



**Gas cylinders for industrial, scientific,  
medical and refrigerant use—Labelling  
and colour coding**



This Australian Standard® was prepared by Committee ME-002, Gas Cylinders. It was approved on behalf of the Council of Standards Australia on 6 May 2016. This Standard was published on 20 May 2016.

---

The following are represented on Committee ME-002:

- Australasian Fire and Emergency Service Authorities Council
  - Australia New Zealand Industrial Gas Association
  - Australian Chamber of Commerce and Industry
  - Australian Gas Association
  - Engineers Australia
  - Gas Energy Australia
  - Gas Technical Regulators Committee
  - National Association of Testing Authorities Australia
  - SafeWork NSW
  - Welding Technology Institute of Australia
  - WorkSafe Victoria
- 

This Standard was issued in draft form for comment as DR AS 4484:2015.

Standards Australia wishes to acknowledge the participation of the expert individuals that contributed to the development of this Standard through their representation on the Committee and through the public comment period.

---

#### **Keeping Standards up-to-date**

Australian Standards® are living documents that reflect progress in science, technology and systems. To maintain their currency, all Standards are periodically reviewed, and new editions are published. Between editions, amendments may be issued.

Standards may also be withdrawn. It is important that readers assure themselves they are using a current Standard, which should include any amendments that may have been published since the Standard was published.

Detailed information about Australian Standards, drafts, amendments and new projects can be found by visiting [www.standards.org.au](http://www.standards.org.au)

Standards Australia welcomes suggestions for improvements, and encourages readers to notify us immediately of any apparent inaccuracies or ambiguities. Contact us via email at [mail@standards.org.au](mailto:mail@standards.org.au), or write to Standards Australia, GPO Box 476, Sydney, NSW 2001.

---

Australian Standard<sup>®</sup>

**Gas cylinders for industrial, scientific,  
medical and refrigerant use—Labelling  
and colour coding**

Originated in part as AS 1942—1976.  
Revised and redesignated as AS 4484—1997.  
Previous edition 2004.  
Third edition 2016.

**COPYRIGHT**

© Standards Australia Limited

All rights are reserved. No part of this work may be reproduced or copied in any form or by any means, electronic or mechanical, including photocopying, without the written permission of the publisher, unless otherwise permitted under the Copyright Act 1968.

Published by SAI Global Limited under licence from Standards Australia Limited, GPO Box 476, Sydney, NSW 2001, Australia

ISBN 978 1 76035 499 2

## PREFACE

This Standard was prepared by the Australian members of the Joint Standards Australia/Standards New Zealand Committee ME-002, Gas Cylinders, to supersede AS 4484—2004.

After consultation with stakeholders in both countries, Standards Australia and Standards New Zealand decided to develop this Standard as an Australian, rather than an Australian/New Zealand Standard.

The objective of this Standard is to specify the legible identification of the cylinder with the name or abbreviated symbol of the contained gas or, where applicable, its refrigerant number and the colours for the external cylinder surfaces.

This revision recognizes the completion of the change-over of the medical gas cylinders to the colour coding requirement in general accordance with ISO 32:1977, *Gas cylinders for medical use—Marking for identification of content*. This provides a means to identify certain medical gas cylinders by shoulder colour only. The letter ‘N’ markings on the shoulder of a medical gas cylinder, which were used to differentiate between the old and new colour schemes, are now redundant. As white is the colour assigned to the body of medical gas cylinders, it is not accepted as an alternative to Silver Grey.

The refrigerant numbers specified in this Standard are identical with those given in ISO 817:2014, *Refrigerants—Designation and safety classification*.

Certain gases have both refrigerant and industrial applications (e.g. ammonia, carbon dioxide, sulphur dioxide and, propane) and may be listed in Tables 1, 2 and 3. The allocation of identification colours then depends on the application for which the gas is intended.

Statements expressed in mandatory terms in notes to Tables and Figures are deemed to be requirements of this Standard.

The term ‘normative’ has been used in this Standard to define the application of the appendix to which it applies. A ‘normative’ appendix is an integral part of a Standard.

## CONTENTS

	<i>Page</i>
1 SCOPE .....	4
2 REFERENCED DOCUMENTS .....	4
3 DEFINITIONS .....	5
4 LABELLING .....	6
5 COLOUR CODING .....	7
6 COLOURS—INDUSTRIAL AND SCIENTIFIC GASES .....	8
7 COLOUR CODING—MEDICAL GASES .....	12
8 COLOUR CODING—REFRIGERANT GASES .....	16
APPENDIX A COLOUR SPECIFICATIONS .....	19

## STANDARDS AUSTRALIA

## Australian Standard

**Gas cylinders for industrial, scientific, medical and refrigerant use—  
Labelling and colour coding****1 SCOPE**

This Standard specifies the requirements for labelling and colour coding to identify the contents of compressed gas cylinders for industrial, scientific, medical and refrigerant gases, which are used in accordance with AS 2030, Parts 1, 2, 4 and 5.

Colour coding includes special identification for eductor tubes to indicate liquid withdrawal.

This Standard applies to gas cylinders of water capacity in the range 0.1 kg to 150 kg used as single cylinders or in bundles of cylinders. Cylinders with a water capacity outside the above range, or where the total water capacity of a bundle of cylinders exceeds 810 L, with colour coding may follow this Standard.

This Standard does not apply to cylinders used for self-contained underwater breathing apparatus (SCUBA), self-contained breathing apparatus (SCBA), or fire extinguishing agents and portable fire extinguishers. For identification of these cylinders reference should be made to the relevant product or application Standard.

The colour coding requirements of this Standard do not apply to liquid petroleum gas (LP Gas) cylinders in a cylinder of 12 kg water capacity or less, which are usually considered for domestic use and are finished in a range of colours.

The colour coding requirements of this Standard do not apply to cylinders which are either imported for use but not refilling in Australia (colours of country of origin are applicable), nor for cylinders which are imported for the specific purpose of filling for export.

**2 REFERENCED DOCUMENTS**

The following Standards are referred to in this Standard:

AS

2030	Gas cylinders
2030.1	Part 1: General requirements
2030.5	Part 5: Filling, inspection and testing of refillable cylinders
2030	The verification, filling, inspection, testing and maintenance of cylinders for the storage and transport of compressed gases
2030.2	Part 2: Cylinders for dissolved acetylene
2030.4	Part 4: Welded cylinders—Insulated
2473	Valves for compressed gas cylinders
2473.3	Part 3: Outlet connections for medical gases (including pin-indexed yoke connections)
2700	Colour standards for general purposes
2896	Medical gas systems—Installation and testing of non-flammable medical gas pipeline systems
2902	Medical gas systems—Low pressure flexible hose assemblies

ISO  
32 Gas cylinders for medical use—Marking for identification of content  
10286 Gas cylinders—Terminology  
EN  
1089 Transportable gas cylinders—Gas cylinders identification (excluding LPG)  
1089-3 Part 3: Colour coding  
Australian Dangerous Goods Code (ADG Code)  
Safe Work Australia  
Labelling of Workplace Hazardous Chemicals Code of Practice  
Therapeutic Goods Administration  
Standard for the Uniform Scheduling of Medicines and Poisons No. 7 (SUSMP)  
Therapeutic Goods Order No. 69—General requirements for labels for medicines

### 3 DEFINITIONS

For the purpose of this Standard, the definitions given in AS 2030.1 and those below apply.

