

## Safety Data Sheet

Material Name: ARGON, LIQUID

SDS ID: 00232568

**Section 1 - PRODUCT AND COMPANY IDENTIFICATION****Material Name**

ARGON, LIQUID

**Synonyms**

ARGON, REFRIGERATED LIQUID; ARGON, CRYOGENIC LIQUID; ARGON; LIQUID ARGON; UN 1951; Ar;

**Chemical Family**

non-metallic

**Product Use**

Industrial and Specialty Gas Applications.

**Restrictions on Use**

None known.

**Details of the supplier of the safety data sheet**

POLAR CRYOGENICS

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**Section 2 - HAZARDS IDENTIFICATION****Classification in accordance with paragraph (d) of 29 CFR 1910.1200.**

Gases Under Pressure - Liquefied gas

**GHS Label Elements****Symbol(s)****Signal Word**

Warning

**Hazard Statement(s)**

Contains gas under pressure; may explode if heated.

**Precautionary Statement(s)****Prevention**

None needed according to classification criteria.

**Response**

None needed according to classification criteria.

**Storage**

Protect from sunlight. Store in a well-ventilated place.

**Disposal**

Dispose of contents/container in accordance with local/regional/national/international regulations.

**Other Hazards**

Frostbite may occur from rapid evaporation of the liquified gas.

**Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS**

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CAS	Component Name	Percent
7440-37-1	ARGON, LIQUID	100.0

## Section 4 - FIRST AID MEASURES

### Inhalation

If adverse effects occur, remove to uncontaminated area. Get medical attention.

### Skin

If frostbite or freezing occur, immediately flush with plenty of lukewarm water (105-115°F; 41-46°C). DO NOT USE HOT WATER. If warm water is not available, gently wrap affected parts in blankets. Get immediate medical attention.

### Eyes

Contact with liquid: Immediately flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.

### Ingestion

If swallowed, get medical attention.

### Most Important Symptoms/Effects

#### Acute

Frostbite, suffocation

#### Delayed

No information on significant adverse effects.

## Section 5 - FIRE FIGHTING MEASURES

### Extinguishing Media

#### Suitable Extinguishing Media

Use extinguishing agents appropriate for surrounding fire.

#### Unsuitable Extinguishing Media

None known.

### Special Hazards Arising from the Chemical

Negligible fire hazard. Containers may rupture or explode if exposed to heat.

### Hazardous Combustion Products

None known.

### Fire Fighting Measures

Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out. Stay away from the ends of tanks. For tank, rail car or tank truck, evacuation radius: 800 meters (1/2 mile). Use extinguishing agents appropriate for surrounding fire. Cool containers with water spray until well after the fire is out. Do not get water directly on material. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.

### Special Protective Equipment and Precautions for Firefighters

Wear personal protective clothing and equipment such as self-contained breathing apparatus (SCBA) for protection against possible exposure.

## Section 6 - ACCIDENTAL RELEASE MEASURES

### Personal Precautions, Protective Equipment and Emergency Procedures

Wear personal protective clothing and equipment, see Section 8.

### Methods and Materials for Containment and Cleaning Up

Do not touch or walk through spilled material. Stop leak if possible without personal risk. Use water spray to reduce vapors or divert vapor cloud drift. Avoid allowing water runoff to contact spilled material. Do not direct water at

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spill or source of leak. If possible, turn leaking containers so that gas escapes rather than liquid. Prevent entry into waterways, sewers, basements, or confined areas. Allow substance to evaporate. Keep unnecessary people away, isolate hazard area and deny entry. Stay upwind and keep out of low areas. Ventilate closed spaces before entering.

## Environmental Precautions

Avoid release to the environment.

## Section 7 - HANDLING AND STORAGE

### Conditions for Safe Storage, Including any Incompatibilities

Protect from sunlight. Store in a well-ventilated place.

Subject to storage regulations: U.S. OSHA 29 CFR 1910.101.

