

ADDITIONAL DATA

Symptoms of Exposure: (Continued)

- o Tingling of the tongue, fingertips or toes;
- o Weakened speech leading to the inability to utter sounds;
- o Rapid reduction in the ability to perform movements;
- o Reduced consciousness of the surroundings;
- o Loss of tactile sensations;
- o Heightened mental activity.

It should be recognized that it is possible that none of the above symptoms may occur in nitrogen asphyxia so that there are no definite warning symptoms.

*For additional information, refer to L'Air Liquide's Encyclopedie des Gaz.

First Aid: (Continued)

to prevent accumulation of high concentrations so as to reduce the oxygen level in the air to less than 18 molar percent.

Material Safety Data Sheet

LIQUID AIR CORPORATION INDUSTRIAL GASES DIVISION One California Plaza, Suite 350 2121 N. California Blvd. Walnut Creek, California 94596 ISSUE DATE: OCTOBER, 1988 AND REVISIONS CORPORATE SAFETY DEPT.		PRODUCT NAME Argon TELEPHONE (415) 972-8500 EMERGENCY RESPONSE INFORMATION ON PAGE 2 TRADE NAME AND SYNONYMS Argon CHEMICAL NAME AND SYNONYMS Argon FORMULA Ar MOLECULAR WEIGHT 39.948 CHEMICAL FAMILY Rare gas	
LIQUID AIR CORPORATION INDUSTRIAL GASES DIVISION One California Plaza, Suite 350 2121 N. California Blvd. Walnut Creek, California 94596 ISSUE DATE: OCTOBER, 1988 AND REVISIONS CORPORATE SAFETY DEPT.		CAS Number: 7440-37-1 CHEMICAL FAMILY Rare gas	

HEALTH HAZARD DATA

TIME WEIGHTED AVERAGE EXPOSURE LIMIT Argon is defined as a simple asphyxiant. Oxygen levels should be maintained at greater than 18 molar percent at normal atmospheric pressure which is equivalent to a partial pressure of 135 mm Hg (ACGIH, 1984-85).

Symptoms of Exposure
Effects of exposure to high concentrations so as to displace the oxygen in air necessary for life may include any, all or none of the following:

- o Loss of balance or dizziness;
- o Tightness in the frontal area of the forehead;

(Continued on last page.)

TOXICOLOGICAL PROPERTIES

Argon is nontoxic but the liberation of a large amount in a confined area could displace the amount of oxygen in air necessary to support life.

Listed as Carcinogen or Potential Carcinogen: National Toxicology Program Yes No I.A.R.C. Yes No OSHA Yes No

RECOMMENDED FIRST AID TREATMENT

PROMPT MEDICAL ATTENTION IS MANDATORY IN ALL CASES OF OVEREXPOSURE TO ARGON. RESCUE PERSONNEL SHOULD BE EQUIPPED WITH SELF-CONTAINED BREATHING APPARATUS.

Inhalation: Conscious persons should be assisted to an uncontaminated area and inhale fresh air. Quick removal from the contaminated area is most important. Unconscious persons should be moved to an uncontaminated area, given mouth-to-mouth resuscitation and supplemental oxygen. Medical assistance should be sought immediately.

Judgments as to the suitability of information herein for purchaser's purposes are the exclusive purchaser's responsibility. Therefore, although responsible care has been taken in the preparation of this information, Liquid Air Corporation extends no warranties, makes no representations, and assumes no responsibility as to the accuracy or reliability of such information for application to purchaser's intended purposes or consequences of its use. Since Liquid Air Corporation has no control over the use of this product, it assumes no liability for damage or loss of product resulting from improper use or application of the product. Data Sheets may be changed from time to time. Be sure to consult the latest edition.