#### 3.1 Colour coding

The coloured materials applied or permanently affixed to a cylinder as a coating, sleeve or some other form.

#### 3.2 Composite cylinder

A fibre wrapped transportable gas cylinder that can be either hoop-wrapped or fully wrapped, and with or without an aluminium, steel or non-metallic liner, intended for compressed gas under pressure.

#### 3.3 Industrial gas

Gas that is used in a technical process in industrial production or similar activity, excluding medical and breathing applications (see ISO 10286, Entry Number 720).

#### 3.4 Label

A means of providing identification of the contents of a gas cylinder including:

- (a) Self-adhesive labels.
- (b) Text which is applied by stencilling or other means.
- (c) Any attachment to the cylinder whose sole purpose is to act as a label carrier.

#### 3.5 Medical gas

Any gas or mixture of gases intended to be administered to patients for therapeutic, diagnostic or prophylactic purposes, or to be used for surgical tool applications (see AS 2473.3—2007).

NOTE: In Australia, medical gases are listed on the Australian Register of Therapeutic Goods.

#### 3.6 Refrigerant gas

Gas that is used in a heat cycle usually including, for enhanced efficiency, a reversible phase change from a gas to a liquid (see ISO 10286, Entry Number 721).

#### 3.7 Scientific gas

Gas that is used for analysis, calibration and other similar purposes in scientific laboratories (see ISO 10286, Entry Number 722).

## 4 LABELLING

### 4.1 General

The contents of a cylinder or bundle of cylinders, shall be identified on its label. The colours of the cylinder or bundle of cylinders shall be a secondary means of identification.

Identification is achieved by symbols and text representing the contents of the cylinder being either directly printed or stencilled on the cylinder's surface or in the form of pre-printed labels applied to the cylinder's surface.

The cylinder shall be legibly labelled.

NOTE: ADG Code, Labelling of Workplace Hazardous Chemicals CoP, SUSMP and TGO No. 69 have labelling requirements that may apply to gas cylinders.

As the colour coding of a cylinder includes the body colour and if applicable, its body labels, not more than 20% of the body of the cylinder may be used for promotional or marketing purposes.

### 4.2 Location and durability

#### 4.2.1 Location of label(s)

The required label(s) should be located as close as practicable to the valve end of each gas cylinder or to the outlet on a bundle of cylinders.

On a composite cylinder a complying label may be applied under a clear outer resin layer or under a clear outer filament winding.

#### 4.2.2 Durability of labels

Each label and their means of attachment shall be of material that ensures the label will remain in place and be legible after normal exposure to conditions incident to transport, storage and use.

### 4.3 Body labels

Body labels may be used on the body of a cylinder to identify the name and/or the chemical symbol of the contained gas.

When used, body labels shall be applied to two opposing sides of a cylinder, unless the water capacity of the cylinder is less than 15 L where a single body label may be applied.

For bundles of cylinders a body label shall be applied to a minimum of one cylinder on at least two opposite sides of the bundle.

The body label text shall be in either black or white, with the colour being selected to contrast with the body colour.

Body labels shall be clearly visible.

### 4.4 Special labelling

Where the contents of the cylinder have a special condition, such as a specific storage temperature, or the constituents are in special or laboratory proportions, such as multi-component gas mixtures, the cylinder shall be identified in accordance with one of the following:

- (a) By labelling to show the special condition, and the special or analysed proportions.
- (b) By a label indicating that the contents are a special gas mixture and referring to a report that is attached to the cylinder.

The major constituent or balance gas need not have the percentage marked and should be shown as, 'IN \_\_\_\_\_ (name of balance gas)' or 'BALANCE \_\_\_\_\_ (name of balance gas)'. The minor constituents should have their proportions given as a percentage, or p.p.m. (volume) or other means as appropriate.

## 5 COLOUR CODING

### 5.1 General

The name and specification of the colours adopted by this Standard refer to those specified in the current edition of AS 2700.

The general basis of the colour code is to identify the characteristics of the gas.

Toxic .....	Golden Yellow.
Flammable .....	Signal Red.
Oxidizing .....	Bluebell.
Non-flammable, non-toxic .....	Apple Green.

The cylinder colours to be used to identify the gas contents of all gas cylinders shall be in accordance with Table 1 except for the following:

- Medical gas cylinders shall be in accordance with Table 2.
- Non-medical breathing gas cylinders shall have shoulder colours in accordance with Table 2 with a Green Grey body colour.
- Refrigerant gas cylinders, if coloured, shall have regions permanently coloured in accordance with Table 3.

Painting and other permanent coatings or treatments including weather resistant plastic films are acceptable methods of colouring.

#### NOTES:

- Past editions of this Standard assigned colours to some gases which may not agree in full with the identification of characteristics above. These assignments are well recognized through long-term use and are continued in the respective Tables.
- The gas characteristic colours are the same as in EN 1089-3:2011.
- Cylinders that, prior to the publication of this Standard, have used a white body as an alternative to Silver Grey/galvanized may continue to do so until they are removed from service.
- Cylinders that, prior to the publication of this Standard, have used a brown band to indicate a non-flammable and non-toxic (N.O.S.) refrigerant gas or have used hues of yellow other than Canary Yellow to indicate a recovered refrigerant gas, may continue to do so until they are repainted or recoloured.

### 5.2 Requirements for coatings

The paint permanent coating or film used shall be fade and ultraviolet-resistant as far as practicable.

For composite gas cylinders, a clear or translucent film may be specified by the cylinder manufacturer to assist inspection of the fibre condition. Where a coloured coating or film is applied to a composite gas cylinder, the colour shall be as specified in this Standard. A white opaque plastic film is an acceptable alternative for the colour white.

### 5.3 Eductor tubes

A cylinder with a single outlet valve fitted with an eductor tube for liquid withdrawal, shall be labelled to identify the liquid withdrawal facility with the clearly written word(s) 'Liquid; or 'Liquid Withdrawal'.

The cylinder, other than a liquid petroleum gas (LP Gas) cylinder, shall also be labelled with two longitudinal stripes, which are—

- on opposite sides of the body of the cylinder;

- (b) either black or white, being selected to contrast with the colour of the body of the cylinder;
- (c) each of length not less than 50% of the body of the cylinder length; and
- (d) each of width approximately 12% of the cylinder diameter.

A LP Gas cylinder, other than for use on a forklift truck, with a single outlet valve fitted with an eductor tube for liquid withdrawal, may be coloured Royal Blue on either—

- (i) the entire shoulder of the cylinder; or
- (ii) on the valve protection ring and the shoulder of the cylinder within it.

A cylinder with dual outlets or actuators to allow either gas or liquid withdrawal, need not be labelled or coloured to indicate the liquid withdrawal facility, providing the outlets or the actuators clearly indicate which is for vapour and which is for liquid withdrawal.

#### **5.4 Enclosed cylinders**

Where the body and/or shoulder band region of a cylinder or bundle of cylinders is substantially obscured by an attached enclosure, such as an enclosed valve guard or protective panels on a bundle of cylinders, then body labels shall be applied as per Clause 4.3. If the cylinders are fully enclosed, labels clearly identifying the contents shall be applied to the outer surface of the enclosure.

## **6 COLOURS—INDUSTRIAL AND SCIENTIFIC GASES**

### **6.1 General**

Colours shall be applied to the body and, where appropriate, bands as shown in Figures 1(A) and 1(B). Colours shall be allocated to identify the constituents of the cylinder contents up to and including four constituents (i.e. up to three added components plus the balance gas).

