

## Chemical Safety Data Sheet MSDS / SDS

## Argon

Revision Date:2024-03-16 Revision Number:1

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

**Product identifier**

Product name : Argon  
CBnumber : CB0330440  
CAS : 7440-37-1  
EINECS Number : 231-147-0  
Synonyms : ARGON,argon,compressed

**Relevant identified uses of the substance or mixture and uses advised against**

Relevant identified uses : For R&D use only. Not for medicinal, household or other use.  
Uses advised against : none

**Company Identification**

Company : Chemicalbook  
Address : Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing  
Telephone : 400-158-6606

## SECTION 2: Hazards identification

**Classification of the substance or mixture**

Not classified.

**Label elements****Pictogram(s)**

□

Signal word : Warning

**Hazard statement(s)**

H280 Contains gas under pressure; may explode if heated

**Precautionary statement(s)**

P410+P403 Protect from sunlight. Store in a well-ventilated place.

**Prevention**

none

**Response**

none

**Storage**

none

#### **Disposal**

none

#### **Other hazards**

no data available

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## SECTION 3: Composition/information on ingredients

### **Substance**

Product name	: Argon
Synonyms	: ARGON,argon,compressed
CAS	: 7440-37-1
EC number	: 231-147-0
MF	: Ar
MW	: 39.95

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## SECTION 4: First aid measures

### **Description of first aid measures**

#### **If inhaled**

Fresh air, rest. Artificial respiration may be needed. Refer for medical attention.

#### **Following skin contact**

ON FROSTBITE: rinse with plenty of water, do NOT remove clothes. Refer for medical attention .

#### **Following eye contact**

First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.

#### **Following ingestion**

Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor or Poison Control Center immediately.

### **Most important symptoms and effects, both acute and delayed**

Excerpt from ERG Guide 121 [Gases - Inert]: Vapors may cause dizziness or asphyxiation without warning. Vapors from liquefied gas are initially heavier than air and spread along ground. (ERG, 2016)

Excerpt from ERG Guide 120 [Gases - Inert (Including Refrigerated Liquids)]: Vapors may cause dizziness or asphyxiation without warning. Vapors from liquefied gas are initially heavier than air and spread along ground. Contact with gas or liquefied gas may cause burns, severe injury and/or frostbite. (ERG, 2016)

### **Indication of any immediate medical attention and special treatment needed**

Immediate first aid: Ensure that adequate decontamination has been carried out. If patient is not breathing, start artificial respiration, preferably with a demand-valve resuscitator, bag-valve-mask device, or pocket mask, as trained. Perform CPR as necessary. Immediately flush contaminated eyes with gently flowing water. Do not induce vomiting. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain an open airway and prevent aspiration. Keep patient quiet and maintain normal body temperature.

## SECTION 5: Firefighting measures

### Extinguishing media

If material involved in fire: Extinguish fire using agent suitable for type of surrounding fire. Material itself does not burn or burns with difficulty. Cool all affected containers with flooding quantities of water. Apply water from as far a distance as possible. Argon, compressed; Argon, refrigerated liquid

### Specific Hazards Arising from the Chemical

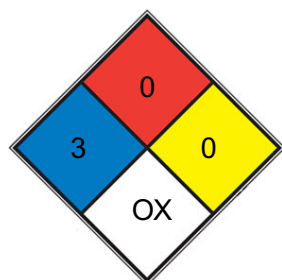
Excerpt from ERG Guide 121 [Gases - Inert]: Non-flammable gases. Containers may explode when heated. Ruptured cylinders may rocket. (ERG, 2016)

Excerpt from ERG Guide 120 [Gases - Inert (Including Refrigerated Liquids)]: Non-flammable gases. Containers may explode when heated. Ruptured cylinders may rocket. (ERG, 2016)

### Advice for firefighters

In case of fire in the surroundings, use appropriate extinguishing media.

