

# Safety Data Sheet

Argon/Oxygen, mixture

US Cylinder Gas

Alsip, IL



## Section 1: Product and Company Identification

**US Cylinder Gas**

Alsip, IL

Product Code: **Argon/Oxygen Mixes**

Part Number: Argon/Oxygen Mixes

**Synonyms:** Ar/O2 Mix

**Recommended Use:** Industrial use. Use as directed

**Usage Restrictions:**

## Section 2: Hazards Identification



### Warning

Hazard Classification:

Gases Under Pressure, H280  
Simple Asphyxiant, OSHA-H01

Hazard Statements:

H280: Contains gas under pressure; may explode if heated  
OSHA-H01: MAY DISPLACE OXYGEN AND CAUSE RAPID SUFFOCATION.

Precautionary Statements

P202: Do not handle until all safety precautions have been read and understood.  
P271+P403: Use and store only outdoors or in a well-ventilated place.  
CGA-PG02: Protect from sunlight when ambient temperature exceeds 52C (125F).  
CGA-PG05: Use a back flow preventive device in the piping.  
CGA-PG06: Close valve after each use and when empty.  
CGA-PG10+CGA-PG20: Use only with equipment of compatible materials of construction and rated for cylinder pressure.  
CGA-PG12: Do not open valve until connected to equipment prepared for use.  
CGA-PG27: Read and follow the Safety Data Sheet (SDS) before use.

### Section 3: Composition/Information on Ingredients

	CAS #	Concentration
Oxygen	7782-44-7	0 – 19.5%
Argon	7440-37-1	Balance

	Chemical Substance	Chemical Family	Trade Names
Oxygen	OXYGEN, COMPRESSED GAS	Inorganic gases	OXYGEN; DIOXYGEN; MOLECULAR OXYGEN; OXYGEN MOLECULE; PURE OXYGEN; UN 1072; O2
Argon	ARGON, COMPRESSED	Inorganic gases	ARGON; UN 1006; AR

### Section 4: First Aid Measures

	Skin Contact	Eye Contact	Ingestion	Inhalation	Note to Physicians
Oxygen	None expected	None expected	Not likely route of exposure	If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. Get immediate medical attention.	None
Argon	Not applicable route of exposure	Flush eyes with plenty of water.	Not applicable route of exposure	If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. Get immediate medical attention.	For inhalation, consider oxygen.

### Section 5: Fire Fighting Measures

	Suitable Extinguishing Media	Products of Combustion	Protection of Firefighters
Oxygen	Non-flammable. Use extinguishing agent appropriate for the material which is burning. Use water in large quantities for fires involving oxygen.	Oxides of burning material	<ul style="list-style-type: none"> <li>▪ Respiratory protection may be needed for frequent or heavy exposure.</li> <li>▪ None</li> </ul>
Argon	Non-flammable gas	Not applicable	<ul style="list-style-type: none"> <li>▪ N/a</li> <li>▪ N/A</li> </ul>

### Section 6: Accidental Release Measures

	Personal Precautions	Environmental Precautions	Methods for Containment
Oxygen	Keep unnecessary people away, isolate hazard area and deny entry. Ventilate closed spaces before entering.	Avoid contact with combustible materials.	Stop leak if possible without personal risk.
Argon	Keep unnecessary people away, isolate hazard area and deny entry. Stay upwind and keep out of low areas.	None known.	Stop leak if possible without personal risk.

	Methods for Cleanup	Other Information
Oxygen	Stop leak and ventilate	None
Argon	Leaks may be detected by a soapy-water solution.	

### Section 7: Handling and Storage

	Handling	Storage
Oxygen	Store and handle in accordance with all current regulations and standards. Subject to storage regulations: U.S. OSHA 29 CFR 1910.101.	Keep separated from incompatible substances.

	Handling	Storage
Argon	Store and handle in accordance with all current regulations and standards. Subject to storage regulations: U.S. OSHA 29 CFR 1910.101. Keep separated from incompatible substances.	Avoid using in confined spaces.

