Helium

He

Specifications

Component	Chemical formula	Unit	Helium 4.6	Helium 5.0	Helium 6.0
Helium	He	%	≥ 99.996	≥ 99.999	≥ 99.9999
Water	H_2O	ppm	≤ 5	≤ 3	≤ 0.3
Oxygen	O_2	ppm	≤ 5	≤ 2	≤ 0.1
Total hydrocarbons	C_nH_m	ppm	≤ 1	≤ 0.5	≤ 0.1
Carbon monoxide	CO	ppm			≤ 0.1
Carbon dioxide	CO_2	ppm			≤ 0.1
Nitrogen	N_2	ppm	≤ 25	≤ 8	≤ 0.2
Hydrogen	H_2	ppm			≤ 0.1

Other types of Helium Balloon Gas

Characteristics Colourless and odourless gas. Inert.

Physical hazards Compressed gas; may explode if heated.

Health hazards Asphyxiant in high concentrations.

UN number 1046 (Compressed)

CAS number 7440-59-7

EC number 231-168-5

Hazards symbol (GHS) GHS04

Signal word (GHS) WARNING

GHS ADR Class 2, 1A

Properties

Molecular weight (mass)	4.003	g/mol
Boiling point at 1.013 bar	-268.93	°C
Density at 15°C, 1.013 bar	0.169	kg/m^3
Density of gas in relation to air (specific	0.14	
Critical temperature	-267.95	°C

Packaging

Size	**D**	**G**	**12 cyl pack**
Volume	10 ltr wc	50 ltr wc	12 x 50 ltr wc
Filling pressure @ 15°C	200 bar	200 bar	300 bar
Dimensions	150 x 760 mm	230 x 1620 mm	200 x 800 x 1700 mm
Gross weight	11 kg	54 kg	1100 kg
Content @ 15°C , 1.013 bar	1.8 m^3	9.1 m^3	157

Valve outlet **AS type 10**

Cylinder colour Brown

Conversion Gas-Mass-Liquid

m^3 gas (+15°C, 1.013 bar)	litre liquid (boiling point, 1.013 bar)	kg
1.0	1.35	0.169
0.741	1.0	0.125
5.91	7.98	1.0

Recommended pressure regulator

For specialty gases, Coregas offers two series of cylinder regulators. Single stage regulators reduce the pressure in one step. Two stage regulators reduce the pressure in two steps and give a more constant outlet pressure over time.

SPECTRON	Single Stage Brass	FM51
	Dual Stage Brass	FM53

Safe handling and storage advise

CYLINDER STORAGE AND HANDLING

Store cylinders in upright position and properly secured to prevent falling over.
Keep cylinders below 50°C in a well ventilated place, away from sources of heat and combustible materials.
Protect cylinders, particularly the valve, against physical damage whether full or empty.
Close valves on empty cylinders.

LEAKING CYLINDERS

Move to a well ventilated area.
Stop leak, if possible to do so.
If leak cannot be stopped, move cylinder to a safe area and allow to empty.
Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe.

PRECAUTIONS IN USE

Never allow oil or grease on cylinder or valve.
Close cylinder valve when not in use.
Always use regulator to connect to the system.
Secure cylinders to prevent falling over.
Open cylinder valve slowly.
Use only in well ventilated area.

PERSONAL PROTECTION

Personnel regularly engaged in the use and movement of gas cylinders must be provided with:
• Safety footwear
• Leather or PVC gloves
• Full cover overalls & safety glasses are recommended.

FIRE

Cool cylinders with water from a protected location.
Do not approach cylinders suspected to be hot.
Remove cool cylinders from path of the fire.
If unable to keep cylinders cool, evacuate area.

FIRST AID
Get immediate medical advice/attention.

ADDITIONAL INFORMATION

The information, recommendations and data contained in this publication are intended to give basic guidance for safe handling and use of gases.
It is essential for the safe use of gases that personnel are properly trained and are fully aware of the possible hazards.
Further information and advice on any matter relating to the safe handling or use of these products may be obtained from the nearest Coregas office.

Liability clause

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