### NFPA 704



**HEALTH 3** Short exposure could cause serious temporary or moderate residual injury (e.g. [liquid hydrogen](#), [sulfuric acid](#), [calcium hypochlorite](#), hexafluorosilicic acid)

**FIRE 0** Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand. Materials that will not burn in air when exposed to a temperature of 820 °C (1,500 °F) for a period of 5 minutes.(e.g. Carbon tetrachloride)

**REACT 0** Normally stable, even under fire exposure conditions, and is not reactive with water (e.g. helium,[N2](#))

**SPEC. HAZ. OX**

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## SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Personal protection: self-contained breathing apparatus. Ventilation. NEVER direct water jet on liquid.

### Environmental precautions

Personal protection: self-contained breathing apparatus. Ventilation. NEVER direct water jet on liquid.

### Methods and materials for containment and cleaning up

Personal precautions: Avoid breathing vapors, mist or gas. Environmental precautions: No special environmental precautions required.

Methods for cleaning up: Wipe up with absorbent material (e.g. cloth, fleece).

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## SECTION 7: Handling and storage

### Precautions for safe handling

Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

### Conditions for safe storage, including any incompatibilities

Fireproof if in building. Keep in a well-ventilated room. Keep container tightly closed in a dry and well-ventilated place. Contents under pressure.

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## SECTION 8: Exposure controls/personal protection

### Control parameters

#### Occupational Exposure limit values

<b>Component</b>	Argon			
<b>CAS No.</b>	7440-37-1			
	<b>Limit value - Eight hours</b>		<b>Limit value - Short term</b>	
	<b>ppm</b>	<b>mg/m<sup>3</sup></b>	<b>ppm</b>	<b>mg/m<sup>3</sup></b>
<b>Canada - Ontario</b>	(1)	?	?	?
<b>New Zealand</b>	(1)	?	?	?
	<b>Remarks</b>			
<b>Canada - Ontario</b>	(1) Simple asphyxiant			
<b>New Zealand</b>	(1) Simple asphyxiant			

#### Biological limit values

no data available

### Exposure controls

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

### Individual protection measures

#### Eye/face protection

Wear safety goggles or face shield.

#### Skin protection

Cold-insulating gloves. Protective clothing.

#### Respiratory protection

Use ventilation.

#### Thermal hazards

no data available

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## SECTION 9: Physical and chemical properties

### Information on basic physicochemical properties

Physical state	colorless gas
Colour	Colorless monatomic gas
Odour	Odorless
Melting point/freezing point	-189°C
Boiling point or initial boiling point and boiling range	-185.7°C(lit.)
Flammability	Not combustible. Heating will cause rise in pressure with risk of bursting.
Lower and upper explosion limit/flammability limit	no data available
Flash point	no data available
Auto-ignition temperature	no data available
Decomposition temperature	no data available
pH	no data available
Kinematic viscosity	no data available
Solubility	Soluble in organic liquids
Partition coefficient n-octanol/water	0.74
Vapour pressure	no data available
Density and/or relative density	1.784 (0°C)
Relative vapour density	1.38 (21 °C, vs air)
Particle characteristics	no data available

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## SECTION 10: Stability and reactivity

### Reactivity

No rapid reaction with air. No rapid reaction with water.

### Chemical stability

no data available

### Possibility of hazardous reactions

The gas is heavier than air and may accumulate in lowered spaces causing a deficiency of oxygen. These substances undergo no chemical reactions under any known circumstances. They are nonflammable, noncombustible and nontoxic. They can asphyxiate.

### Conditions to avoid

no data available

### **Incompatible materials**

CHEMICAL PROFILE: Contact of very cold liquefied gas with water may result in vigorous or violent boiling of the product and extremely rapid vaporization due to the large temperature differences involved. If the water is hot, there is the possibility that a liquid "superheat" explosion may occur. Pressures may build to dangerous levels if liquid gas contacts water in a closed container (Handling Chemicals Safely 1980). (REACTIVITY, 1999)

### **Hazardous decomposition products**

no data available

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## **SECTION 11: Toxicological information**

### **Acute toxicity**

- Oral: no data available
- Inhalation: no data available
- Dermal: no data available

### **Skin corrosion/irritation**

no data available

### **Serious eye damage/irritation**

no data available

### **Respiratory or skin sensitization**

no data available

### **Germ cell mutagenicity**

no data available

### **Carcinogenicity**

no data available

### **Reproductive toxicity**

no data available

### **STOT-single exposure**

Asphyxiation. The liquid may cause frostbite.