## Section 8: Exposure Controls/Personal Protection

	Exposure Guidelines
Oxygen	OXYGEN, COMPRESSED GAS: No occupational exposure limits established.
Argon	ARGON, COMPRESSED: ARGON: ACGIH (simple asphyxiant)

### Engineering Controls

Handle only in fully enclosed systems.

	Eye Protection	Skin Protection	Respiratory Protection
Oxygen	Eye protection not required, but recommended.	Protective clothing is not required. Protective gloves are not required.	Respiratory protection may be needed for frequent or heavy exposure.
Argon	Eye protection not required, but recommended.	Protective clothing is not required. Wear appropriate chemical resistant gloves.	N/a

### General Hygiene considerations

- Avoid breathing vapor or mist
- Avoid contact with eyes and skin
- Wash thoroughly after handling and before eating or drinking

## Section 9: Physical and Chemical Properties

	Physical State	Appearance	Color	Change in Appearance	Physical Form	Odor
Oxygen	Gas	Clear	Colorless	N/A	Gas	Odorless
Argon	Gas	Colorless	Colorless	N/A	Gas	Odorless

	Taste	Flash Point	Flammability	Partition Coefficient	Autoignition Temperature	Upper Explosive Limits
Oxygen	Tasteless	Not flammable	Not available	Not available	Nonflammable	Nonflammable
Argon	Tasteless	Not flammable			Nonflammable	Nonflammable

	Lower Explosive Limits	Boiling Point	Freezing Point	Vapor Pressure	Vapor Density	Specific Gravity
Oxygen	Nonflammable	-297 F (-183 C)	-360 F (-218 C)	760 mmHg @ -183 C	1.1 (Air=1)	Not applicable
Argon	Nonflammable	-303 F (-186 C)	-308 F (-189 C)	500 mmHg @ -190 C	1.38 (Air=1)	Not applicable

	Water Solubility	pH	Odor Threshold	Evaporation Rate	Viscosity	Molecular Weight
Oxygen	3.2% @ 25 C	Not applicable	Not available	Not applicable	0.02075 cP @ 25 C	31.9988
Argon	3.36% @ 20 C	Not applicable	Not available	Not applicable	0.0225 cP @ 25 C	39.948

	Molecular Formula	Density	Weight per Gallon	Volatility by Volume	Volatility	Solvent Solubility
Oxygen	O2	1.309 g/L @ 25 C	Not available	Not applicable	Not applicable	Soluble : Alcohol
Argon	AR	1.784 g/L @ 0 C	Not available	100%	Not applicable	Soluble : Organic solvents

## Section 10: Stability and Reactivity

	Stability	Conditions to Avoid	Incompatible Materials
Oxygen	Stable at normal temperatures and pressure.	Avoid contact with combustible materials. Protect from physical damage and heat. Containers may rupture or explode if exposed to heat.	Combustible materials, halo carbons, metals, bases, reducing agents, amines, metal salts, oxidizing materials, alkaline earth and alkali metals
Argon	Stable at normal temperatures and pressure.	Protect from physical damage and heat. Containers may rupture or explode if exposed to heat.	No data available.

  

	Hazardous Decomposition Products	Possibility of Hazardous Reactions
Oxygen	Miscellaneous decomposition products	Will not polymerize.
Argon	No data available.	Will not polymerize.

