

Australian Standard[®]

**Identification of the contents of
pipes, conduits and ducts**

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The following interests are represented on Committee SF/16:

Australian Chamber of Commerce and Industry
Australian Gas Association
Australian Institute of Petroleum
Institute of Hospital Engineering, Australia
Public Works Department, N.S.W.
Society of Fire Protection Engineers
Water Board Sydney—Illawarra—Blue Mountains

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PREFACE

This Standard was prepared by the Standards Australia Committee on Identification of Pipes, to supersede AS 1345—1982.

The basic colour scheme for pipe identification remains virtually the same as it was in the 1982 edition, as does the design and use of pipe markers. The only significant difference is the inclusion of a dark-blue supplementary colour to be used as an additional colour band around pipes carrying materials for human consumption.

A number of other changes have been made to the Standard with a view to making it easier to understand and use by practitioners. For example, the tabulation of base colours and their uses now includes a series of illustrative examples of where each colour should, and should not be used.

As regards the specification of colour, the Standard now provides both for a target colour for matching colour-mixed surface finishes such as paints, and a colour tolerance where ready-made materials such as adhesive films or as-supplied pipe colour are to be considered.

In the Foreword to the 1982 edition it was noted that the colour system adopted in that Standard was based on the International Standard ISO/R 508*. The Committee observed at that time that this International Standard had been approved by many ISO member bodies and that it applied to shipping as well as land installations. Furthermore, the requirements of ISO/R 508 were considered to possess intrinsic merit in that the number of colours were reduced to a minimum and the colours given were sufficiently distinct from one another to be separately identifiable when seen in isolation. Although ISO/R 508 has since been withdrawn, action to issue a revision has started. It is likely, however, to be some considerable time before a revised ISO Standard is available. It was therefore considered inappropriate to delay the development of this edition of this Standard.

The term 'informative' has been used in this Standard to define the application of the appendix to which it applies. An 'informative' appendix is only for information and guidance.

* Identification colours for pipes conveying fluids in liquid or gaseous condition in land installations and on board ships.

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FOREWORD

This Standard relies fundamentally on a single colour identification system. It is not possible to provide for all situations in such a system. Furthermore, because colours may be seen in isolation from one another, the absolute number of colours available is limited and is considerably less than the ideal number of categories which might otherwise be provided for pipe contents. For this reason, in selecting an appropriate colour, worker safety is one of the most important concerns. For example, the colour for acids and alkalis would be applied only where a potential corrosive hazard existed, and not to highly diluted acids or alkalis such as might be found in waste water or liquid foodstuff.

More detailed information on the contents of a pipe is provided, firstly, by the use of two special supplementary colours, yellow to indicate especially hazardous material and dark blue for materials for human consumption. The second means is by use of pipe markers which include words to describe the contents. Symbols for radioactive and biological hazards are also used.

The Standard sets out principles which should be considered in the planning of a scheme for identification of piping. Individual undertakings may find it necessary to depart from these principles in the application of markings in particular localities. However, this should only be done in extreme circumstances where adherence to the general principles cannot possibly be maintained and special care is taken to ensure that no colour is used for a purpose which conflicts with this Standard to the degree that either safety or operational efficiency is compromised.

The principles of this Standard should be applied to the identification of buried and other normally inaccessible services. However, it is recognized that such application may present difficulties and for this reason no normative requirements have been specified.

STANDARDS AUSTRALIA

Australian Standard

Identification of the contents of pipes, conduits and ducts

1 SCOPE This Standard specifies means of identifying the contents of pipes, conduits, ducts and sheathing used to contain fluids, or for the distribution of electrical or communications services in land installations and on board ships, by the use of colours, words and symbols. It is not intended to apply to buried or normally inaccessible services. However, the general principles may be applied when considering those services.

NOTE: It is recognized that application of this Standard to buried services may present difficulties and for this reason only general guidance is offered.

2 APPLICATION It is recognized that in certain industries and applications there are consistent and widely recognized colour coding systems in use other than that specified in this Standard. Use of alternative systems is acceptable under this Standard in the following circumstances:

- (a) In installations normally inaccessible other than to operators and emergency response personnel trained in the coding system in use; where different services would otherwise have predominantly the same identification colour, and supplementary or alternative identification is desirable for operational reasons but does not compromise safety.
- (b) In areas in public view where use of the basic identification colour would not be aesthetically acceptable. In such cases all required colours and markers shall be placed on the pipe as soon as it has disappeared from public view, e.g. through a wall or bulkhead. If word descriptions are required on the service they may be placed in a contrasting colour on the decorative colour in public view.

Appendix A lists known examples of alternative systems and the Standards in which they are specified or described.

NOTE: Additional Standards may be included in future editions of this Standard. Enquiries in this regard may be made to Standards Australia Head Office quoting Committee Number SF/16.

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

- AS
1169 Minimizing of combustion hazards arising from the medical use of flammable anaesthetic agents
- 1596 LP gas—Storage and handling
- 1744 Forms of letters and numerals for road signs
- 2700 Colour standards for general purposes
- 2896 Medical gas systems—Installation and testing of non-flammable medical gas pipeline systems
- 3000 Electrical installations—Buildings, structures and premises (known as the SAA Wiring Rules)
- 3500 National Plumbing and Drainage Code



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