HAZARDOUS MATERIALS OR OTHER LIQUID, SOLID, OR GASES

None

PHYSICAL DATA

Boiling Point	-302.55°F (-185.86°C)	Liquid Density at Boiling Point	86.95 lb/ft ³ (1392.8 kg/m ³)
Vapor Pressure @ 70°F (21.1°C)	Above the Critical Temp.	Gas Density at 70°F & 1 atm	1.034 lb/ft ³ (1.656 kg/m ³)
Critical Temp. @ 68°F (20°C)	-188.12°F (-122.29°C)	Freezing Point	-308.87°F (-189.37°C)
Specific Gravity	0.330	Flammable Limits % by Volume	N/A
Appearance and Color	Colorless, odorless gas	Electrical Classification	Nonhazardous

FIRE AND EXPLOSION HAZARD DATA

Flash Point (ASTM D 93)	N/A	Auto Ignition Temperature	N/A
Flammable Range	N/A	Flammable Limits % by Volume	N/A
Non-flammable	100%	Electrical Classification	Nonhazardous
Special Fire Fighting Procedures	N/A	UNusual Fire and Explosion Hazards	N/A

REACTIVITY DATA

Stability	Stable	Conditions to Avoid	None
Hazardous Polymerization	None	Conditions to Avoid	None
Hazardous Decomposition Products	None	Other	None
Hazardous Reaction with Water	None	Other	None
Hazardous Reaction with Oxidizers	None	Other	None
Hazardous Reaction with Acids	None	Other	None

SPILL OR LEAK PROCEDURES

Steps to be taken in case of spill or leak of material in containers or smaller quantities. Evacuate all personnel from affected area. Use appropriate protective equipment. If leak is in container or container valve, contact the closest Liquid Air Corporation location.

Do not attempt to dispose of residual or unused quantities. Return in the shipping container properly labeled with any valve outlet plugs or caps secured and valve protection cap in place to Liquid Air Corporation for proper disposal. For emergency disposal, contact the closest Liquid Air Corporation location.

EMERGENCY RESPONSE INFORMATION
 IN CASE OF EMERGENCY INVOLVING THIS MATERIAL, CALL DAY OR NIGHT (800) 231-1366 OR CALL CHEMTREC AT (800) 424-9300

SPECIAL PROTECTION INFORMATION

Respiratory Protection (Specify type)	Positive pressure air line with mask or self-contained breathing apparatus should be available for emergency use.	Special Ventilation	See last page.
See Local Exhaust	See last page.	Mechanical (dm)	Other
Protective gloves	Any material	Eye Protection	Safety goggles or glasses
Other Protective Equipment	Safety shoes		

SPECIAL PRECAUTIONS:

SPECIAL LABELING INFORMATION: Argon or Argon, compressed DOT Shipping Name: Nonflammable gas DOT Shipping Label: Nonflammable gas I.D. No.: UN 1006
 Use only in well-ventilated areas. Valve protection caps must remain in place unless container is secured with valve outlet piped to use point. Do not drag, slide or roll cylinders. Use a suitable hand truck for cylinder movement. Use a pressure reducing regulator when connecting cylinder to lower pressure (K3,000 psi) piping or systems. Do not heat cylinder by any means to increase the discharge rate of product from the cylinder. Use a check valve or trap in the discharge line to prevent hazardous back flow into the cylinder.

For additional handling recommendations consult the Liquides Encyclopedia de Gaz or Compressed Gas Association Pamphlet # 1
SPECIAL STORAGE RECOMMENDATIONS:

Protect cylinders from physical damage. Store in cool, dry, well-ventilated area away from heavily trafficked areas and emergency exits. Do not allow the temperature where cylinders are stored to exceed 130°F (54°C). Cylinders should be stored upright and firmly secured to prevent falling or being knocked over. Full and empty cylinders should be segregated. Use a "first in, first out" inventory system to prevent full cylinders being stored for excessive periods of time.

Do not store cylinders in sub-surface or closed (poorly ventilated) areas. Argon is heavier than air and leaking gas could accumulate in low areas and cause suffocation without warning.

For additional storage recommendations consult the Liquides Encyclopedia de Gaz or Compressed Gas Association Pamphlet # 1

SPECIAL PACKAGING RECOMMENDATIONS:

Argon is noncorrosive and may be used with any common structural material.

OTHER RECOMMENDATIONS OR PRECAUTIONS:

Compressed gas cylinders should not be refilled except by qualified producers of compressed gases. Shipment of a compressed gas cylinder which has not been filled by the owner or with his (written) consent is a violation of Federal Law (49CFR).

*United States Government agencies (i.e. Department of Transportation, Occupational Safety and Health Administration, Food and Drug Administration and others) may have specific regulations concerning the transportation, handling, storage or use of this product which may not be contained herein. The customer or user of this product should be familiar with these regulations.