



Argon, compressed

Safety Data Sheet P-4563

according to U.S. Code of Federal Regulations 29 CFR 1910.1200. Hazard Communication.
Date of issue: 01/01/1979 Revision date: 10/03/2014 Supersedes: 12/01/2009

SECTION 1: Product and company identification

1.1. Product identifier

Product form : Substance

Name : Argon, compressed

CAS No : 7440-37-1

Formula : Ar

Other means of identification : Shielding gas, argon 40

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Industrial use. Use as directed.

1.3. Details of the supplier of the safety data sheet

Praxair, Inc.

39 Old Ridgebury Road

Danbury, CT 06810-5113 - USA

T 1-800-772-9247 (1-800-PRAXAIR) - F 1-716-879-2146

www.praxair.com

1.4. Emergency telephone number

Emergency number : Onsite Emergencies: 1-800-645-4633
CHEMTRAC, USA 1-800-424-9300, International 001-703-527-3887 (Collect calls accepted, contract 17729)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Compressed gas H280

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US)



GHS04

Warning

H280 - CONTAINS GAS UNDER PRESSURE, MAY EXPLODE IF HEATED

OSHA-H01 - MAY DISPLACE OXYGEN AND CAUSE RAPID SUFFOCATION

P202 - Do not handle until all safety precautions have been read and understood

C271-H203 - Use and store only outdoors or in a well-ventilated place.

CGA-PG06 - Use a backflow preventive device in the piping.

CGA-PG06 - Use only with rated working pressure.

CGA-PG06 - Close valve after each use and when empty.

CGA-PG02 - Protect from sunlight when ambient temperature exceeds 52°C (125°F).

2.3. Other hazards

Other hazards not contributing to the classification : Asphyxiant in high concentrations.

2.4. Unknown acute toxicity (GHS-US)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substance

10/14/2014

EN (English US)

SDS ID: P-4563

1/8

This document is only controlled while on the Praxair, Inc. website and a copy of this controlled version is available for download. Praxair cannot assure the integrity or accuracy of any version of this document after it has been downloaded or removed from our website.

Argon, compressed

Safety Data Sheet

according to U.S. Code of Federal Regulations 29 CFR 1910.1200. Hazard Communication.

Name	Product identifier (CAS No)	%
Argon, compressed (Main constituent)	7440-37-1	100

3.2. Mixture

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation

: Remove victim to uncontaminated area wearing self contained breathing apparatus. Keep victim warm and rested. Call a doctor. Apply artificial respiration if breathing stopped.

: Adverse effects not expected from this product.

: Immediately flush eyes thoroughly with water for at least 15 minutes. Hold the eyelids open and away from the eyeballs to ensure that all surfaces are flushed thoroughly. Get immediate medical attention.

: Ingestion is not considered a potential route of exposure.

4.2. Most important symptoms and effects, both acute and delayed

No additional information available

4.3. Indication of any immediate medical attention and special treatment needed

None.

SECTION 5: Firefighting measures

5.1. Extinguishing media

: Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire.

5.2. Special hazards arising from the substance or mixture

: No reactivity hazard other than the effects described in sub-sections below.

5.3. Advice for firefighters

Firefighting instructions

: Evacuate all personnel from the danger area. Use self-contained breathing apparatus (SCBA) and protective clothing. Immediately cool containers with water from maximum distance. Stop flow of gas if safe to do so, while continuing cooling water spray. Remove ignition sources if safe to do so. Remove containers from area of fire if safe to do so. On-site fire brigades must comply with OSHA 29 CFR 1910.156 and applicable standards under 29 CFR 1910 Subpart L—Fire Protection.

: Compressed gas: asphyxiant. Suffocation hazard by lack of oxygen.

: Use self-contained breathing apparatus. Standard protective clothing and equipment (Self Contained Breathing Apparatus) for fire fighters.

