

Australian Standard[®]

**Packaging for poisonous
substances**

This Australian Standard was prepared by Committee PK/24, Containers for Poisonous Substances. It was approved on behalf of the Council of Standards Australia on 28 March 1997 and published on 5 June 1997.

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Australian Institute of Petroleum
Canmakers Institute of Australia
Commonwealth Department of Human Services and Health
Health and Community Services, Victoria
N.S.W. Health Department
Packaging Council of Australia
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Australian Standard[®]

Packaging for poisonous substances

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PREFACE

This Standard was prepared by the Standards Australia Committee PK/24, Containers for Poisonous Substances, as a revision of AS 2216—1978, *Glass and rigid plastics containers for poisonous substances*.

In the preparation of this Standard, cognizance has been taken of the *Standard for the Uniform Scheduling of Drugs and Poisons* (SUSDP), published by the Australian Government Printing Service, Canberra.

This Standard should be read in conjunction with the *Standard for the Uniform Scheduling of Drugs and Poisons* (SUSDP) and the *Australian Code for the Transport of Dangerous Goods by Road and Rail* (ADG Code).

The objective of this Standard is to ensure that poisonous substances are packaged in containers that will not leak, are appropriately marked and will maintain their integrity during the life of the poisonous substance.

The principal differences between this Standard and the 1978 edition are as follows:

- (a) Flexible containers, metal containers, fibreboard and paperboard containers have been included.
- (b) Specific nominal capacities are no longer specified.
- (c) Colour requirements for containers have been excluded.
- (d) Tactile identification requirements have been altered.

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.

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STANDARDS AUSTRALIA

Australian Standard

Packaging for poisonous substances

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE This Standard sets out safety and performance requirements for the packaging of up to 2 L or 2 kg of poisonous substances.

NOTES:

- 1 This Standard is not intended to duplicate the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG Code). Where the requirements of the ADG Code apply, this Standard should be read in conjunction with the Code.
- 2 Appendix A contains recommendations and advice on information which should be provided by the purchaser at the time of enquiry or order.
- 3 Alternative methods for determining compliance with this Standard are given in Appendix B.
- 4 Poisonous substances are generally defined under State, Territory or Commonwealth legislation.

1.2 REFERENCED DOCUMENTS The following documents are referred to in this Standard:

AS

- | | |
|--------|--|
| 1199 | Sampling procedures and tables for inspection by attributes |
| 1399 | Guide to AS 1199—Sampling procedures and tables for inspection by attributes |
| 2400 | Packaging |
| 2400.6 | Part 6: Paper and paperboard |
| 2854 | Tinplate cans for general use |

AS/NZS

- | | |
|------------|--|
| ISO 9000 | Quality management and quality assurance standards |
| ISO 9000.1 | Part 1: Guidelines for selection and use |
| ISO 9004 | Quality management and quality system elements |
| ISO 9004.1 | Part 1: Guidelines |

SAA

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|---------|--|
| HB18 | Guidelines for third-party certification and accreditation |
| HB18.28 | Guide 28—General rules for a model third-party certification scheme for products |

ASTM

- | | |
|-------|---|
| C147 | Standard test methods for internal pressure test on glass containers |
| C148 | Standard test methods for polariscopic examination of glass containers |
| C149 | Standard test methods for thermal shock resistance of glass containers |
| D2684 | Test method for permeability of thermoplastic containers to packaged reagents or proprietary products |

Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG Code)*

* Published by the Australian Government Publishing Service, Canberra

1.3 DEFINITIONS For the purpose of this Standard the definitions below apply.

1.3.1 Flexible plastic—plastic materials that are easily hand-folded or twisted and bent without breaking.

1.3.2 Immediate container—any form of container in which a poisonous substance is directly packaged.

NOTE: An immediate container may also be a primary pack. There are also instances where the immediate container cannot be readily separated from the primary pack, e.g. a bladder-type package.

1.3.3 Poison symbol—the word ‘POISON’ in sans serif capital letters in the vertical orientation, and with three ribs on either side of it, as shown in Figure 1.1.

1.3.4 Primary pack—the pack in which a poisonous substance and its immediate container are presented for sale or supply.

NOTE: Depending on how the primary pack is handled during transport or storage, it may be regarded as a sole container or inner packaging according to the ADG Code.

1.3.5 Rigid plastic—plastic materials that have a modulus of elasticity in flexure greater than 700 MPa at $23 \pm 2^\circ\text{C}$ and $50 \pm 5\%$ relative humidity.

1.3.6 Ullage—the difference between the internal capacity of the immediate container and the volume occupied by the contents, expressed as a percentage of the filled capacity of the container—

$$\text{i.e. Ullage, (\%)} = \frac{\text{Internal capacity} - \text{filled capacity}}{\text{Internal capacity}} \times 100$$

1.4 GENERAL REQUIREMENTS

1.4.1 Ullage Where its contents are liable to expansion during handling, storage or transport, the immediate container intended for storing liquid shall have sufficient ullage so as to prevent any consequential breakage of the container or leakage of the contents, but, in any case, not less than 5% by volume of the nett contents.

1.4.2 Integrity of container The immediate container shall be robust enough to withstand damage which would result in leakage, during the ordinary risks of storage, handling and transport.

Under normal conditions of storage and use, the immediate container shall show no visible signs of deterioration such as embrittlement, swelling, cracking, tackiness, softening or shrinkage during the life of the poisonous substance.

The immediate container shall have barrier properties which shall prevent alteration of the contents or transfer of contents through its walls.

NOTE: ASTM D2684 may be used as a guide for evaluating barrier properties of thermoplastic material.

1.4.3 Closure The immediate container shall be capable of being securely closed and, except where intended to be used on one occasion only, shall be capable of being securely reclosed to prevent leakage during the ordinary risks of storage, handling and transport.

1.4.4 Compatibility The immediate container and closure, and any wad, gasket or other sealant, shall not chemically react with the substance with which the container is to be filled. The immediate container and contents shall not physically interact to cause deterioration in the performance of the container.

1.4.5 Handle location Any handle or measuring arm provided on the immediate container shall be located in such a position that it does not obscure any tactile identification.