### Incompatible Materials

No data available.

## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

### Component Exposure Limits

ARGON, LIQUID	7440-37-1
ACGIH:	(See Appendix F: Minimal Oxygen Content )

### ACGIH - Threshold Limit Values - Biological Exposure Indices (BEI)

There are no biological limit values for any of this product's components.

### Engineering Controls

Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

### Individual Protection Measures, such as Personal Protective Equipment

#### Eye/face protection

For the gas: Eye protection not required, but recommended. For the liquid: Wear splash resistant safety goggles. Contact lenses should not be worn. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

#### Skin Protection

For the gas: Protective clothing is not required. For the liquid: Wear appropriate protective, cold insulating clothing.

#### Respiratory Protection

Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode.

#### Glove Recommendations

For the gas: Protective clothing is not required. For the liquid: Wear appropriate protective, cold insulating clothing.

#### Protective Materials

leather

## Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Not available	Physical State	gas
Odor	odorless	Color	colorless
Odor Threshold	Not available	pH	Not available
Melting Point	-189 °C (-308 °F)	Boiling Point	-186 °C (-303 °F)
Boiling Point Range	Not available	Freezing point	Not available



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Evaporation Rate	Not available	Flammability (solid, gas)	Not available
Autoignition Temperature	Not available	Flash Point	Not available
Lower Explosive Limit	Not available	Decomposition temperature	Not available
Upper Explosive Limit	Not available	Vapor Pressure	500 mmHg @ -190 °C
Vapor Density (air=1)	1.38	Specific Gravity (water=1)	1.4 at -186 °C
Water Solubility	3.36 % (@ 20 °C )	Partition coefficient: n-octanol/water	Not available
Viscosity	0.283 cp	Kinematic viscosity	Not available
Solubility (Other)	Not available	Density	Not available
Physical Form	cryogenic liquid	Taste	tasteless
Molecular Formula	Ar	Molecular Weight	39.848

## Section 10 - STABILITY AND REACTIVITY

### Reactivity

No reactivity hazard is expected.

### Chemical Stability

Stable at normal temperatures and pressure.

### Possibility of Hazardous Reactions

Will not polymerize.

### Conditions to Avoid

Protect from physical damage and heat. Containers may rupture or explode if exposed to heat. Avoid contact with water or moisture.

### Incompatible Materials

No data available.

### Hazardous decomposition products

miscellaneous decomposition products

## Section 11 - TOXICOLOGICAL INFORMATION

### Information on Likely Routes of Exposure

#### Inhalation

nausea, vomiting, dizziness, tingling sensation, suffocation, convulsions, coma

#### Skin Contact

blisters, frostbite

#### Eye Contact

frostbite, blurred vision

#### Ingestion

frostbite

### Acute and Chronic Toxicity

Component Analysis - LD50/LC50

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The components of this material have been reviewed in various sources and no selected endpoints have been identified.

**Product Toxicity Data**

**Acute Toxicity Estimate**

No data available.

**Immediate Effects**

Frostbite, suffocation

**Delayed Effects**

No information on significant adverse effects.

**Irritation/Corrosivity Data**

No data available.

**Respiratory Sensitization**

No data available.

**Dermal Sensitization**

No data available.

**Component Carcinogenicity**

None of this product's components are listed by ACGIH, IARC, NTP, DFG or OSHA.

**Germ Cell Mutagenicity**

No data available.

**Tumorigenic Data**

No data available

**Reproductive Toxicity**

No data available.

**Specific Target Organ Toxicity - Single Exposure**

No information on significant adverse effects.

**Specific Target Organ Toxicity - Repeated Exposure**

No information on significant adverse effects.

**Aspiration hazard**

No data available.

**Medical Conditions Aggravated by Exposure**

No data available.

### Section 12 - ECOLOGICAL INFORMATION

**Component Analysis - Aquatic Toxicity**

No LOLI ecotoxicity data are available for this product's components.

