

Australian/New Zealand Standard™

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



AS/NZS 3833:2007

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee CH-009, Safe Handling of Chemicals. It was approved on behalf of the Council of Standards Australia on 8 March 2007 and on behalf of the Council of Standards New Zealand on 11 May 2007.

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The following are represented on Committee CH-009:

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Australasian Fire Authorities Council
Australian Institute of Petroleum
Australian Paint Manufacturers' Federation
Consumers' Federation of Australia
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Australian/New Zealand Standard™

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

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PREFACE

This Standard was prepared by Joint Standards Australia/Standards New Zealand Committee CH-009, Safe Handling of Chemicals, to supersede AS/NZS 3833:1998. Revision of this Standard was commenced following the committee's agreement that the series of Standards relating to the storage and handling of dangerous goods be reviewed and updated to reflect changed regulatory requirements and control philosophies that have been refined since the publication of the 1998 edition, taking into particular account the current (2004) edition of AS 1940, *The storage and handling of flammable and combustible liquids*.

The purpose of this Standard is to provide minimum acceptable safety requirements for installations where more than one class of dangerous goods is stored and handled, whether in packages or intermediate bulk containers (IBCs) of up to 1.6 m³ capacity.

This Standard addresses the storage and handling of mixed classes of dangerous goods of Classes and Divisions 1.4S (as consumer commodities), 2 (as consumer commodities or aerosols of UN 1950), 3, 4.1, 4.3, 5.1, 5.2, 6.1, 8 and 9, and combustible liquids when stored with the dangerous goods, in packages and IBCs as described above.

The terms 'normative' and 'informative' have been used in this Standard to indicate the application of each appendix. A normative appendix is an integral part of the Standard, whereas an informative appendix provides information and guidance.

Statements expressed in mandatory terms in notes to tables and figures are requirements of this Standard. Notes that appear in the main text are intended to provide information and recommendations only.

Australian and New Zealand references are separated by a slash (/) or parentheses. Australian references apply in Australia, and New Zealand references apply in New Zealand. Joint Standards apply in both Australia and New Zealand.

The series of Standards covering the storage, handling and transport of dangerous goods currently comprises the following publications:

HB 76	Dangerous goods—Initial emergency response guide
AS	
1216	Class labels for dangerous goods
1678	Emergency procedure guide—Transport (series)
1894	The storage and handling of non-flammable cryogenic and refrigerated liquids
1940	The storage and handling of flammable and combustible liquids
2187	Explosives—Storage, transport and use (series)
2507	The storage and handling of agricultural and veterinary chemicals
2508	Safe storage and handling information card (series)
2714	The storage and handling of hazardous chemical materials—Class 5.2 substances (organic peroxides)
2809	Road tank vehicles for dangerous goods (series)
3780	The storage and handling of corrosive substances
3846	The handling and transport of dangerous cargoes in port areas
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
4081	The storage and handling 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
NZS	
5433	Transport of dangerous goods on land

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FOREWORD

This Standard provides requirements and recommendations for the storage and handling of more than one class of dangerous goods within the same storage area, without the need for segregating walls. It may be applied where the dangerous goods are kept in packages and intermediate bulk containers (IBCs) of up to 1.6 m³ capacity.

Features of this Standard

This Standard is different from many of the other Australian or Joint Standards for the storage and handling of dangerous goods, in that it allows more than one class of dangerous goods to be stored together, without the need for segregating walls between the different classes. To achieve this storage, certain assumptions have been made and requirements added. These are outlined below, with further information given in the body of the Standard.

Prohibition of certain dangerous goods

This Standard prohibits certain types and classes of dangerous goods from the mixed class store because of their special requirements, their hazards, or the additional risk they could present. These dangerous goods are excluded from this Standard. The dangerous goods that may be included in the mixed class store, and those that are excluded, are described in Section 1, Scope and Application.

Where it is necessary to store any of the dangerous goods that are excluded from this Standard, the relevant Australian or Joint Standard for those dangerous goods needs to be used.

Hazard assessment

A written hazard assessment is necessary. This assessment needs to identify the dangerous goods that are to be stored, address all of the relevant requirements clause-by-clause, and record in detail how compliance with the requirements will be achieved.

The hazard assessment needs to identify the compatibility or otherwise of all of the dangerous goods that are to be stored. Some goods might react dangerously, and this also needs to be identified. If goods that are not dangerous goods are to be kept in the same store, their compatibility may also need to be investigated. This information is necessary so that the goods can be suitably segregated within the store.

The hazard assessment also needs to provide for ongoing store management and housekeeping.

It may be necessary to obtain expert advice when planning the store. It is usually best to contact the relevant regulatory authority for the storage and handling of dangerous goods at an early stage.

Segregation within the dangerous goods store

Any incompatible goods, and goods which might react dangerously, will need to be segregated within the store. Segregation is described in Section 6. It may also be necessary to segregate dangerous goods from any foodstuffs or food ingredients in the store.

Retail storage

Many dangerous goods are packed in small packages for retail sale. Requirements for such dangerous goods in retail shops and retail distribution centres is given in Section 3 of this Standard.

Management and housekeeping

The standard of management and housekeeping in the store needs to be consistently high. This is to ensure safe storage and effective management of any emergencies that could arise. It is important that the segregation of goods is maintained at all times.

STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

Australian/New Zealand Standard**The storage and handling of mixed classes of dangerous goods, in packages and intermediate bulk containers**

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE AND OBJECTIVE**1.1.1 Scope**

This Standard sets out requirements and recommendations for the safe storage and handling of dangerous goods, in packages and intermediate bulk containers (IBCs) of up to 1.6 m³ capacity, where dangerous goods of more than one class are kept within the same store, without the need for segregating walls.

NOTES:

- 1 Dangerous goods are classified as such and listed in the *UN Recommendations on the Transport of Dangerous Goods—Model Regulations*. They are also listed in the *Australian Dangerous Goods Code* (ADG Code) and NZS 5433.
- 2 An outline of the classes and divisions of dangerous goods is provided in Appendix A.
- 3 To achieve storage conditions comparable in safety to those for individual class storages, the various Australian or Joint Standards for the storage and handling of individual classes of dangerous goods have been reviewed and additional requirements and recommendations introduced as necessary. The resulting conditions for mixed class storage are intended to provide an equivalent level of safety as that which would be achieved by applying the relevant Australian Standard for each individual class or division of dangerous goods being kept.

1.1.2 Objective

The objective of this Standard is to provide minimum acceptable safety requirements for storage areas, operating procedures, emergency planning and fire protection. It provides technical guidance that may assist in the storage and handling of dangerous goods in accordance with regulatory requirements.

NOTES:

- 1 In Australia, this would be in accordance with the risk management requirements of NOHSC:1015 and regulations based on that document. In New Zealand, this would be with the HSNO Act.
- 2 AS/NZS 4360 should also be consulted regarding risk management.

1.2 APPLICATION**1.2.1 Which Standard should be used?**

The various Australian or Joint Standards for the storage and handling of dangerous goods provide requirements and guidance in accordance with the risk management principles of NOHSC:1015 and regulations that draw upon that document. As a result, it may be necessary to consider several Standards:

- (a) The relevant Australian or Joint Standard for each class of dangerous goods being stored.
- (b) Any industry-specific Standard for the storage and handling of the dangerous goods being stored, e.g. AS 2507.



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