### **STOT-repeated exposure**

no data available

### **Aspiration hazard**

On loss of containment this substance can cause suffocation by lowering the oxygen content of the air in confined areas.

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## SECTION 12: Ecological information

### Toxicity

Toxicity to fish: no data available

Toxicity to daphnia and other aquatic invertebrates: no data available

Toxicity to algae: no data available

Toxicity to microorganisms: no data available

### Persistence and degradability

no data available

### Bioaccumulative potential

no data available

### Mobility in soil

no data available

### Other adverse effects

no data available

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## SECTION 13: Disposal considerations

### Disposal methods

#### Product

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

#### Contaminated packaging

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

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## SECTION 14: Transport information

### UN Number

ADR/RID: UN1951 (For reference only, please check.)

IMDG: UN1951 (For reference only, please check.)

IATA: UN1951 (For reference only, please check.)

### UN Proper Shipping Name

ADR/RID: ARGON, REFRIGERATED LIQUID (For reference only, please check.)

IMDG: ARGON, REFRIGERATED LIQUID (For reference only, please check.)

IATA: ARGON, REFRIGERATED LIQUID (For reference only, please check.)

### **Transport hazard class(es)**

ADR/RID: 2.2 (For reference only, please check.)

IMDG: 2.2 (For reference only, please check.)

IATA: 2.2 (For reference only, please check.)

### **Packing group, if applicable**

ADR/RID: (For reference only, please check.)

IMDG: (For reference only, please check.)

IATA: (For reference only, please check.)

### **Environmental hazards**

ADR/RID: No

IMDG: No

IATA: No

### **Special precautions for user**

no data available

### **Transport in bulk according to IMO instruments**

no data available

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## SECTION 15: Regulatory information

### **Safety, health and environmental regulations specific for the product in question**

#### **European Inventory of Existing Commercial Chemical Substances (EINECS)**

Listed.

#### **EC Inventory**

Listed.

#### **United States Toxic Substances Control Act (TSCA) Inventory**

Listed.

#### **China Catalog of Hazardous chemicals 2015**

Listed.

#### **New Zealand Inventory of Chemicals (NZIoC)**

Listed.

#### **PICCS**

Listed.

#### **Vietnam National Chemical Inventory**

Listed.

#### **IECSC**

Listed.

#### **Korea Existing Chemicals List (KECL)**

Listed.



## SECTION 16: Other information

### Abbreviations and acronyms

CAS: Chemical Abstracts Service

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

RID: Regulation concerning the International Carriage of Dangerous Goods by Rail

IMDG: International Maritime Dangerous Goods

IATA: International Air Transportation Association

TWA: Time Weighted Average

STEL: Short term exposure limit

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

EC50: Effective Concentration 50%

### References

IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>

HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>

IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>

eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website: [http://www.echemportal.org/echemportal/index?pageID=0&request\\_locale=en](http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en)

CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>

ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>

ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: <http://www.phmsa.dot.gov/hazmat/library/erg>

Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp>

ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>

### Other Information

Other UN number: 1006 Argon, compressed. High concentrations in the air cause a deficiency of oxygen with the risk of unconsciousness or death. Check oxygen content before entering area.

#### Disclaimer:

The information in this MSDS is only applicable to the specified product, unless otherwise specified, it is not applicable to the mixture of this product and other substances. This MSDS only provides information on the safety of the product for those who have received the appropriate professional training for the user of the product. Users of this MSDS must make independent judgments on the applicability of this SDS. The authors of this MSDS will not be held responsible for any harm caused by the use of this MSDS.