**Persistence and Degradability**

No information available for the product.

**Bioaccumulative Potential**

No information available for the product.

**Mobility**

No information available for the product.

### Section 13 - DISPOSAL CONSIDERATIONS

**Disposal Methods**

Dispose in accordance with all applicable regulations.

**Component Waste Numbers**

The U.S. EPA has not published waste numbers for this product's components.

### Section 14 - TRANSPORT INFORMATION

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## US DOT Information:

Shipping Name: ARGON, REFRIGERATED LIQUID

Hazard Class: 2.2

UN/NA #: UN1951

Required Label(s): 2.2

## TDG Information:

Shipping Name: ARGON, REFRIGERATED LIQUID

Hazard Class: 2.2

UN#: UN1951

Required Label(s): 2.2

## International Bulk Chemical Code

This material does not contain any chemicals required by the IBC Code to be identified as dangerous chemicals in bulk.

## Section 15 - REGULATORY INFORMATION

### U.S. Federal Regulations

None of this product's components are listed under SARA Sections 302/304 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), or require an OSHA process safety plan.

### SARA Section 311/312 (40 CFR 370 Subparts B and C) reporting categories

Gas Under Pressure

### U.S. State Regulations

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA
ARGON, LIQUID	7440-37-1	No	Yes	Yes	Yes	Yes

### California Safe Drinking Water and Toxic Enforcement Act (Proposition 65)

Not listed under California Proposition 65.

### Component Analysis - Inventory

#### ARGON, LIQUID (7440-37-1)

US	CA	AU	CN	EU	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2
Yes	DSL	Yes	Yes	EIN	Yes	No	Yes	No

KR - REACH CCA	MX	NZ	PH	TH-TECI	TW	VN (Draft)
No	Yes	Yes	Yes	Yes	Yes	Yes

## Section 16 - OTHER INFORMATION

### NFPA Ratings

Health: 3 Fire: 0 Instability: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

### Summary of Changes

Updated: 05/01/2015

### Key / Legend

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ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CA/MA/MN/NJ/PA - California/Massachusetts/Minnesota/New Jersey/Pennsylvania\*; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CFR - Code of Federal Regulations (US); CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EC - European Commission; EEC - European Economic Community; EIN - European Inventory of (Existing Commercial Chemical Substances); EINECS - European Inventory of Existing Commercial Chemical Substances; ENCS - Japan Existing and New Chemical Substance Inventory; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; F - Background (for Venezuela Biological Exposure Indices); IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; ISHL - Japan Industrial Safety and Health Law; IUCLID - International Uniform Chemical Information Database; JP - Japan; Kow - Octanol/water partition coefficient; KR KECI Annex 1 - Korea Existing Chemicals Inventory (KECI) / Korea Existing Chemicals List (KECL); KR KECI Annex 2 - Korea Existing Chemicals Inventory (KECI) / Korea Existing Chemicals List (KECL) , KR - Korea; LD50/LC50 - Lethal Dose/ Lethal Concentration; KR REACH CCA - Korea Registration and Evaluation of Chemical Substances Chemical Control Act; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; MX - Mexico; Ne- Non-specific; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; Nq - Non-quantitative; NSL - Non-Domestic Substance List (Canada); NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PEL - Permissible Exposure Limit; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH - Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; Sc - Semi-quantitative; STEL - Short-term Exposure Limit; TCCA - Korea Toxic Chemicals Control Act; TDG - Transportation of Dangerous Goods; TH-TECI - Thailand - FDA Existing Chemicals Inventory (TECI); TLV - Threshold Limit Value; TSCA - Toxic Substances Control Act; TW - Taiwan; TWA - Time Weighted Average; UEL - Upper Explosive Limit; UN/NA - United Nations /North American; US - United States; VLE - Exposure Limit Value (Mexico); VN (Draft) - Vietnam (Draft); WHMIS - Workplace Hazardous Materials Information System (Canada).

## Other Information

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