: Use fire control measures appropriate for the surrounding fire. Exposure to fire and heat radiation may cause gas receptacles to rupture. Cool endangered receptacles with water spray jet from a protected position. Prevent water used in emergency cases from entering sewers and drainage systems. Stop flow of product if safe to do so. Use water spray or fog to knock down fire flames if possible.

Specific methods

: Use fire control measures appropriate for the surrounding fire. Exposure to fire and heat radiation may cause gas receptacles to rupture. Cool endangered receptacles with water spray jet from a protected position. Prevent water used in emergency cases from entering sewers and drainage systems. Stop flow of product if safe to do so. Use water spray or fog to knock down fire flames if possible.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures

: Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous. Evacuate area. Ensure adequate air ventilation. Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe. Stop leak if safe to do so.

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Try to stop release.

10/14/2014

EN (English US)

SDS ID: P-4563

2/8

This document is only controlled while on the Praxair, Inc. website and a copy of this controlled version is available for download. Praxair cannot assure the integrity or accuracy of any version of this document after it has been downloaded or removed from our website.

Argon, compressed

Safety Data Sheet

according to U.S. Code of Federal Regulations 29 CFR 1910.1200, Hazard Communication.

6.3. Methods and material for containment and cleaning up

No additional information available

6.4. Reference to other sections

See also sections 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling

- Wear leather safety gloves and safety shoes when handling cylinders. Protect cylinders from physical damage; do not drag, roll, slide or drop. While moving cylinder, always keep in place removable valve cover. Never attempt to lift a cylinder by its cap; the cap is intended solely to pick up debris. Use proper lifting techniques. Never lift or start cylinders. Use a cart, dolly, hand truck, etc. to move cylinders. Never lift or start cylinders by the neck or cap. Use an adjustable strap wrench to remove over-tight or rusted caps. Slowly open the valve. Use an adjustable strap wrench to remove over-tight or rusted caps. Slowly open the valve. If the valve is hard to open, discontinue use and contact your supplier. Close the container valve after each use; keep closed even when empty. Never apply flame or localized heat directly to any part of the container. High temperatures may damage the container and could cause the pressure relief device to fail prematurely, venting the container contents. For other precautions in using this product, see section 16.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions

- Store in a cool, well-ventilated place. Store and use with adequate ventilation. Store only where temperature will not exceed 125°F (52°C). Firmly secure containers upright to keep them from falling or being knocked over. Install valve protection cap, if provided, firmly in place by hand. Store full and empty containers separately. Use a first-in, first-out inventory system to prevent storing full containers for long periods.

OTHER PRECAUTIONS FOR HANDLING, STORAGE AND USE: When handling product under pressure, use proper equipment and procedures with cylinders. Do not attempt to be an engineer. Never work on refrigeration systems. Use back flow prevention devices in the piping. Gases can cause rapid suffocation because of oxygen deficiency, store and use with adequate ventilation. If a leak occurs, close the container valve and blow down the system in a safe and environmentally correct manner in compliance with all international, federal/national, state/provincial, and local laws; then repair the leak. Never place a container where it may become part of an electrical circuit.

7.3. Specific end use(s)

None.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Argon, compressed (7440-37-1)	Not established
ACGIH	Not established
USA OSHA	Not established

8.2. Exposure controls

Appropriate engineering controls

- Oxygen detectors should be used when asphyxiating gases may be released. Systems under pressure should be regularly checked for leakages. Provide adequate general and local exhaust ventilation. Consider work permit system e.g. for maintenance activities.

Hand protection

Eye protection

Respiratory protection

- Wear working gloves when handling gas containers.
- Wear safety glasses with side shields.
- When workplace conditions warrant respirator use, follow a respiratory protection program that meets OSHA 29 CFR 1910.134, ANSI Z88.2, or MSHA 30 CFR 72.710 (where applicable). Use an air-supplied or air-purifying cartridge if the action level is exceeded. Ensure that the respirator has the appropriate protection factor for the exposure level. If cartridge type respirators are used, the cartridge must be appropriate for the chemical exposure (e.g., an organic vapor cartridge). For emergencies or instances with unknown exposure levels, use a self-contained breathing apparatus (SCBA).