## Section 11: Toxicology Information

### Acute Effects

	Oral LD50	Dermal LD50	Inhalation
Oxygen	Not established	Not established	Irritation, changes in body temperature, nausea, difficulty breathing, irregular heartbeat, dizziness, disorientation, hallucinations, mood swings, pain in extremities, tremors, lung congestion, convulsions
Argon	Not established	Not established	Nausea, vomiting, difficulty breathing, irregular heartbeat, headache, dizziness, disorientation, mood swings, tingling sensation, loss of coordination, suffocation, convulsions, unconsciousness, coma

  

	Eye Irritation	Skin Irritation	Sensitization
Oxygen	No information on significant adverse effects	No information on significant adverse effects	No significant target effects reported.
Argon	No information on significant adverse effects	No information on significant adverse effects	

### Chronic Effects

	Carcinogenicity	Mutagenicity	Reproductive Effects	Developmental Effects
Oxygen	Not known.	Available.	Available.	No data
Argon	Not established	Not established	Not established	No data

## Section 12: Ecological Information

### Fate and Transport

	Eco toxicity	Persistence / Degradability	Bioaccumulation / Accumulation	Mobility in Environment
Oxygen	Fish toxicity: Not available Invertebrate toxicity: Not available Algal toxicity: Not available Phyto toxicity: Not available Other toxicity: Not available	Not available	Low bioaccumulation	Not available
Argon	Fish toxicity: Not available Invertebrate toxicity: Not available Algal toxicity: Not available Phyto toxicity: Not available Other toxicity: Not available	Not available	Not available	Not available

## Section 13: Disposal Considerations

<b>Oxygen</b>	Dispose in accordance with all applicable regulations. Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): D001.
<b>Argon</b>	Dispose in accordance with all applicable regulations.

## Section 14: Transportation Information

### U.S. DOT 49 CFR 172.101

#### DOT Information For This Mixture

<b>Shipping Name</b>	Compressed gas, n.o.s. (Oxygen, Argon)
<b>UN Number</b>	UN1956
<b>Hazard Class</b>	2.2
<b>Hazard Information</b>	NonFlammable Gas

#### Individual Component Information

	Proper Shipping Name	ID Number	Hazard Class or Division	Packing Group	Labeling Requirements	Passenger Aircraft or Railcar Quantity Limitations	Cargo Aircraft Only Quantity Limitations	Additional Shipping Description
<b>Oxygen</b>	Oxygen, compressed	UN1072	2.2	Not available	2.2; 5.1	75 kg or L	150 kg	N/A
<b>Argon</b>	Argon, compressed	UN1006	2.2	Not applicable	2.2	75 kg or L	150 kg	N/A

### Canadian Transportation of Dangerous Goods

	Shipping Name	UN Number	Class	Packing Group / Risk Group
<b>Oxygen</b>	Oxygen, compressed	UN1072	2.2; 5.1	Not applicable
<b>Argon</b>	Argon, compressed	UN1006	2.2	Not applicable

## Section 15: Regulatory Information

### U.S. Regulations

	CERCLA Sections	SARA 355.30	SARA 355.40
<b>Oxygen</b>	Not regulated.	Not regulated.	Not regulated.
<b>Argon</b>	Not regulated.	Not regulated.	Not regulated.

### SARA 370.21

	Acute	Chronic	Fire	Reactive	Sudden Release
<b>Oxygen</b>	No	No	Yes	No	Yes
<b>Argon</b>	Yes	No	No	No	Yes

### SARA 372.65

<b>Oxygen</b>	Not regulated.
<b>Argon</b>	Not regulated.

### OSHA Process Safety

<b>Oxygen</b>	Not regulated.
<b>Argon</b>	Not regulated.

### State Regulations

	CA Proposition 65
<b>Oxygen</b>	Not regulated.
<b>Argon</b>	Not regulated.

## Canadian Regulations

	WHMIS Classification
Oxygen	A,C
Argon	A

## National Inventory Status

	US Inventory (TSCA)	TSCA 12b Export Notification	Canada Inventory (DSL/NDSL)
Oxygen	Listed on inventory.	Not listed.	Not determined.
Argon	Listed on inventory.	Not listed.	Listed on inventory.

## Section 16: Other Information

	NFPA Rating
Oxygen	HEALTH=0 FIRE=0 REACTIVITY=0 SPECIAL=OX
Argon	HEALTH=0 FIRE=0 REACTIVITY=0 SPECIAL=SA

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard