

SECTION 1: Identification

1.1. Identification

Product Identifier : Bloxygen Inert Gas Preservation System
 Product form : Limited Quantity
 Substance name : Argon
 Chemical name : Argon
 CAS No : 7440-37-1

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

Use of the substance/mixture : Preserve substances sensitive to oxygen or moisture

1.3. Details of the supplier of the safety data sheet

IronWood Designs
 P.O. Box 13838
 San Luis Obispo, CA 93406
 (888) 810-8311
www.bloxygen.com

1.4. Emergency telephone number

Emergency number : 1-888-810-8311

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Compressed gas H280 - Contains gas under pressure; may explode if heated
 Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :



GHS04

Signal word (GHS-US) : Warning
 Hazard statements (GHS-US) : H280 - Contains gas under pressure; may explode if heated
 OSHA-H01 - May displace oxygen and cause rapid suffocation
 Precautionary statements (GHS-US) : P102 – Keep out of reach of children.
 P103 – Read label before use.
 P202 - Do not handle until all safety precautions have been read and understood
 P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing
 P308+P313 - If exposed or concerned: Get medical advice/attention
 P412 – Do not expose to temperatures exceeding 50°C / 120°F
 Limited Quantity Bloxygen is packaged per 49CFR173.306(a)3 as a Limited Quantity consumer commodity.
 Bloxygen meets USPS Mailability requirements and can be shipped via passenger aircraft.



2.3. Other hazards

Other hazards which do not result in classification Asphyxiant in high concentrations.

2.4. Unknown acute toxicity (GHS US)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substance

Name	Product identifier	%	Classification (GHS-US)
Argon, Compressed (Main constituent)	(CAS No) 7440-37-1	> 99.9	Argon, Compressed Limited Quantity

Full text of H-phrases: see section 16

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 fresh air and keep at rest in a position comfortable for breathing. If you feel unwell, seek medical advice.
- First-aid measures after skin contact : Adverse effects not expected from this product.
- First-aid measures after eye contact : Adverse effects not expected from this product.
- First-aid measures after ingestion : Ingestion is not considered a potential route of exposure.

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

- Symptoms/injuries after inhalation : May displace oxygen and cause rapid suffocation. If you feel unwell, seek medical advice.
- Symptoms/injuries after skin contact : Adverse effects not expected from this product.
- Symptoms/injuries after eye contact : Adverse effects not expected from this product.
- Symptoms/injuries after ingestion : Ingestion is not considered a potential route of exposure.
- Symptoms/injuries upon intravenous admin : Not known.
- Chronic symptoms : None known.

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

No additional information available

SECTION 5: Fire fighting 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

- Fire hazard : The product is not flammable. Packaging, cap, and label are.
- Explosion hazard : Product is not explosive. Heat may build pressure, rupturing closed containers.
- Reactivity : None.

5.3. Advice for firefighters

- Firefighting instructions : In case of fire: Continue water spray or fog until containers stay cool. Use extinguishants to contain the fire. Isolate the source of the fire or let it burn out.



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Protection during firefighting : Standard protective clothing and equipment (e.g., Self-Contained Breathing Apparatus) for fire fighters. Do not enter fire area without proper protective equipment, including respiratory protection. Compressed gas: asphyxiant. Suffocation hazard by lack of oxygen.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Ensure adequate ventilation. Due to the small size and content of each cylinder, an accidental release of this product presents significantly less risk of an oxygen deficient environment or other safety hazard than a similar release from a traditional cylinder.

Allow the gas, which is heavier than air, to dissipate. If necessary, monitor the surrounding area (and the original area of the release) for oxygen. Oxygen levels must be above 19.5% before non-emergency personnel are allowed to re-enter area.

6.1.1. For non-emergency personnel

Protective equipment : Wear protective equipment consistent with the site emergency plan.

Emergency procedures : Escape the danger area by the closest safe route. Mark the danger area. Seal off low-lying areas. Keep upwind.

6.1.2. For emergency responders

Protective equipment : Standard protective clothing and equipment (e.g., Self-Contained Breathing Apparatus) for fire fighters. Equip cleanup crew with proper protection.