Each constituent shall be identified whenever it is deliberately added, regardless of its final composition.

Where a gas is listed in Table 1, the colours specified for that gas shall be used. Where the gas is not listed, the colour for characteristics of each added gas or component of the mixture shall be according to Clause 5.1. The balance gas shall be identified by the body colour.

Where the body or the shoulder colour region of a cylinder is substantially obscured by an attachment, see Clause 5.4

### **6.2 Body colour**

Industrial cylinders shall be coloured on at least 80% of the shoulder and body surface nearest to the valve end of the cylinder or, if a permanent valve protection ring is fitted, on at least 80% of the cylinder, measured from below the top edge of the valve protection ring as indicated in Figures 1(A) and 1(B) as appropriate (for composite gas cylinders see Clause 5.2).

If another colour is used on the non-mandatory 20% of the cylinder body, then the colour chosen should not allow misinterpretation of the gas identity or gas characteristic as assigned in this Standard.

### **6.3 Order of colours**

The order of allocation of identification colour(s) shall be from the body, for the greatest constituent (measured by volume), to band three, for the least. Where two constituents exist in nominally equal quantities, the most hazardous shall have the higher ranking (closer to the body), or if equally hazardous, the order of the two may be arbitrary.

The order of hazard from least to greatest shall be taken as follows:

- (a) Non-flammable—Non-toxic (least).
- (b) Oxidizing.
- (c) Flammable, or hydrocarbon.
- (d) Toxic.
- (e) Toxic and flammable (greatest).

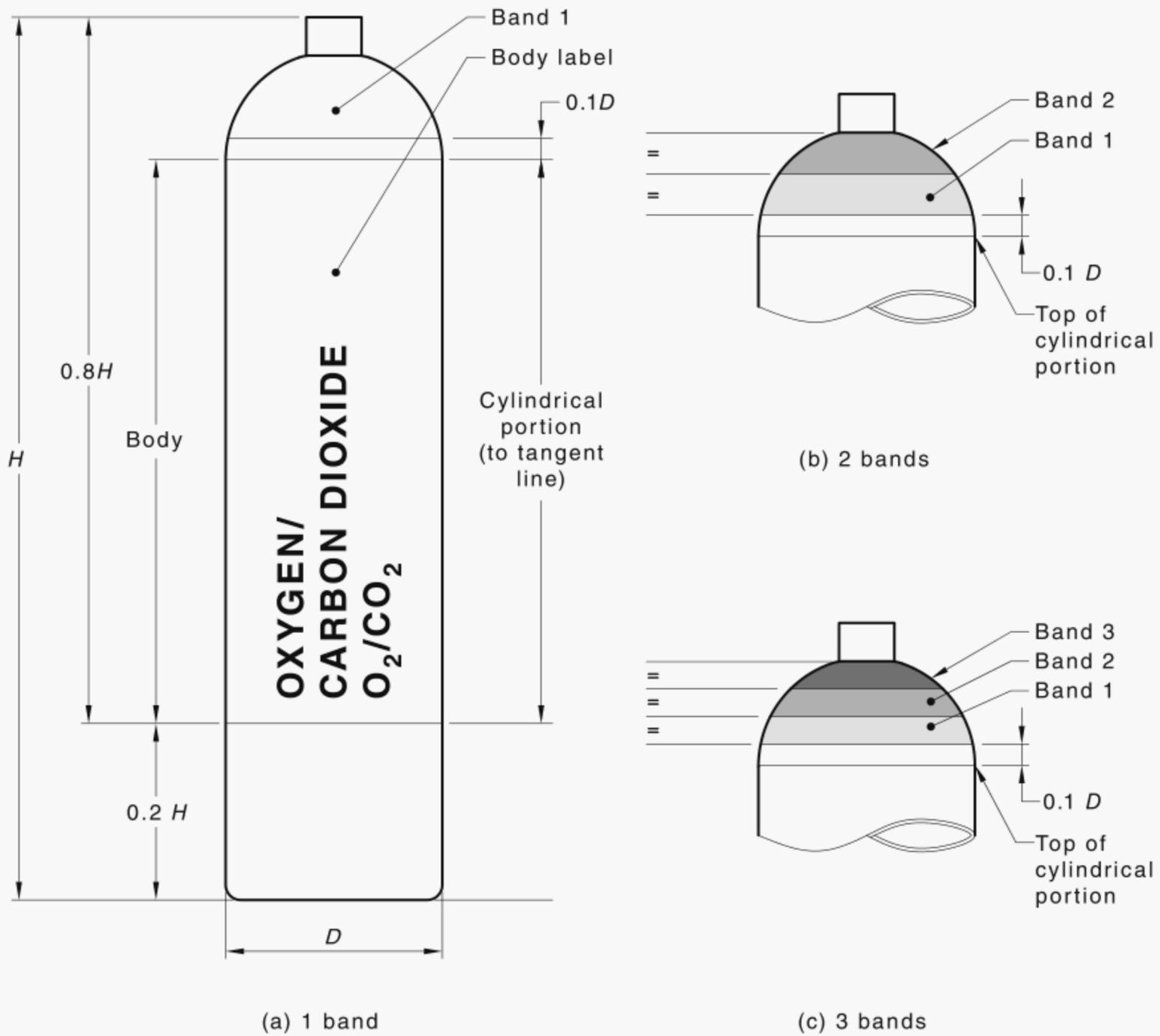
NOTE: Toxic and corrosive are to be regarded as equivalent in this Standard.

Where the cylinder contents comprise more than five constituents, this shall be indicated by the top band being painted in the colour Mustard. The body colour shall be the major constituent. Where equal proportions occur, the most hazardous is to be the body colour. Band 1 (and 2 if required) shall identify the characteristic or combination of characteristics for the total mixture, given in Table 1 and detailed in Figures 1(A) and 1(B) as appropriate.

Examples of colour identification for mixtures include the following:

- (i) 'A' percent carbon dioxide in argon (where  $A < 50$ ):
  - (A) Band—Green Grey.
  - (B) Body—Peacock Blue.
- (ii) 'A' percent hydrogen in nitrogen (where  $A < 50$ ):
  - (A) Band—Signal Red.
  - (B) Body—Pewter.
- (iii) 'A' percent Ethylene oxide in helium (where  $A < 50$ ):
  - (A) Band—Buff.
  - (B) Body—Brown.
- (iv) 'A' percent carbon dioxide and 'B' percent hydrogen sulphide (where  $A > B$  and balance of nitrogen  $> A$ ):
  - (A) Band 3, (top) Golden Yellow. (See Note.)
  - (B) Band 2, Signal Red. (See Note.)
  - (C) Band 1, (bottom) Green Grey.
  - (D) Body, Pewter.