Thermal hazard protection

Environmental exposure controls

- None necessary.
- None necessary.

10/14/2014

EN (English US)

SDS ID: P-4563

3/8

This document is only controlled while on the Praxair, Inc. website and a copy of this controlled version is available for download. Praxair cannot assure the integrity or accuracy of any version of this document after it has been downloaded or removed from our website.

Argon, compressed

Safety Data Sheet

according to U.S. Code of Federal Regulations 29 CFR 1910.1200, Hazard Communication.

Other information : Wear safety shoes while handling containers.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Gas

Appearance : Colorless gas.

Molecular mass : 40 g/mol

Color : Colorless.

Odor : No data available

Odor threshold : No data available

pH : Not applicable.

Relative evaporation rate (butyl acetate=1) : No data available

Relative evaporation rate (ether=1) : Not applicable.

Melting point : -189 °C

Freezing point : No data available

Boiling point : -185.9 °C

Flash point : No data available

Critical temperature : -122.4 °C

Auto-ignition temperature : Not applicable.

Decomposition temperature : No data available

Flammability (solid, gas) : No data available

Vapor pressure : Not applicable.

Critical pressure : 4895 kPa

Relative vapor density at 20 °C : No data available

Relative density : No data available

Specific gravity / density : 0.103 lb/ft³ Vapor density at 70°F (21.1°C)

Relative gas density : 1.38

Solubility : Water: 61 mg/l

Log Pow : Not applicable.

Log Kow : Not applicable.

Viscosity, kinematic : Not applicable.

Viscosity, dynamic : Not applicable.

Explosive properties : Not applicable.

Oxidizing properties : None.

Explosive limits : No data available

9.2. Other information

Gas group : Compressed gas

Additional information : Gas/vapor heavier than air. May accumulate in confined spaces, particularly at or below ground level.

SECTION 10: Stability and reactivity

10.1. Reactivity

No reactivity hazard other than the effects described in sub-sections below.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

None.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10/14/2014

EN (English US)

SDS ID: P-4563

4/8

This document is only controlled while on the Praxair, Inc. website and a copy of this controlled version is available for download. Praxair cannot assure the integrity or accuracy of any version of this document after it has been downloaded or removed from our website.

Argon, compressed

Safety Data Sheet

according to U.S. Code of Federal Regulations 29 CFR 1910.1200, Hazard Communication.

10.5. Incompatible materials

Using this product in welding and cutting may create additional hazards. The arc from electric arc welding may form gaseous reaction products such as carbon monoxide and carbon dioxide. Ozone and nitrogen oxides may be formed by the radiation from the arc. Other decomposition products of arc welding and cutting originate from the volatilization, reaction, and oxidation of the material being worked.

10.6. Hazardous decomposition products

None.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified
 Skin corrosion/irritation : Not classified
 pH: Not applicable.
 Serious eye damage/irritation : Not classified
 pH: Not applicable.
 Respiratory or skin sensitization : Not classified
 Germ cell mutagenicity : Not classified
 Carcinogenicity : Not classified
 Reproductive toxicity : Not classified
 Specific target organ toxicity (single exposure) : Not classified
 Specific target organ toxicity (repeated exposure) : Not classified
 Aspiration hazard : No known effects from this product.
 : Not classified
 : Not applicable.

SECTION 12: Ecological information

12.1. Toxicity : No ecological damage caused by this product.
 Ecology - general

12.2. Persistence and degradability

Argon, compressed (7440-37-1)
 Persistence and degradability : No ecological damage caused by this product.

12.3. Bioaccumulative potential

Argon, compressed (7440-37-1)
 Log Pow : Not applicable.
 Log Pow : Not applicable.
 Bioaccumulative potential : No ecological damage caused by this product.

