

UN	1006
HAZCHEM	2.1
CLASS	2.2

Argon, compressed

T E C H S P E C S

CONTAINER	'Fz'	'G'	'E'	MAXI 4	MAXI 8
CONTENT m ³ (101.325 kPa @ 15° C)	10.2	7.5	3.7	58.0	116
GAUGE PRESSURE (kPa @ 15° C)	approx. 6,000*	14,700	14,700	approx. 10,000*	approx. 10,000*
AVERAGE WEIGHT kg (full)	71	68	34	460	865
AVERAGE WEIGHT kg (empty)	54	55	28	355	660
OUTLET CONNECTION A.S. 2473 Type 10	HORIZ.	VERTICAL	VERTICAL	HORIZ.	HORIZ.

NOTE: The above data is typical of the most common containers.
* denotes the use of a pressure reducing valve.

SPECIFICATION

Argon > 99.99%

PHYSICAL DATA

Chemical Symbol	Ar
Boiling Point	-185.9°C
Relative Density (Air = 1)	1.4
Molecular Weight	39.948
Critical Temperature	-122.4°C
Flashpoint	Non-flammable
Density of Gas (@101.3 kPa & 15°C)	1.675 kg/m ³
Solubility in Water (@101.3 kPa & 20°C)	0.036
Specific Volume (@101.3 kPa & 15°C)	1.692 m ³ /kg

PROPERTIES

Argon is an inert, non toxic, colourless, odourless and tasteless gas. It constitutes approx. 0.9% of the atmosphere.

USES

Owing to its chemical inertness, argon is employed for welding in inert gas atmospheres. Argon, either pure or in combination with carbon dioxide, oxygen, hydrogen or helium, is the most widely used gas in welding applications.

Argon is also employed in metallurgy for heat treatment in a protective atmosphere, notably for the annealing of high carbon steels to prevent decarburization.

It serves as a carrier gas for silane in the deposition of silicon.

Argon is employed in the iron and steel industry in the following manner.

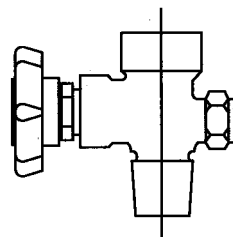
- In the gaseous state, it serves in degassing and desulfuration of molten steel and iron baths.

In the area of electrical lighting, argon is used to fill:

- incandescent light bulbs.
- phosphorescent tubes, in mixtures with neon, helium and mercury vapour.
- thyratron radio tubes, in mixtures with neon.



CYLINDER IDENTIFICATION COLOUR
• PEACOCK BLUE



OUTLET CONNECTION
AS 2473 TYPE 10, TYPE 50
FEMALE R.H. THREAD



CLASS LABEL

Argon, compressed

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TECH SPECS

H A N D L I N G & S A F E T Y

USES Continued

Argon is also employed as a carrier gas in chromatography. Mixed with methane, argon is used for flushing Geiger-Muller counters employed for the detection of X- and γ -rays.

These instruments are employed in monitoring nuclear radiation and for the analysis of spectra emitted by X-ray fluorescence analytical devices.

HAZARDS

Should argon replace oxygen in air there is a risk of asphyxia: air containing less than 16% oxygen is dangerous.

CYLINDER STORAGE AND HANDLING

Store cylinders upright in a cool, well ventilated area away from sources of heat and combustible materials. Protect cylinders, particularly the valve, against physical damage whether full or empty.

Do not artificially heat cylinder. Keep away from artificial heat.

Do not allow any part of the cylinder to be exposed to temperatures above 55°C.

Check that cylinders are clearly labelled.

Keep outlet seals in place on full cylinders.

Close valves on empty cylinders.

LEAKING CYLINDERS

Move to a well ventilated area.

Stop leak if possible to do so.

Evacuate area way from direction of movement of gas.

If leak cannot be stopped, move cylinder to a safe area and allow to empty.

MATERIALS COMPATIBILITY

Argon is non-corrosive and so any common metal is acceptable, provided equipment is designed to withstand process pressure.

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 system.

Secure cylinders to prevent falling over.

Open cylinder valve slowly.

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

Argon will not support combustion.

Remove cylinders not directly affected by fire.

Cool cylinders with water from a protected location.

If unable to keep cylinders cool, evacuate area.

FIRST AID

If victim is conscious:

- Move to uncontaminated area to breathe fresh air.
- Keep warm and quiet.
- Call doctor.

If victim is unconscious:

- Move to uncontaminated area and give assisted respiration.
- When breathing is restored, treatment as above. Continued treatment should be symptomatic and supportive.

ADDITIONAL INFORMATION

The information, recommendations and data contained in this publication are intended to give basic guidance to users of Air Liquide gases for their safe handling and use.

Material Safety Data Sheets (MSDS) for gases and gas mixtures supplied by Air Liquide are also available.

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 Air Liquide office.