

Technical Information Sheet

TIS NO 6: Rev 1 2005

Cylinder Identification Colour Coding and Labelling Requirements

For many years British Standard 349 has covered the identification colours for Industrial Gas Cylinders in the United Kingdom. More recently much work has been carried out to harmonise technical standards for gas cylinders across Europe. As part of this process, the colours of industrial gas cylinders will now be the same in the EEC following the publication of BS EN1089-3: 1997 Transportable Gas Cylinders – Cylinder Identification Part 3 Colour coding. (The current edition of this standard is BS EN 1089-3: 2004.)

Medical gases are already harmonised and consistent with ISO 32.

The purpose of this leaflet is to explain to users of gas cylinders the recent changes and also to give some explanation to the contents of cylinder labels, which are the primary means of identifying the contents of gas cylinders.

Some aspects of BS EN1089-3 are optional and this publication follows the recommendations of the European Industrial Gases Association whose aim is to arrive at a fully harmonised colour coding system across Europe.

The new colour code will be introduced progressively over the next few years either as new cylinders are purchased or re-tested by the gas companies. The reason for an extended introduction period is due to the great number of cylinders in service.

Colour coding applies solely to the shoulder, or curved part, at the top of the cylinder and is used to identify the properties of the gas in the cylinder. A number of gases have been assigned a specific colour and these are shown below. Where a gas does not have a specific colour, the properties of the gas are indicated. Two concentric bands may be used to show where a gas has more than one property, or the two colours may be painted in quarters around the shoulder if preferred.

Unless specifically identified, the properties and colours are in increasing order of hazard:

Inert: **Bright green**

Oxidising: **Light blue**

Flammable: **Red**

Toxic: **Yellow**

Important points:

- The colour coding applies to industrial and medical cylinders.

- The use of the stencilled letter ‘N’, specified in BS EN 1089-3, is not necessary in the UK.
- The colour coding applies only to the cylinder shoulder.
- The body of the cylinder may be coloured for other purposes and most gas companies will select their own colour that will not conflict with the colour on the shoulder.
- Colour coding of cylinders in bundles/packs is not a requirement of BS EN 1089-3, but can be used as an additional aid to identification for safety or operational reasons.




Note: RAL numbers used in this document refer to the register RAL 840 HR, obtainable from:

RAL
 Siegburger Strasse 39
 D-53757 Sankt Augustin
 Germany

Colour classification by hazard property





GAS TYPE	NEW COLOURS
INERT	 Bright green RAL 6018
OXIDISING	 Light blue RAL 5012
FLAMMABLE	 Red RAL 3000
TOXIC AND/OR CORROSIVE	 Yellow RAL 1018

Specific gases



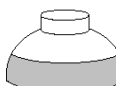



GAS TYPE		NEW COLOURS
Acetylene*	C ₂ H ₂	 Maroon colour 541 in BS 381 C (Body & shoulder)
Oxygen	O ₂	 White RAL 9010
Nitrous oxide	N ₂ O	 Blue RAL 5010

* The colour given in BS EN 1089-3 is RAL 3009, and is actually more like brick-red. In the UK it is a legal requirement to paint acetylene cylinders maroon. It is recommended therefore that UK acetylene cylinders continue to be painted maroon as specified in BS 381c, colour number 541. Attention is drawn to the fact that cylinders originating in other European countries may be encountered, which are painted to RAL 3009.









Inert gases for medical and industrial applications

GAS TYPE		NEW COLOURS
Argon	Ar	 Dark green RAL 6001
Nitrogen	N ₂	 Black RAL 9005
Carbon dioxide	CO ₂	 Grey RAL 7037
Helium	He	 Brown RAL 8008

Gas mixtures for medical or inhalation purposes

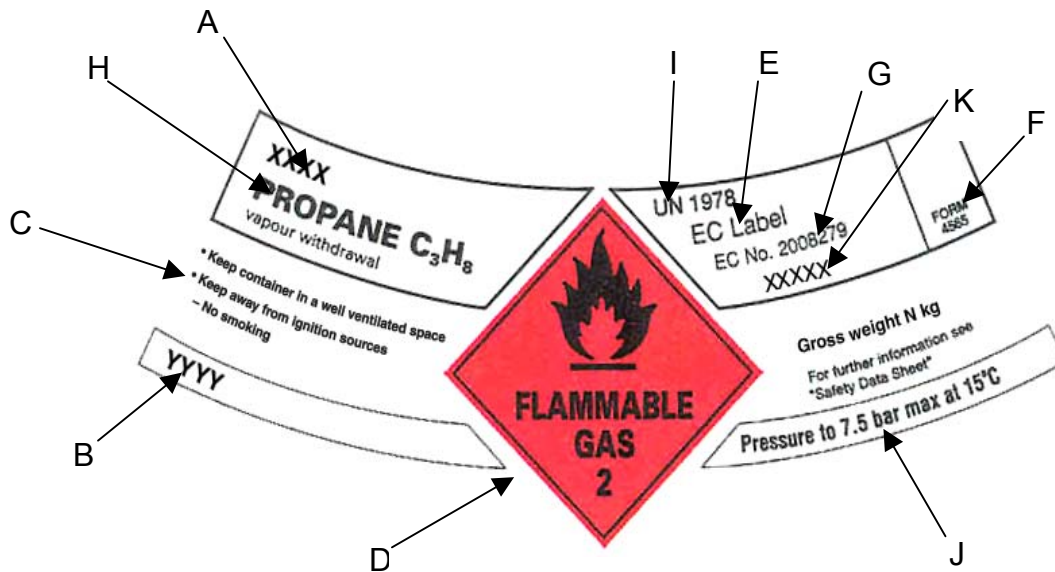
GAS TYPE		NEW COLOURS	
Air or synthetic air $20\% \leq O_2 \leq 23\%$			White RAL 9010 Black RAL 9005
Helium/oxygen	He/O ₂		White RAL 9010 Brown RAL 8008
Oxygen/carbon dioxide	O ₂ /CO ₂		White RAL 9010 Grey RAL 7037
Oxygen/nitrogen O ₂ < 20%	O ₂ /N ₂		Bright green RAL 6018
Oxygen/nitrogen O ₂ > 23%	O ₂ /N ₂		Light Blue RAL 5012
Oxygen/nitrous oxide	O ₂ /N ₂ O		White RAL 9010 Blue RAL 5010

Examples of some industrial gases and gas mixtures

GAS TYPE		NEW COLOURS	
Air or synthetic air	O ₂ < or = 23.5%		Bright green RAL 6018
Ammonia	NH ₃		Yellow RAL 1018
Chlorine	Cl ₂		Yellow RAL 1018
Hydrogen	H ₂		Red RAL 3000
Krypton	Kr		Bright green RAL 6018
Methane	CH ₄		Red RAL 3000
Argon/carbon dioxide	Ar/CO ₂		Bright green RAL 6018
Nitrogen/carbon dioxide	N ₂ /CO ₂		Bright green RAL 6018

LABELLING INFORMATION

All gas cylinders are required to be labelled to indicate the contents of the cylinder. Below is an example of a typical label, with an explanation of the various items that are displayed. It must always be remembered that the label is the means of identifying the contents of the cylinder. The colour of the cylinder is only a guide.



- A Company name
- B Address of the company in the United Kingdom
- C Risk and safety phrases relating to the product
- D Hazard symbols
- E EC label (for pure substances only)
- F Revision number (gas company use to identify label revision)
- G EC number, if applicable
- H Product name
- I UN identification number and proper shipping name (given by product name)
- J Any additional company information
- K Emergency contact telephone number

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