

Argon Compressed^{# 115} Gas

PRODUCT NAME Argon	CAS # 7440-37-1
TRADE NAME AND SYNONYMS Argon; Argon, compressed	DOT I.D. No.: UN 1006
CHEMICAL NAME AND SYNONYMS Argon	DOT Hazard Class: Nonflammable gas
ISSUE DATE AND REVISIONS 25 November 1985	Formula: Ar
	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, 1985-86).
SYMPTOMS OF EXPOSURE Effects of exposure to high concentrations so as to displace the oxygen in air necessary for life may include <u>any</u> , <u>all</u> , or <u>none</u> of the following: <ul style="list-style-type: none"> o Loss of balance or dizziness o Tightness in the frontal area of the forehead o Tingling in the tongue, fingertips or toes <div style="text-align: right;">(Continued on last page.)</div>
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.
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. Further treatment should be symptomatic and supportive.

Information contained in this material safety data sheet is offered without charge for use by technically qualified personnel at their discretion and risk. All statements, technical information and recommendations contained herein are based on tests and data which we believe to be reliable, but the accuracy or completeness thereof is not guaranteed and no warranty of any kind is made with respect thereto. This information is not intended as a license to operate under or a recommendation to practice or infringe any patent of this Company or others covering any process, composition of matter or use.
 Since the Company shall have no control of the use of the product described herein, the Company assumes no liability for loss or damage incurred from the proper or improper use of such product.

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES

PHYSICAL DATA

BOILING POINT -302.6°F (-185.9°C)	LIQUID DENSITY AT BOILING POINT 87 lb/ft ³ (1393 kg/m ³)
VAPOR PRESSURE @ 70°F (21.1°C): Above the critical temp. of -188.1°F (-122.3°C)	GAS DENSITY AT 70°F, 1 atm .1034 lb/ft ³ (1.656 kg/m ³)
SOLUBILITY IN WATER Very slightly	FREEZING POINT -308.9°F (-189.4°C)
EVAPORATION RATE N/A	SPECIFIC GRAVITY (AIR=1) 1.38
APPEARANCE AND ODOR Colorless, odorless gas	

FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used) N/A	AUTO IGNITION TEMPERATURE N/A	FLAMMABLE LIMITS % BY VOLUME LEL N/A UEL N/A	
EXTINGUISHING MEDIA Nonflammable, inert gas		ELECTRICAL CLASSIFICATION Nonhazardous	
SPECIAL FIRE FIGHTING PROCEDURES N/A			
UNUSUAL FIRE AND EXPLOSION HAZARDS N/A			

REACTIVITY DATA

STABILITY Unstable	CONDITIONS TO AVOID
Stable	X N/A
INCOMPATIBILITY (Materials to avoid) None	
HAZARDOUS DECOMPOSITION PRODUCTS None	
HAZARDOUS POLYMERIZATION	CONDITIONS TO AVOID
May Occur	
Will Not Occur	X N/A

SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED Evacuate all personnel from affected area. Use appropriate protective equipment. If leak is in container or container valve, contact your closest supplier location or call the emergency telephone number listed herein.
DISPOSAL METHOD Do not attempt to dispose of waste 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 your supplier. For emergency disposal assistance, contact your closest supplier location or call the emergency telephone number listed herein.

RESPIRATORY PROTECTION (Specify type) Positive pressure air line with mask or self-contained breathing apparatus should be available for emergency use.

VENTILATION See Local Exhaust on last page.	LOCAL EXHAUST See last page.	SPECIAL N/A
	MECHANICAL (Gen.) N/A	OTHER N/A
PROTECTIVE GLOVES Any material		
EYE PROTECTION Safety goggles or glasses		
OTHER PROTECTIVE EQUIPMENT Safety shoes		

SPECIAL PRECAUTIONS*

SPECIAL LABELING INFORMATION

DOT Shipping Name: Argon or Argon, Compressed DOT Hazard Class: Nonflammable gas
DOT Shipping Label: Nonflammable gas I.D. No.: UN 1006

SPECIAL HANDLING RECOMMENDATIONS

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 (<3,000 psig) 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 recommendations, consult Compressed Gas Association's Pamphlets P-1, P-9, P-14, and Safety Bulletin SB-2.

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 130F (54C). 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.

For additional recommendations, consult Compressed Gas Association's Pamphlets P-1, P-9, P-14, and Safety Bulletin SB-2.

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).

*Various 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 will not be reflected in this data sheet. The customer should review these regulations to ensure that he is in full compliance.

SYMPTOMS OF EXPOSURE: (Continued)

- 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 argon asphyxia so that there are no definite warning symptoms.

LOCAL EXHAUST: (Continued)

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