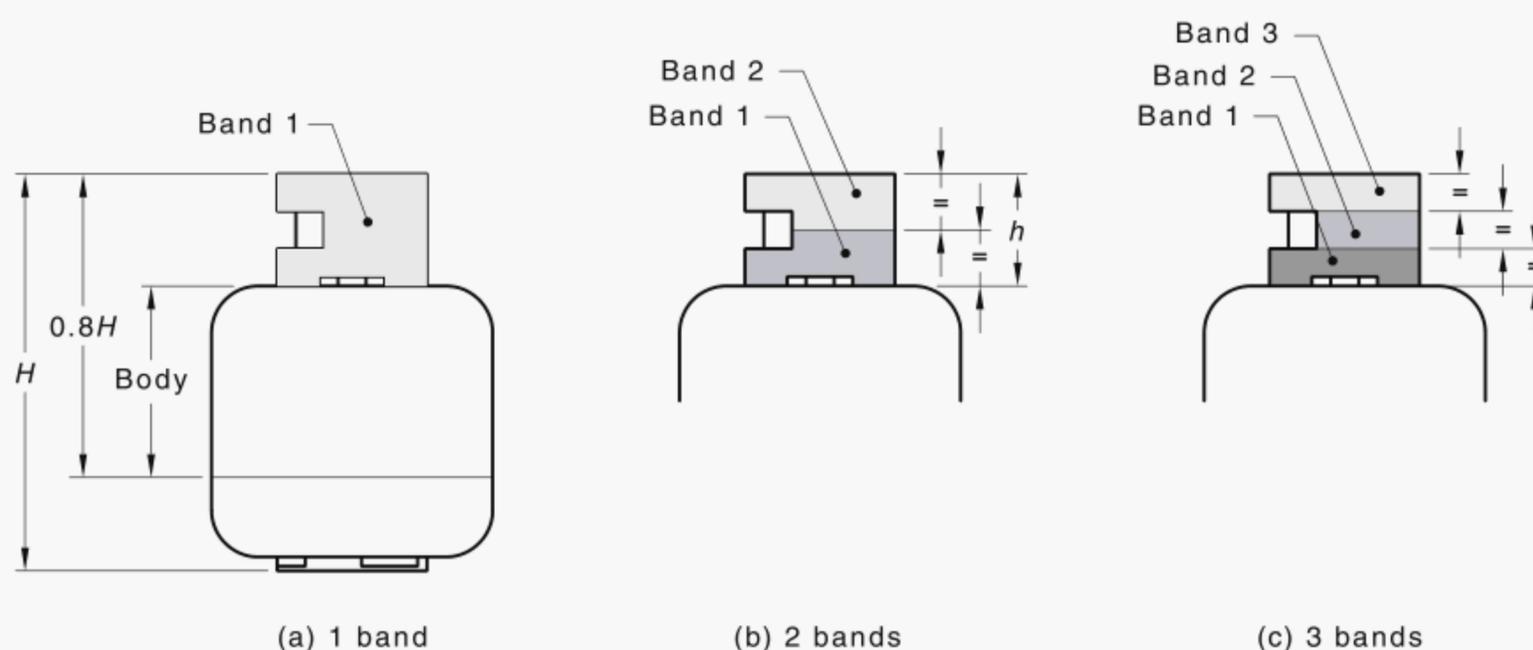
NOTE: The colour code assigned to hydrogen sulphide is Signal Red/Golden Yellow and so Bands 2 and 3 are used.



NOTES:

- 1 The colour coding does not include non-permanently attached valve guards, the colour of which should not allow misinterpretation of the gas identity or gas characteristic.
- 2 If the cylinder is not fitted with a valve guard or handle, the cylinder neck shall be of the colour assigned to the top band.

FIGURE 1(A) INDUSTRIAL AND SCIENTIFIC GASES—TYPICAL BODY AND BAND REGIONS—SEAMLESS CYLINDERS WITH AND WITHOUT PERMANENT VALVE GUARDS



NOTE: The Band 1 colour region may include the shoulder of the cylinder.

FIGURE 1(B) INDUSTRIAL AND SCIENTIFIC GASES—TYPICAL BODY AND BAND REGIONS—WELDED CYLINDERS WITH PERMANENTLY ATTACHED VALVE PROTECTION RING

TABLE 1  
IDENTIFICATION COLOURS FOR  
INDUSTRIAL AND SCIENTIFIC GASES

Gas or characteristic(s) of gas	Abbreviation or symbol	AS 2700 colour names for body and bands (see Note 1)
Acetylene	C <sub>2</sub> H <sub>2</sub>	Claret
Air	Air	Pewter/Black (see Note 2)
Argon	Ar	Peacock Blue
Butane (commercial)	—	Silver Grey (see Note 3)
Butane (pure)	C <sub>4</sub> H <sub>10</sub>	Silver Grey (see Note 3)
Carbon dioxide	CO <sub>2</sub>	Green Grey
Chlorine	Cl <sub>2</sub>	Golden Yellow
Ethylene	C <sub>2</sub> H <sub>4</sub>	Violet
Ethylene oxide	C <sub>2</sub> H <sub>4</sub> O	Buff
Helium	He	Brown
Hydrogen	H <sub>2</sub>	Signal Red
Hydrogen sulfide	H <sub>2</sub> S	Signal Red/Golden Yellow (see Note 2)
Liquid petroleum gas	LP Gas or LPG	Silver Grey (see Note 3)
Methane (commercial)	—	Silver Grey (see Note 3)
Methane (pure)	CH <sub>4</sub>	Silver Grey (see Note 3)
Methyl bromide	CH <sub>3</sub> Br	Golden Yellow
Nitric oxide	NO	Turquoise
Nitrogen	N <sub>2</sub>	Pewter
Nitrous oxide	N <sub>2</sub> O	Ultramarine
Oxygen	O <sub>2</sub>	Black

(continued)

**TABLE 1** (continued)

Gas or characteristic(s) of gas	Abbreviation or symbol	AS 2700 colour names for body and bands (see Note 1)
Propane (commercial)	—	Silver Grey (see Note 3)
Propane (pure)	C <sub>2</sub> H <sub>6</sub>	Silver Grey (see Note 3)
Flammable excluding hydrocarbon gases, (N.O.S.) (see Note 4)	—	Signal Red (see Note 5)
Gas mixtures (N.O.S.) containing Oxygen ≤23.5% (see Note 4)		Apple Green (see Note 5)
Gas mixtures (N.O.S.) containing Oxygen >23.5% (see Note 4)		Bluebell (see Note 5)
Hydrocarbon (N.O.S.) (see Note 4)	—	Silver
Non-flammable non-toxic (N.O.S.) (see Note 4)	—	Apple Green (see Note 5)
Oxidizing (N.O.S.) (see Note 4)	—	Bluebell (see Note 5)
Toxic (N.O.S.) (see Note 4)	—	Golden Yellow (see Note 5)
Toxic and flammable (N.O.S.) (see Note 4)	—	Signal Red/Golden Yellow (see Note 2)
Toxic and non-flammable (N.O.S.) (see Note 4)	—	Brown/Golden Yellow (see Note 2)

## NOTES:

- 1 See Appendix A for AS 2700 colour specifications.
- 2 Where two colours are shown (separated by '/'), the first shown is the body region colour and the second shown is the band region colour.
- 3 Silver Grey is taken to include the colour obtained by the application of metallic aluminium paint and that of hot dipped galvanizing of the cylinder.
- 4 N.O.S. = Not otherwise specified.
- 5 See Clause 5.1.
- 6 The name of the gas and/or chemical formula may be on the body of the cylinder. See Clause 4.3.

**7 COLOUR CODING—MEDICAL GASES**

Medical gas cylinders shall be colour coded by the combination of specified shoulder colours and a common white body. (For composite gas cylinders see Clause 5.2.)

NOTE: The letter 'N' markings on the shoulder of a medical cylinder are redundant and should be removed at or before the cylinder's next periodic inspection.

