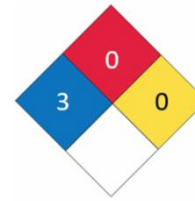




Label 2.2: Non-flammable, nontoxic gas



NFPA Rating

### SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Trade Name	:Liquid Argon
Chemical Family	: Inert Gas
Formula	: Ar
Company Indentation	: Barrak Industrial Gases Factory.
Emergency telephone number	: +966 13 5826507

### SECTION 2: COMPOSITION / INFORMATION ON INGREDIENTS

Name	Product identifier	%
Liquid Argon	(CAS-No.) 7440-37-1	>99%

### SECTION 3: HAZARDS IDENTIFICATION

#### Emergency Overview

Caution! Extremely cold liquid and gas under pressure. Can cause rapid suffocation. Can cause severe frostbite. May cause dizziness and drowsiness. Self-contained breathing apparatus and protective clothing may be required by rescue workers.

#### Effects of a Single (Acute)

##### Overexposure

##### -Inhalation

: Asphyxiant. Effects are due to lack of oxygen. Moderate concentrations may cause headache, drowsiness, dizziness, excitation, excess salivation, vomiting, and unconsciousness. Lack of oxygen can kill.

##### Skin Contact

##### Skin Absorption

##### Swallowing

: No harm expected from vapour. Liquid may cause frostbite.

: No harm expected. Liquid may cause frostbite.

: An unlikely route of exposure, but frostbite of the lips and mouth may result from contact with the liquid.

##### Eye Contact

##### Effects of Repeated (Chronic)

##### Overexposure

##### Other Effects of Overexposure

##### Medical Conditions Aggravated by

##### Overexposure

: No harm expected from vapour. Liquid may cause frostbite.

: No evidence of adverse effects from available information.

: Argon is an asphyxiant. Lack of oxygen can kill.

: A knowledge of the available toxicology information and of the physical and chemical properties of the material suggests that overexposure is unlikely to aggravate existing medical conditions.

##### Potential Environmental Effects

: None known.

### SECTION 4: FIRST AID MEASURES

<b>Inhalation</b>	: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
<b>Skin contact</b>	: Immediately warm frostbite area with warm water (not to exceed 40C). In case of massive exposure, remove clothing and shoes while showering with warm water. Get medical attention immediately.
<b>Swallowing</b>	: This product is a gas at normal temperature and pressure.
<b>Eye Contact</b>	: Immediately flush eyes with water for a least 15 minutes. See a physician, preferably an ophthalmologist, immediately
<b>Notes to Physician</b>	: This product is inert. There is no specific antidote. Treatment of over-exposure should be directed at the control of symptoms and the clinical condition. Victim may not be aware of asphyxiation

### SECTION 5: FIRE FIGHTING MEASURES

<b>Flammable class</b>	: Non-flammable.
<b>Extinguishing media</b> - Suitable extinguishing media	: All known extinguishants can be used.
<b>Hazardous combustion products</b>	: None.
<b>Specific physical and chemical hazards</b>	: Container may rupture due to heat of fire. This material will freeze water rapidly. Containers are provided with a pressure relief device designed to vent contents when they are exposed to elevated temperature.
<b>Specific methods</b>	: If possible, stop flow of product. Evacuate all personnel from danger area. Immediately deluge cylinders with water from maximum distance until cool; then move them away from fire area if without risk. Self-contained breathing apparatus may be required by rescue workers.
<b>Protective equipment and precautions for firefighters</b>	: CAUTION! Asphxiant. Effects are due to lack of oxygen. Evacuate all personnel from danger area. Immediately deluge cylinders with water from maximum distance until cool; then move them away from fire area if without risk.

### SECTION 6: ACCIDENTAL RELEASE MEASURES

<b>Personal precautions</b>	: Evacuate area. Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe. Ensure adequate air ventilation.
<b>Environmental precautions</b>	: Try to stop release. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous.
<b>Cleanup methods</b>	: Ventilate area.

### SECTION 7: HANDLING AND STORAGE

<b>Precautions to be taken in handling</b>	: Never allow any unprotected part of your body to touch uninsulated pipes or vessels containing fluids. Flesh will stick to the extremely cold metal and will tear when you try to pull free. For liquid withdraw, wear face shield and gloves. Protect cylinders from damage. Use a suitable hand truck to move cylinders; do not drag, scroll, slide, drop or roll them on their sides. Never attempt to lift a cylinder by its cap; the cap is intended solely to protect the valve. Never insert an object (e.g., wrench, screwdriver, pry bar) into cap openings; doing so may damage the valve and cause a leak. Use an adjustable strap wrench to remove over-tight or rusted or rusted caps. Open valve slowly. If valve is hard to open, discontinue use and contact BGas.
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### SECTION 7: HANDLING AND STORAGE (Continued)

#### Precautions to be taken in storage

: Store and use with adequate ventilation. Firmly secure cylinders upright to keep them from falling or being knocked over. Screw valve protection cap firmly in place by hand. Store only where temperature will not exceed 52C. Store full and empty cylinders separately. Use a first-in, first-out inventory system to prevent storing full cylinders for long periods.

### SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

#### Engineering controls

Local exhaust : Preferred.

#### Mechanical (General)

: Acceptable.

#### Special

: Not applicable

#### Other

: Not applicable

#### Personal protective equipment

: Use air supplied respirator when working in confined space or where local exhaust or ventilation does not keep exposure below TLV.

#### Respiratory Protection

#### Skin Protection

: Loose-fitting cryogenic gloves.

#### Eye/Face Protection

: Wear goggles with filter lens. Provide protective screens and goggles, if necessary to protect others.

#### Respiratory Protection

: As needed, wear hand, head, and body protection which help to prevent injury from radiation, sparks and electrical shock. At a minimum this includes welder's gloves and a protective face shield, and may include arm protectors, aprons, chaps, shoulder protection, as well as dark substantial clothing. Train the worker not to touch live electrical parts.

### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Colorless.
Odor	Odourless.
Odor Threshold	Odourless.
Physical State	Liquid.
pH	Not applicable.
Boiling Point	-185.9°C (-302.6°F)
Freezing Point	-189.2°C (-308.6°F)
Evaporation Rate (Butyl Acetate = 1)	High.
Vapor Pressure	Not applicable.
Vapor Density	0.0016 g/ml @ 21.1°C
Specific Gravity (H2O = 1)	1.39 @ -185.9°C
Specific Gravity (Air = 1)	1.38 g/ml @21.1°C
Solubility In Water	Negligible.
Coefficient of water/oil distribution	Not available.
Percent Volatiles By Volume	100% (v/v)
Molecular Weight	39.95 g/mole
Molecular Formula	Ar

### SECTION 10: STABILITY AND REACTIVITY

<b>Chemical Stability</b>	: Stable
<b>Conditions of Chemical Instability</b>	: Avoid elevated temperatures.
<b>Incompatible Materials</b>	: None known. Argon is chemically inert.
<b>Hazardous Decomposition Products</b>	: None.
<b>Hazardous Polymerization</b>	: Will Not Occur
<b>Conditions of Reactivity</b>	: None.
<b>Conditions to Avoid</b>	: None.

### SECTION 11: TOXICOLOGICAL INFORMATION

<b>Acute Dose Effect</b>	: Argon is a simple asphyxiant.
<b>Study Results</b>	: No known effects.

### SECTION 12: ECOLOGICAL INFORMATION

<b>Other Adverse Effects</b>	: Argon does not contain any Class I or Class II ozone-depleting chemicals.
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### SECTION 13: DISPOSAL CONSIDERATION

<b>Waste Disposal Method</b>	: Do not attempt to dispose of residual or unused quantities. Return cylinder to BGas.
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### SECTION 14: TRANSPORT INFORMATION

<b>Transport Information</b>	: Avoid transport on vehicles where the load space is not separated from the driver's compartment. : Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency. : Before transporting product containers: <ul style="list-style-type: none"><li>- Ensure that containers are firmly secured.</li><li>- Ensure cylinder valve is closed and not leaking.</li><li>- Ensure valve outlet cap nut or plug (where provided) is correctly fitted.</li><li>- Ensure valve protection device (where provided) is correctly fitted.</li><li>- Ensure there is adequate ventilation.</li><li>- Compliance with applicable regulations.</li></ul>
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### SECTION 15: OTHER INFORMATION

Asphyxiant in high concentrations.

Keep container in a well-ventilated place.

Do not breathe the gas

May cause frostbite.

Wear suitable protective clothing

Ensure all national/local regulations are observed.

The hazard of asphyxiation is often overlooked and must be stressed during operator training.

#### Hazard Rating Systems

NFPA Ratings:	HMIS Ratings:
Health =2	Health =3
Flammability =0	Flammability =0
Instability =0	Physical Hazard =2
Special = SA (CGA recommends this to designate Simple Asphyxiant).	

#### Standard valve connections

<b>Threaded</b>	CGA-295
Use the proper CGA connections <b>Do Not Use Adapters.</b>	

End of Documents