12.4. Mobility in soil

Argon, compressed (7440-37-1)
 Mobility in soil : No data available.
 Ecology - soil : No ecological damage caused by this product.

12.5. Other adverse effects

Effect on ozone layer : None.
 Effect on the global warming : None.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : May be vented to atmosphere in a well ventilated place. Consult supplier for specific recommendations. Do not discharge into any place where its accumulation could be dangerous. Contact supplier if guidance is required.

10/14/2014

EN (English US)

SDS ID: P-4563

5/8

This document is only controlled while on the Praxair, Inc. website and a copy of this controlled version is available for download. Praxair cannot assure the integrity or accuracy of any version of this document after it has been downloaded or removed from our website.

Argon, compressed

Safety Data Sheet

according to U.S. Code of Federal Regulations 29 CFR 1910.1200, Hazard Communication.

Waste disposal recommendations

: Dispose of contents/container in accordance with local/regional/national/international regulations. Contact supplier for any special requirements.

SECTION 14: Transport information

In accordance with DOT

Transport document description : UN1006 Argon, compressed, 2.2

UN-No.(DOT) : UN1006

Proper Shipping Name (DOT) : Argon, compressed

Department of Transportation (DOT) Hazard Classes : 2.2 - Class 2.2 - Non-flammable compressed gas 49 CFR 173.115

Hazard labels (DOT) : 2.2 - Non-flammable gas



Additional information

Emergency Response Guide (ERG) Number : 121 (UN1006); 120 (UN1951)

Other information : No supplementary information available.

Special transport precautions

: 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: - Ensure there is adequate ventilation. - Ensure that containers are firmly secured. - Ensure cylinder valve is closed and not leaking. - Ensure valve outlet cap nut or plug (where provided) is correctly fitted. - Ensure valve protection device (where provided) is correctly fitted.

Transport by sea

UN-No. (IMDG) : 1006

Proper Shipping Name (IMDG) : ARGON, COMPRESSED

Class (IMDG) : 2 - Gases

MFAG-No : 121

Air transport

UN-No.(ATA) : 1006

Proper Shipping Name (ATA) : ARGON, COMPRESSED

Class (ATA) : 2

Civil Aeronautics Law : Gases under pressure/Gases nonflammable nontoxic under pressure

SECTION 15: Regulatory information

15.1. US Federal regulations

Argon, compressed (7440-37-1)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

SARA Section 311/312 Hazard Classes : Sudden release of pressure hazard

15.2. International regulations

CANADA

Argon, compressed (7440-37-1)

Listed on the Canadian DSL (Domestic Substances List)

WHMIS Classification : Class A - Compressed Gas

EU-Regulations

Argon, compressed (7440-37-1)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

10/14/2014

EN (English US)

SDS ID: P-4563

6/8

This document is only controlled while on the Praxair, Inc. website and a copy of this controlled version is available for download. Praxair cannot assure the integrity or accuracy of any version of this document after it has been downloaded or removed from our website.

Argon, compressed

Safety Data Sheet

according to U.S. Code of Federal Regulations 29 CFR 1910.1200, Hazard Communication.

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Compressed gas H280

Full text of H-phrases: see section 16

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Not classified

15.2.2. National regulations

Argon, compressed (7440-37-1)

- Listed on the AICS (Australian Inventory of Chemical Substances)
- Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
- Listed on the Korean ECL (Existing Chemicals List)
- Listed on the New Zealand Inventory of Chemicals
- Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

15.3. US State regulations

Argon, compressed(7440-37-1)

U.S. - California - Carcinogens List	No
U.S. - California - Proposition 65 - Developmental Toxicity	No
U.S. - California - Proposition 65 - Reproductive Toxicity - Female	No
U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No
State or local regulations	U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

Revision date : 10/3/2014 12:00:00 AM

Argon, compressed

Safety Data Sheet

according to U.S. Code of Federal Regulations 29 CFR 1910.1200, Hazard Communication.

Other information

: When you mix two or more chemicals, you can create additional, unexpected hazards. Obtain and evaluate the safety information for each component before you produce the mixture. Consult an industrial hygienist or other trained person when you evaluate the end product. Before using any plastics, confirm their compatibility with this product.

Fumes and gases produced during welding and cutting processes can be dangerous to your health and may cause respiratory disease. **KEEP YOUR HEAD OUT OF FUMES. DO NOT BREATHE THE FUMES AND GASES.** Use proper ventilation when welding or cutting. Fumes and gases from your breathing zone and the general area. Short-term overexposure to fumes may cause dizziness, nausea and dryness or irritation of the nose, throat, and eyes; or may cause other similar discomfort. Contaminants in the air may add to the hazard of fumes and gases. One such contaminant, chlorinated hydrocarbon vapors from cleaning and degreasing activities, poses a special risk. **DO NOT USE ELECTRIC ARCS IN THE PRESENCE OF CHLORINATED HYDROCARBON VAPORS—HIGHLY TOXIC PHOSGENE MAY BE PRODUCED.** Metal coatings such as paint, plating, or galvanizing may generate harmful fumes when heated. Residues from cleaning materials may also be harmful. **AVOID ARC OPERATIONS ON PARTS WITH PHOSPHATE RESIDUES (ANTI-RUST, CLEANING PREPARATIONS)—HIGHLY TOXIC PHOSPHINE MAY BE PRODUCED.**

Praxair asks users of this product to study this SDS and become aware of the product hazards and safety information. To promote safe use of this product, a user should (1) notify employees, agents, and contractors of the information in this SDS and of any other known product hazards and safety information, (2) furnish this information to each purchaser of the product, and (3) ask each purchaser to notify its employees and customers of the product hazards and safety information.

The opinions expressed herein are those of qualified experts within Praxair, Inc. We believe that the information contained herein is current as of the date of this Safety Data Sheet. Since the use of this information and the conditions of use are not within the control of Praxair, Inc., it is the user's obligation to determine the conditions of safe use of the product.

Praxair SDSs are furnished on sale or delivery by Praxair or the independent distributors and suppliers who package and sell our products. To obtain current SDSs for these products, contact your Praxair sales representative, local distributor, or supplier, or download from www.praxair.com. If you have questions regarding Praxair SDSs, would like the document number and date of the latest SDS, or would like the names of the Praxair suppliers in your area, please write the Praxair Call Center (Phone: 1-800-PRAXAIR/1-800-772-9247; Address: Praxair Call Center, Praxair, Inc., P. O. Box 44, Tonawanda, NY 14151-0044).

PRAXAIR and the Flowing Airstream design are trademarks or registered trademarks of Praxair Technology, Inc. in the United States and/or other countries.

Full text of H-phrases:

Compressed gas	Gases under pressure Compressed gas
H280	CONTAINS GAS UNDER PRESSURE. MAY EXPLODE IF HEATED

NFPA health hazard

: 0 - Exposure under fire conditions would offer no hazard beyond that of ordinary combustible materials.

NFPA fire hazard

: 0 - Materials that will not burn.

: 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.

NFPA specific hazard

: SA - This denotes gases which are simple asphyxiants.



HMIS III Rating

: 0 Minimal Hazard - No significant risk to health

Health

: 0 Minimal Hazard

Flammability

: 3 Serious Hazard

Physical

SDS US (GHS HazCom 2012) - Praxair

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

10/14/2014

EN (English US)

SDS ID: P-4563

8/8

This document is only controlled while on the Praxair, Inc. website and a copy of this controlled version is available for download. Praxair cannot assure the integrity or accuracy of any version of this document after it has been downloaded or removed from our website.

This document is only controlled while on the Praxair, Inc. website and a copy of this controlled version is available for download. Praxair cannot assure the integrity or accuracy of any version of this document after it has been downloaded or removed from our website.