Where a gas is listed in Table 2, the colours specified for that gas shall be used for the shoulder colour.

Where the gas is not listed, the colour characteristics of each added gas or component of the mixture shall be according to Clause 5.1. A shoulder colour shall be added to identify a component wherever it is deliberately added regardless of its final concentration in the mixture. The colour specifications of the permitted shoulder colours are given in the Appendix A.

The identifying colours shall all be visible when viewed from the valve end of the cylinder and shall be in accordance with Figures 2 and 3.

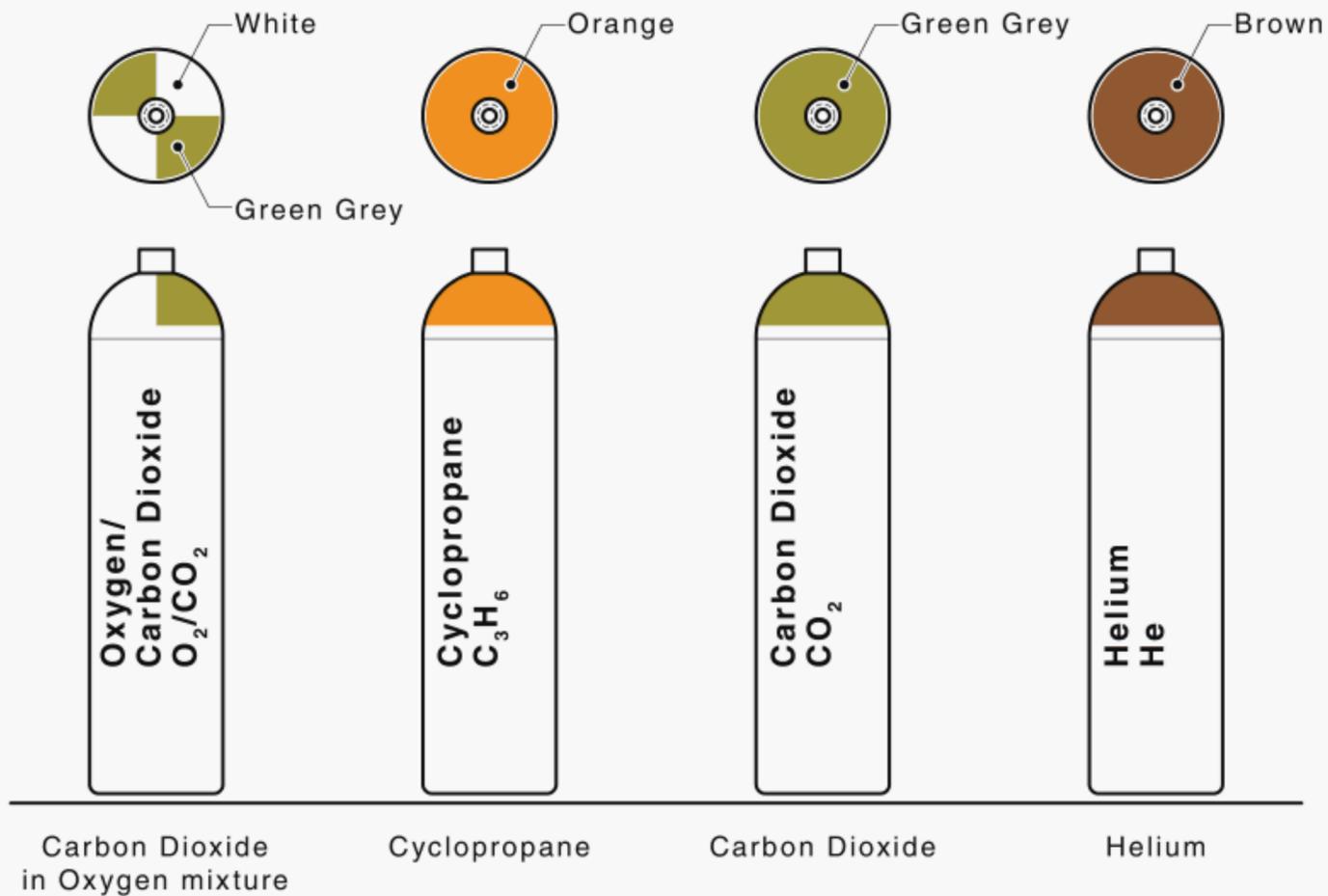
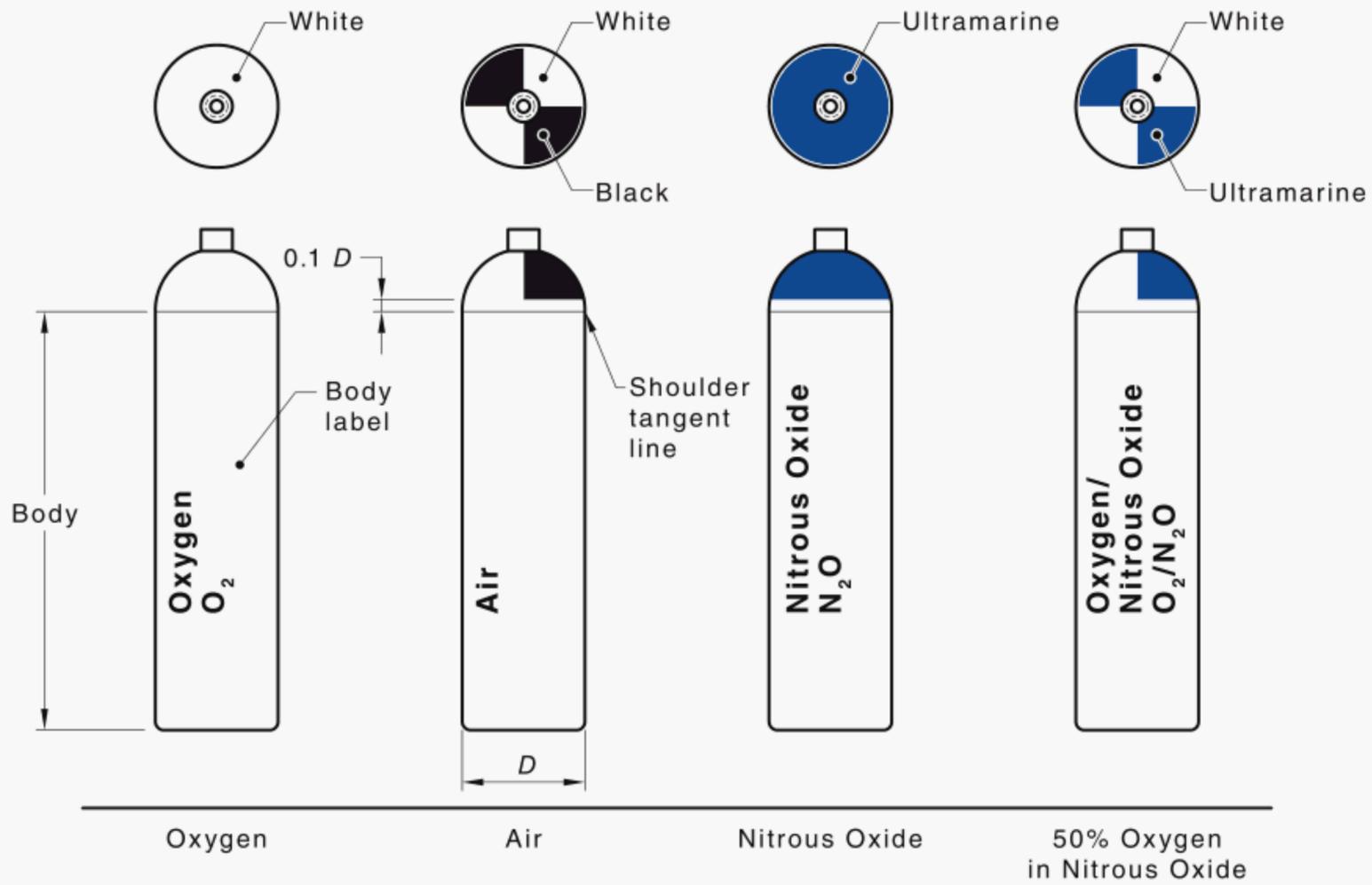
Where the body or the shoulder colour region of a cylinder is substantially obscured by an attachment, see Clause 5.4.

