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Australian Standard 1944—1984

MEDICAL GAS CYLINDER IDENTIFICATION

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STANDARDS ASSOCIATION OF AUSTRALIA
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The following interests are represented on Committee ME/2:

Aluminium Development Council

Australasian Steamship Owners Federation

Australian Chamber of Commerce

Australian Liquefied Petroleum Gas Association

Australian Underwater Federation

Australian Welding Institute

Board of Fire Commissioners of New South Wales

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Department of Mines, Qld

Department of Mines and Energy, N.T.

Department of Territories and Local Government

Insurance Council of Australia Ltd

Railways of Australia Committee

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AUSTRALIAN STANDARD

MEDICAL GAS CYLINDER IDENTIFICATION

AS 1944—1984

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PREFACE

This edition of this standard was prepared by the Association's Committee on Gas Cylinders to supersede AS 1944—1976. It is one of three standards providing separate systems for the identification of refrigerant gas cylinders (AS 1942), industrial gas cylinders (AS 1943), and medical gas cylinders. The systems involve the legible marking of the cylinder with the name, or abbreviated symbol, or where applicable refrigerant number of the contained gas, and specified colour(s) for external surfaces.

The range of gases catered for now includes the mixture of carbon monoxide in air, and nitrous oxide in oxygen.

This standard continues to follow the colours specified for those gases also listed in BS 1319, Specification for Medical Gas Cylinders, Valves and Yoke Connections, except that the blue specified in combination with white for nitrous oxide in oxygen is French Blue and not Azure Blue as in BS 1319.

The colours align with International Standard ISO 32, Gas Cylinders for Medical Use—Marking for Identification of Content, but this standard provides for additional mixtures, up to three end colours, and the abbreviated symbol or formulas rather than both.

Colours are specified by reference to BS 381C:1964, which was endorsed as AS K185. A later standard BS 318C:1980 lists some referenced colours as obsolescent, and does not give individual cards for those colours. Therefore, while some colours are fully provided in BS 381C:1980 it will be necessary to refer to the 1964 edition (available for viewing at SAA Information Centres) for those not so provided. A new standard, AS 2700, is in course of preparation and is expected to provide a reference for all existing identification colours for gas cylinders, but some changes of colour names and codes are expected. Table 2 of this standard gives equivalent names and codes, and it is hoped that the equivalent names will come into common usage in due course.

It is important for safety reasons that colours specified in gas cylinder contents identification not be used on a gas cylinder in any other context.

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Australian Standard
for
MEDICAL GAS CYLINDER IDENTIFICATION

1 SCOPE. This standard specifies the markings and colour code to identify the contents of cylinders to be used in Australia in accordance with AS 2030, Part 1, for the storage and transport of compressed medical gases. The cylinders are of water capacity exceeding 0.1 kg and not exceeding 500 kg. The markings also provide for identification of cylinders for liquid withdrawal fitted with eductor tubes.

NOTES:

1. The requirements of this standard in no way displace any Statutory Authority requirement to comply with AS 1216.
2. Identification of industrial gas cylinders is specified in AS 1943, and of refrigerant gas cylinders in AS 1942.

2 REFERENCED DOCUMENTS. The following standards are referred to in this standard:

AS 1216	Classification, Hazard Identification and Information Systems for Dangerous Goods
AS 1942	Refrigerant Gas Cylinder Identification
AS 1943	Industrial Gas Cylinder Identification
AS 2030	SAA Gas Cylinders Code Part 1—Cylinders for Compressed Gases Other than Acetylene
AS 2700	Colour Standards for Paints and Related Materials*
AS K185	Colours for Specific Purposes
BS 381C:1964	Colours for Specific Purposes.

3 DEFINITIONS. For the purpose of this standard, the definitions given in AS 2030, Part 1, and the following definition apply:

Medical gas—a gas or gas mixture in a cylinder for use for patient care, including therapeutic, diagnostic and prophylactic application, and for powering surgical tools.

NOTE: A gas or a gas mixture in a cylinder for portable self-contained breathing apparatus, but not for patient care, is considered not to be a medical gas for the purposes of this standard.

4 IDENTIFICATION.

4.1 General. The contents of a cylinder shall be identified by marks in accordance with Clause 4.2 and colour(s) in accordance with Clause 4.3. A cylinder fitted with an eductor tube for liquid withdrawal shall be identified in accordance with Clause 4.4. The size and location of marks shall be in accordance with Clause 4.5.

4.2 Marks.

4.2.1 *Basic marks.* The cylinder surface shall be legibly marked by labelling (which cannot be readily detached) or stencilling, preferably off the cylindrical part of the body, to show—

(a) the words 'COMPRESSED', 'MEDICAL', and 'KEEP CYLINDER COOL'; and

(b) the contents, as given by—

(i) name(s) of the gas(es), as listed in Table 1; or

(ii) abbreviated symbol(s), as listed in Table 1.

NOTE: Where Table 1 does not list the gas(es), refer to AS 2030, Part 1.

4.2.2 *Special condition marks or marking of mixtures.* Where the contents of the cylinder has a special condition or the constituents are in special proportions such as in for a mixture, the cylinder surface shall be marked by labelling (which cannot be readily detached) or stencilled to show the special condition and/or special proportions. The order of gas names shall be in ascending order of percentage of the total mixture, and the percentage of each minor constituent shall immediately precede the name of that constituent.

Example:

10% Oxygen in Helium

4.3 Colour(s).

4.3.1 *Regions and colours(s).* The cylinder shall have regions coloured in accordance with Clause 4.3.2 and Clause 4.3.3.

NOTE: Painting or other surface colouring treatments are acceptable methods of colouring.

4.3.2 *Valve end of cylinder.* When viewed from the valve end of the cylinder, a region of identifying colour(s) shall be visible. This region should not extend to the cylindrical portion of the cylinder. The colour(s) shall be in accordance with Table 1 for the nominated gas or gas mixture and shall form diametrically oposite 90-degree sectors where two sector colours are shown, and diametrically opposite 60-degree sectors where three sector colours are shown.

4.3.3 *Body of cylinder.* The remainder of the cylinder surface, except the bottom surface for which colouring is optional, shall be coloured in accordance with Table 1 for the nominated gas or gas mixture.

Where the constituents of a binary mixture are nominally equal, the selection of the constituent to determine body colour may be arbitrary.

4.4 Eductor tube identification (for liquid withdrawal). A cylinder fitted with an eductor tube and intended to provide liquid withdrawal shall be identified by two coloured longitudinal stripes on opposite sides of the cylindrical portion of the cylinder. The stripes shall be either black or white, the colour selected to contrast with the colour of the cylindrical portion. The length of each stripe shall be approximately 50 percent of the cylinder length, and the width approximately 12 percent of the cylinder diameter.

*In course of preparation.