupational Health and Safety Commission.

This Standard has been revised to reflect control philosophies and innovative designs that have been developed since the last edition. One major change in this revision of the Standard is the inclusion of requirements and recommendations for the storage and handling of potable alcohols in bulk and having a strength of greater than 24% v/v ethanol. Another is the inclusion of informative appendices providing guidance on the design and location of blending plants and batch blending and filling operations.

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 a Standard, whereas an ‘informative’ appendix is only for information and guidance.

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

The series of Standards covering the storage and handling of dangerous goods presently comprises the following Standards:

## AS

- 1894 The storage and handling of non-flammable cryogenic and refrigerated liquids
- 2022 Anhydrous ammonia—Storage and handling (known as the SAA Anhydrous Ammonia Code)
- 2507 The storage and handling of agricultural and veterinary chemicals
- 2714 The storage and handling of hazardous chemical materials—Class 5.2 substances (organic peroxides)
- 3780 The storage and handling of corrosive substances
- 3846 The handling and transport of dangerous cargoes in port areas
- 3961 Liquefied natural gas—Storage and handling
- 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
- 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, handling and transport 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 flammable and combustible liquids**

## SECTION 1 SCOPE AND GENERAL

**1.1 SCOPE**

This Standard sets out requirements and recommendations for the safe storage and handling of flammable liquids of dangerous goods Class 3, as classified in the UN *Recommendations for the Transport of Dangerous Goods—Model Regulations* and listed in the ADG Code. This Standard also provides requirements and recommendations for the storage and handling of combustible liquids, as defined in Clause 1.4.9.

This Standard provides minimum acceptable 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 flammable and combustible liquids in accordance with the risk management requirements of NOHSC:1015 and legislation which draws on that document.

This Standard provides requirements for commonly used flammable and combustible liquids such as hydrocarbons and industrial solvents. Some flammable and combustible liquids have other physical and chemical properties that require additional precautions and design considerations. Examples of these are—

- (a) liquids that can polymerize;
- (b) liquids that require blanketing with inert gas;
- (c) liquids that are heated; and
- (d) liquids that are assigned a subsidiary risk.

Any special precautions and considerations necessary for the safe storage and handling of such liquids are additional to the requirements and recommendations provided in this Standard.

For the storage and handling of dangerous goods of another class but having a Class 3 subsidiary risk, this Standard is relevant to their flammability aspects.

**1.2 APPLICATION****1.2.1 Where this Standard applies**

This Standard applies to the storage and handling of Class 3 dangerous goods as described and listed in the ADG Code, with the exception of desensitized explosives of Class 3. It also applies to the storage and handling of combustible liquids. The requirements of this Standard apply in conjunction with, but do not take precedence over, any government regulations that apply in any area.

NOTE: Further information on the classification of flammable liquids, based on the 6th edition of the ADG Code, is given in Appendix A.