**TABLE 2**  
**IDENTIFICATION COLOURS FOR MEDICAL GASES**

<b>Name of gas, or gas mixture (see Note 1)</b>	<b>Abbreviation or symbol (see Note 2)</b>	<b>Shoulder colours (see Note 3)</b>
Air	Air	Black and White
Carbon dioxide	CO <sub>2</sub>	Green Grey
Cyclopropane	C <sub>3</sub> H <sub>6</sub>	Orange
Ethylene	C <sub>2</sub> H <sub>4</sub>	Violet
Helium	He	Brown
Nitric oxide	NO	Turquoise
Nitrogen	N <sub>2</sub>	Black
Nitrous oxide	N <sub>2</sub> O	Ultramarine
Oxygen	O <sub>2</sub>	White
Carbon dioxide in oxygen (CO <sub>2</sub> < 7%)	A% CO <sub>2</sub> in O <sub>2</sub>	White and Green Grey
Carbon monoxide in air	A% CO in air	Black, White and Golden Yellow
Helium and oxygen (O <sub>2</sub> ≥ 20%)	A% He in O <sub>2</sub> and A% O <sub>2</sub> in He	White and Brown
Oxygen in helium (O <sub>2</sub> < 20%)	A% O <sub>2</sub> in He	Apple Green (see Note 4)
Oxygen in nitrogen (O <sub>2</sub> < 20%)	A% O <sub>2</sub> in N <sub>2</sub>	Apple Green (see Note 4)
Oxygen in nitrogen (20% ≤ O <sub>2</sub> ≤ 23.5%)	A% O <sub>2</sub> in N <sub>2</sub>	Black and White
Nitrogen and oxygen (O <sub>2</sub> > 23.5%)	A% N <sub>2</sub> in O <sub>2</sub> and A% O <sub>2</sub> in N <sub>2</sub>	Bluebell (see Note 4)
50% Nitrous oxide in oxygen	50% N <sub>2</sub> O in O <sub>2</sub>	White and Ultramarine

NOTES:

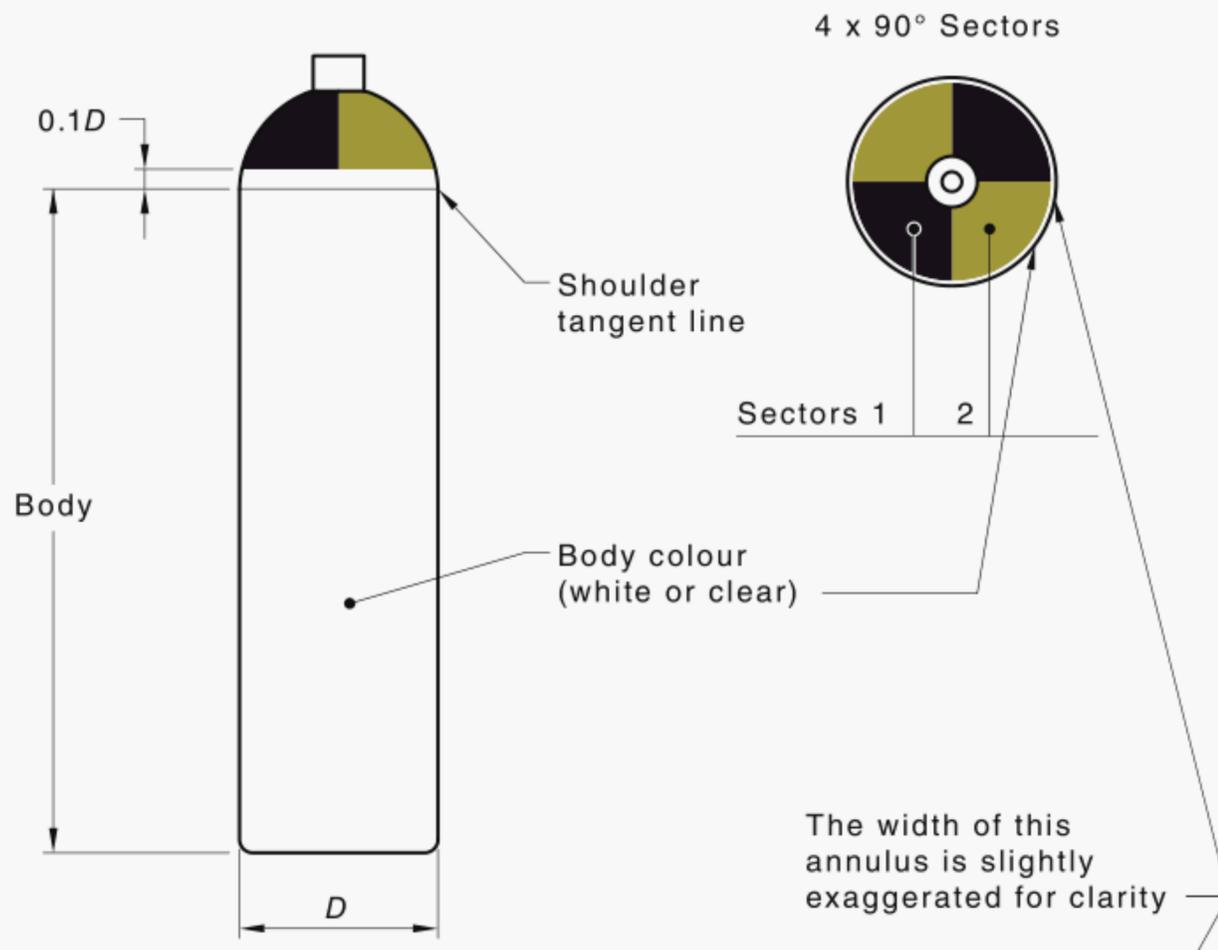
- 1 The name of the gas and chemical formula may be on the body of the cylinder.
- 2 A% is less than 50.
- 3 Multiple colours are applied as sectors. Diametrically opposite sectors are of the same colour (see Figure 3).
- 4 See Clause 5.1.
- 5 Labelling specifies the exact composition of the mixture.
- 6 The name of the gas and/or chemical formula may be on the body of the cylinder. See Clause 4.3.
- 7 For gases intended for non-medical breathing purposes, see Clause 5.1.
- 8 The list of gases in Table 2 is not identical to those in ISO 32, AS 2896 and AS 2902. Colours in ISO 32 are defined by reference to the ISO colour Standard.



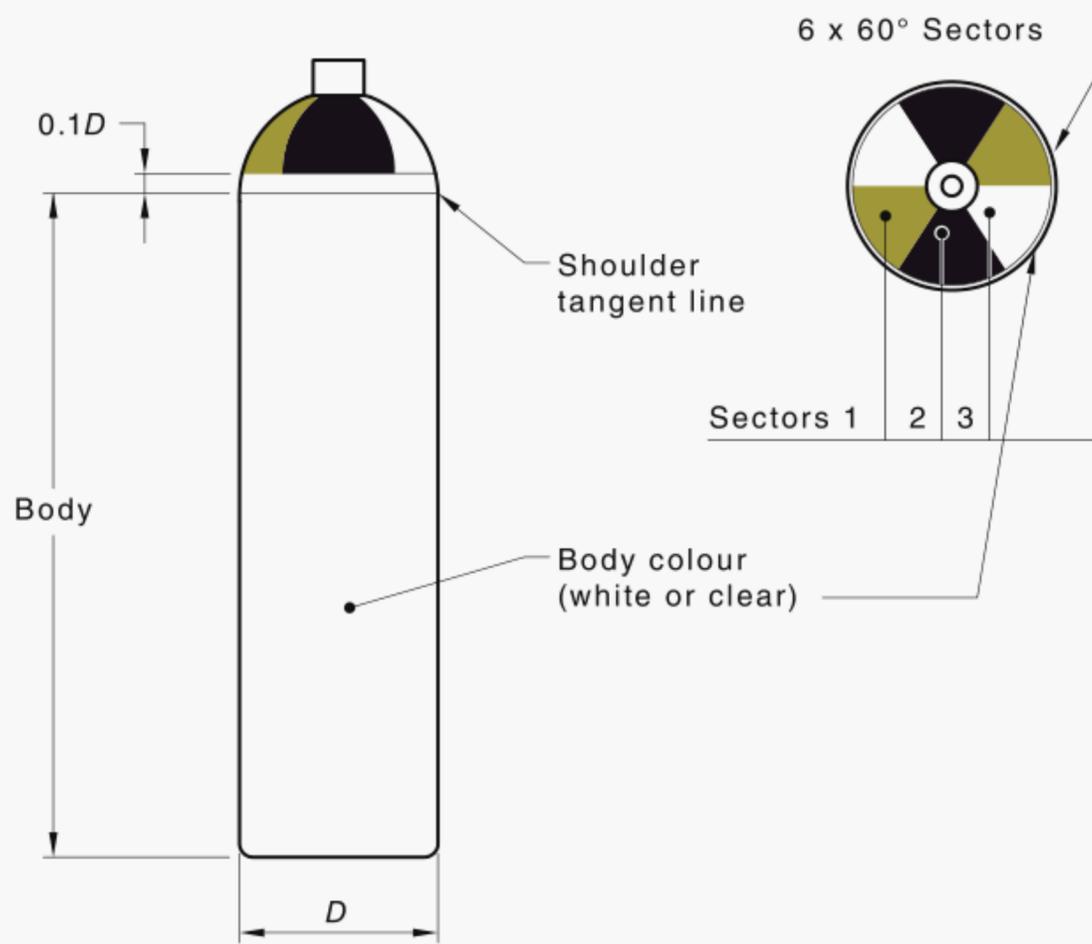
NOTES:

- 1 Body labels, see Clause 4.3.
- 2 See Figure 3 for the dimensions and positions of the colours for all medical gases.
- 3 On colour versions of this Standard (web version only) the colour shown may not correspond exactly to the true colour identification numbers given in this Standard. See Appendix A for colour specification numbers.

FIGURE 2 COLOUR SCHEME—EXAMPLES OF COLOURS AND THEIR POSITION FOR COMMONLY USED MEDICAL GASES



(a) 2 Sector colours



(b) 3 Sector colours

NOTE: On colour versions of this Standard (web version only), the colour shown may not correspond exactly to the true colour identification numbers given in this Standard.

FIGURE 3 MEDICAL GASES—COLOUR SCHEME

## 8 COLOUR CODING—REFRIGERANT GASES

Refrigerant gas cylinders shall have regions permanently coloured in accordance with this Standard (see Table 3 and Figure 4), or they shall be coloured entirely Silver Grey, or left with an exposed metallic finish (e.g. galvanized), with prominent labelling to indicate the contents.

Where colours are used they shall be arranged as follows:

- (a) Colours for nominated refrigerant numbers shall be in accordance with Table 3.
- (b) Colours for binary or ternary mixtures of nominated refrigerants shall be in accordance with Table 3 using colour bands as shown in Figure 4(b) and Band 1 is the major constituent gas, and Bands 2 and 3 are in decreasing order of gas concentration (measured by volume).
- (c) Refrigerant mixtures with 4 or more components shall have a Silver Grey, or galvanized body with the Band 1 (and Band 2 when needed) indicating the characteristics of the mixture (see (d) below), and the top band being Inca Gold.
- (d) Where the gas is not listed in Table 3, the colour for the characteristics of each added gas or component of the mixture shall be in according to Clause 5.1.

If another colour is used on the non-mandatory 20% of the cylinder body, then the colour chosen should not be similar to any used to identify a gas or gas characteristic (see Figure 4).

**TABLE 3**  
**IDENTIFICATION COLOURS FOR REFRIGERANT GASES**

Refrigerant			Colours (Notes 1 and 2)		
Name or characteristic	Abbreviation or symbol	Number designation	Band 1	Band 2	Body
Ammonia	NH <sub>3</sub>	R717	Slate		Silver Grey or Galvanized (see Note 5)
Chlorodifluoromethane	HCFC-22	R22	Moss Green		Silver Grey or Galvanized (see Note 5)
Difluoromethane	HFC-32	R32	Signal Red		Silver Grey or Galvanized (see Note 5)
Difluoromethane/ Pentafluoroethane	HFC-410A	R410A	Rose Pink		Silver Grey or Galvanized (see Note 5)
Difluoromethane/ Pentafluoroethane/ 1,1,1,2 Tetrafluoroethane	HFC-407C	R407C	Golden Tan		Silver Grey or Galvanized (see Note 5)
Isobutane	C4H10	R600a	Signal Red		Silver Grey or Galvanized (see Note 5)
Pentafluoroethane/ 1,1,1 Trifluoroethane/ 1,1,1,2 Tetrafluoroethane	HFC-404A	R404A	Orange		Silver Grey or Galvanized (see Note 5)
Propane	C3H8	R290	Signal Red		Silver Grey or Galvanized (see Note 5)

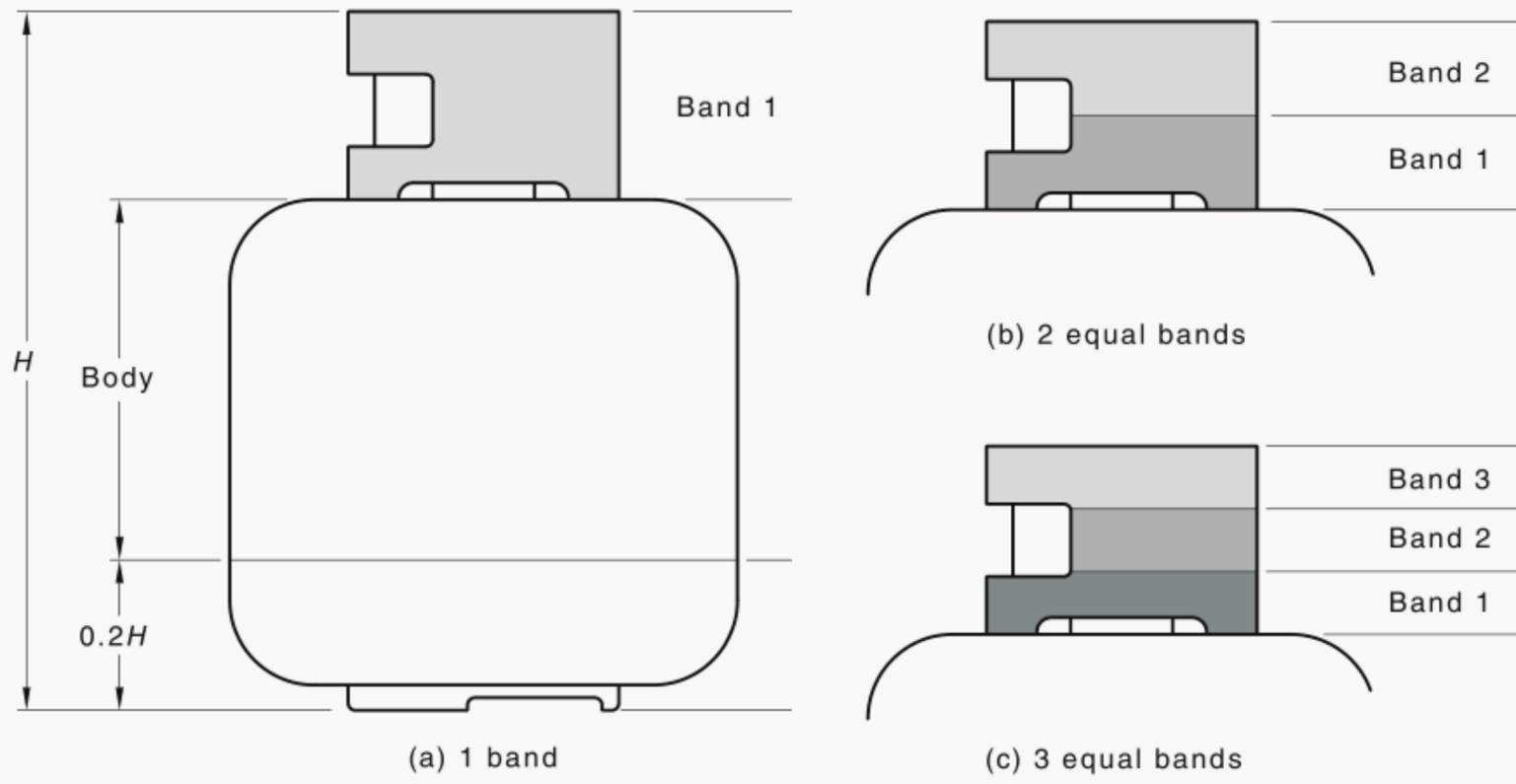
*(continued)*

**TABLE 3** (continued)

Refrigerant			Colours (Notes 1 and 2)		
Name or characteristic	Abbreviation or symbol	Number designation	Band 1	Band 2	Body
1,1,1,2-Tetrafluoroethane	HFC-134a	R134a	Aqua		Silver Grey or Galvanized (see Note 5)
2,3,3,3 Tetrafluoropropene	HFO-1234yf	R1234yf	Signal Red		Silver Grey or Galvanized (see Note 5)
Flammable (N.O.S.) (see Note 3)			Signal Red (see Note 4)		Silver Grey or Galvanized (see Note 5)
Flammable and non-toxic 'Recovered Refrigerant'			Canary Yellow	Signal Red	Slate or Galvanized (see Note 5)
Flammable and toxic (N.O.S.) (see Note 3)			Signal Red (see Note 4)	Golden Yellow	Silver Grey or Galvanized (see Note 5)
Non-flammable and non-toxic (N.O.S.) (see Note 3)			Apple Green (see Note 4)		Silver Grey or Galvanized (see Note 5)
Non-flammable and non-toxic 'Recovered Refrigerant'			Canary Yellow		Slate or Galvanized (see Note 5)
Oxidizing (N.O.S.) (see Note 3)			Bluebell (see Note 4)		Silver Grey or Galvanized (see Note 5)
Toxic (N.O.S.) (see Note 3)			Golden Yellow (see Note 4)		Silver Grey or Galvanized (see Note 5)

## NOTES:

- 1 See Appendix A for colour specification numbers.
- 2 Where refrigerant mixtures are used, the minor band shall be used as the identification of the added component.
- 3 N.O.S. = Not otherwise specified.
- 4 See Clause 5.1.
- 5 Galvanized = the colour obtained by hot dipped galvanizing of the cylinder.



NOTE: The Band 1 colour region may include the shoulder of the cylinder.

FIGURE 4 REFRIGERANT GASES—TYPICAL BODY AND BAND REGIONS

APPENDIX A  
COLOUR SPECIFICATIONS  
(Normative)

<b>AS 2700 colour and number</b>	
Apple Green	G26
Aqua	B25
Black	—
Bluebell	B41
Brown	X54
Buff	X41
Canary Yellow	Y11
Claret	R55
Golden Tan	X53
Golden Yellow	Y14
Green Grey	N32
Inca Gold	Y16
Moss Green	G14
Mustard	Y42
Royal Blue	B12
Orange	X15
Peacock Blue	T53
Pewter	N63
Rose Pink	R25
Signal Red	R13
Silver Grey	N24
Slate	G64
Turquoise	T15
Ultramarine	B21
Violet	P13
White	—

NOTES

### **Standards Australia**

Standards Australia develops Australian Standards® and other documents of public benefit and national interest. These Standards are developed through an open process of consultation and consensus, in which all interested parties are invited to participate. Through a Memorandum of Understanding with the Commonwealth Government, Standards Australia is recognized as Australia's peak non-government national standards body. Standards Australia also supports excellence in design and innovation through the Australian Design Awards.

For further information visit [www.standards.org.au](http://www.standards.org.au)

### **Australian Standards®**

Committees of experts from industry, governments, consumers and other relevant sectors prepare Australian Standards. The requirements or recommendations contained in published Standards are a consensus of the views of representative interests and also take account of comments received from other sources. They reflect the latest scientific and industry experience. Australian Standards are kept under continuous review after publication and are updated regularly to take account of changing technology.

### **International Involvement**

Standards Australia is responsible for ensuring the Australian viewpoint is considered in the formulation of International Standards and that the latest international experience is incorporated in national Standards. This role is vital in assisting local industry to compete in international markets. Standards Australia represents Australia at both the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC).

### **Sales and Distribution**

Australian Standards®, Handbooks and other documents developed by Standards Australia are printed and distributed under licence by SAI Global Limited.

*For information regarding the development of Standards contact:*

Standards Australia Limited  
GPO Box 476  
Sydney NSW 2001  
Phone: 02 9237 6000  
Fax: 02 9237 6010  
Email: [mail@standards.org.au](mailto:mail@standards.org.au)  
Internet: [www.standards.org.au](http://www.standards.org.au)

*For information regarding the sale and distribution of Standards contact:*

SAI Global Limited  
Phone: 13 12 42  
Fax: 1300 65 49 49  
Email: [sales@saiglobal.com](mailto:sales@saiglobal.com)



ISBN 978 1 76035 499 2

This page has been left intentionally blank.