

MATERIAL SAFETY DATA SHEET (MSDS) ARGON

Please ensure that this MSDS is received by an appropriate person

DATE: March 2023
Ref. No.: MS085

Version 3

1 PRODUCT AND COMPANY IDENTIFICATION

Product Name	Argon
Chemical Formula	Ar
Trade Names	Argon, Compressed Argon, High Purity (N4.8) Argon, Instrument grade (N5.0)
Colour coding	Peacock Blue
Valve	All of the above grades have the Brass 5/8 inch right hand BSP female positive pressure valve.
Company Identification	Les Gaz Industriels Ltd Pailles Road G.R.N.W. Republic of Mauritius Tel No: (+230) 212-8306 Fax No: (+230) 212-0235 (+230) 800 1133

EMERGENCY NUMBER

2 COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	Argon
Chemical Family	Inert Rare Gas
CAS No.	7440-37-1
UN No.	1006
ERG No.	121
Hazard Warning	2 C Non-flammable gas

3 HAZARDS IDENTIFICATION

Main Hazards

All cylinders are portable gas containers and must be regarded as pressure vessels at all times. Argon does not support life. It can act as a simple asphyxiant by diluting the concentration of oxygen in air below the levels necessary to support life.

Adverse Health Effects

Inhalation of Argon in excessive concentrations can result in dizziness, nausea, vomiting, loss of consciousness and death.

Chemical Hazards

Argon is extremely inert and forms no known chemical compounds.

Biological Hazards

No known effect

Vapour Inhalation

As Argon acts as a simple asphyxiant death may result from errors in judgement, confusion, or loss of consciousness, which prevents self-rescue. At low oxygen concentrations, unconsciousness and death may occur in seconds without warning.

Label Elements

Hazard Pictograms



Precautionary Statements

H280:	Contains gas under pressure, may explode if heated.
P403:	Store in a well-ventilated place
P280:	Wear protective gloves/eye protection/face protection.

4 FIRST AID MEASURES

Eye/Skin Contact	Unknown effect.
Ingestion	Ingestion is not considered a potential route of exposure.
Inhalation	Victim may not be aware of asphyxiation. Remove victim to uncontaminated area wearing self-contained breathing apparatus. Keep victim warm and rested. Seek medical attention. Apply artificial respiration if breathing stopped. Low concentrations of Argon will not cause irritation.

5 FIRE FIGHTING MEASURES

Extinguishing Media

As Argon is an inert gas, it does not contribute to the fire, but could help with the extinguishing by reducing the oxygen content of the air by dilution to below the level to support combustion.

Specific Hazard

Argon does not support life. It can act as a simple asphyxiant by diluting the concentration of oxygen in the air below the levels to support life.

Emergency Actions

If possible, shut off the source of excess Argon. Evacuate area. All cylinders should be removed from the vicinity of the fire. Cylinders that cannot be removed should be cooled with water from a safe distance to prevent build-up of excessive pressure. Cylinders that have been exposed to excessive heat should be clearly identified and returned to supplier. CONTACT LES GAZ INDUSTRIELS LTD.

Protective Clothing

Self-contained breathing apparatus.

Safety gloves, goggles and shoes, or boots, should be worn when handling cylinders.

Environmental Precautions

Argon is heavier than air and could accumulate in low-lying areas. Care should be taken when entering a potentially oxygen-deficient environment. If possible, ventilate the affected area.

6 ACCIDENTAL RELEASE MEASURES

Personal Precautions

Do not enter any area where Argon has been spilled unless tests have shown that it is safe to do so.

Environmental Precautions

Argon does not pose a hazard to the environment.

Small Spills

Shut off the source of escaping Argon. Ventilate the area.

Large Spills

Evacuate the area. Shut off the source of the spill if this can be done without risk. Restrict access to the area until completion of the clean-up procedure. Ventilate the area using force-draught if necessary.

7 HANDLING AND STORAGE

Do not allow cylinders to slide or come into contact with sharp edges. Argon cylinders may be stacked horizontally provided that they are firmly secured at each end to prevent rolling. Use a "first in - first out" inventory system to prevent full cylinders from being stored for excessive periods of time. Keep out of reach of children.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Hazards

As Argon is a simple asphyxiant, avoid any areas where spillage has taken place. Only enter once testing has proved the atmosphere to be safe.

Engineering Control Measures

Engineering control measures are preferred to reduce exposure to oxygen-depleted atmospheres. General methods include forced-draught ventilation, separate from other exhaust ventilation systems. Ensure that sufficient fresh air enters at, or near, floor level.

Personal Protection

Self-contained breathing apparatus should always be worn when entering area where oxygen depletion may have occurred. Safety goggles, gloves and shoes or boots should be worn when handling cylinders.

Skin

No known effect.

9 PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL DATA

Chemical Symbol	Ar
Molecular Weight	39.948 g/mol

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Specific Volume @ 20°C & 1 atm 603.7 ml/g
Colour None
Taste None
Odour None

10 STABILITY AND REACTIVITY

Conditions to avoid

The dilution of the oxygen concentration in the atmosphere to levels which cannot support life. Never use cylinders as rollers or supports, or for any other purpose than the storing of Argon. Never expose cylinders to excessive heat, as this may cause sufficient build-up of pressure to rupture the cylinders.

Incompatible Materials

As argon is inert, it may be contained in systems constructed of any of the common metals which have been designed to safely withstand the pressures involved.

Hazardous Decomposition Products

None

11 TOXICOLOGICAL INFORMATION

Acute Toxicity No known effect
Skin & eye contact No known effect
Chronic Toxicity No known effect
Carcinogenicity No known effect
Mutagenicity No known effect
Reproductive Hazards No known effect

(For further information see Section 3. Adverse Health effects)

12 ECOLOGICAL INFORMATION

Argon is heavier than air and can cause pockets of oxygen-depleted atmosphere in low-lying areas. It does not pose a hazard to the ecology.

13 DISPOSAL CONSIDERATIONS

Disposal Methods

Small amounts may be blown to the atmosphere under controlled conditions. Large amounts should only be handled by gas supplier.

Disposal of Packaging

The disposal of cylinders must only be handled by the gas supplier.

14 TRANSPORT INFORMATION

ROAD TRANSPORTATION

UN No 1006
Class 2.2
Danger Group Non-flammable, non-toxic gases
Subsidiary Risk Asphyxiant
ERG No 121
Hazchem warning 2C Non-flammable gas

SEA TRANSPORTATION

IMDG 1006
Class 2.2
Label Non-Flammable Gas

AIR TRANSPORTATION

ICAO/IATA Code 1006
Class 2.2
Danger Group Non-Flammable Gas
Packaging instructions
- Cargo 200
- Passenger 200
Maximum quantity allowed
- Cargo 150kg
- Passenger 75kg

15 REGULATORY INFORMATION

EEC Hazard class Non-flammable

Risk Phrase	Description	Safety Phrase	Description
R44	Risk of explosion if heated under confinement	S2	Keep out of reach of Children
		S9	Keep container in a well-Ventilated place
		S15	Keep away from heat
		S37	Wear suitable gloves
		S39	Wear eye/face protection

National legislation None

Refer to SABS 0265 for explanation of the above.

16 OTHER INFORMATION

Bibliography

Compressed Gas Association, Arlington, Virginia
Handbook of Compressed Gases – 3rd Edition Matheson
Matheson Gas Data Book – 6th Edition
SABS 0265 - Labelling of Dangerous Substances

17 EXCLUSION OF LIABILITY

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