Emergency procedures : Evacuate and limit access. Ventilate area.

6.2. Environmental precautions

Try to stop release if safe to do so. For incidental leaks from an individual cylinder or valve, contact the manufacturer for a replacement.

6.3. Methods and material for containment and cleaning up

For containment : Try to stop release if safe to do so.

Methods for cleaning up : Dispose of this material and its container in accordance with local regulations.

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 : Do not handle until all safety precautions have been read and understood. Avoid breathing gas. Use only with adequate ventilation. Be aware of any signs of dizziness or fatigue; exposures to fatal concentrations of this product could occur without any significant warning symptoms, due to oxygen deficiency.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Comply with applicable regulations.

Storage conditions : Do not expose to temperatures exceeding 50°C (120°F). Keep container closed when not in use. Protect cylinder from physical damage.

Incompatible products known : None

Incompatible materials known : None

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls



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Appropriate engineering controls	: No special respiratory protection is required under normal circumstances of use. Use supplied air respiratory protection if oxygen levels are below 19.5% or unknown during emergency response to a release of multiple containers of this product. If respirator protection is needed, use only protection authorized in the U.S. Federal OSHA Standard (29 CFR 1910.134), applicable U.S. State regulations, or the Canadian CSA Standard Z94.4-93 and applicable standards of Canadian Provinces. Oxygen levels below 19.5% are considered IDLH by OSHA.
Hand protection	: No special hand protection is required under normal circumstances of use.
Eye protection	: Wear safety glasses with side shields. 29 CFR 1910.133: Eye and Face Protection.
Skin and body protection	: No special protection is required under normal circumstances of use.
Respiratory protection	: No special respiratory protection is required under normal circumstances of use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Viscosity, kinematic
Appearance	Viscosity, dynamic
Molecular mass	Viscosity, kinematic (calculated value) (40 °C)
Color	EJ<Piosive properties
Odor	Oxidizing properties
Odor threshold	Flammability (solid, gas)
pH	Gas
pH solution	Colorless gas
Relative evaporation rate (butylacetate=1)	40g/mol
Relative evaporation rate (ether=1)	Colorless
Melting point	No odor warning properties
Freezing point	No data available
Boiling point	Not applicable
Flash point	No data available
Critical temperature	No data available
Auto-ignition temperature	Not applicable
Decomposition temperature	-189°C
Vapor pressure	No data available
Vapor pressure at 50°C	-185.9°C
Critical pressure	No data available
Relative vapor density at 20°C	-122.4°C
Relative density	Not applicable
Relative density of saturated gas/air mixture	No data available
Density	Not applicable
Relative gas density	No data available
Solubility	4898 kPa
Log Pow	0.0016 (≥21.1)
Log Kow	No data available
	No data available



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

1.38

Water: 61 mg/1

Not applicable

Not applicable

Not applicable

Not applicable

Not applicable

Not applicable

None

Not flammable

9.2. Other information

Additional information : Product packaged as a 49 CFR 173.306 Limited Quantity

SECTION 10: Stability and reactivity

10.1. Reactivity

None known. Inert gas.

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).

10.5. Incompatible materials

None known. Argon is an inert gas.

10.6. Hazardous decomposition products

Under normal conditions of storage and use hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Argon (7440-37-1)

LC50 inhalation rat (ppm)	820000 ppm/4h
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Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
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	: Not classified
Symptoms/injuries after inhalation	: May displace oxygen and cause rapid suffocation. If you feel unwell, seek medical advice.
Symptoms/injuries after skin contact	: Adverse effects not expected from this product.
Symptoms/injuries after eye contact	: Adverse effects not expected from this product.
Symptoms/injuries after ingestion	: Ingestion is not considered a potential route of exposure.
Symptoms/injuries upon intravenous administration	: Not known.
Chronic symptoms	: None known.

SECTION 12: Ecological information

12.1. Toxicity



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No additional information available. Argon is naturally occurring and is the third most common gas in nature.

12.2. Persistence and degradability

No ecological damage caused by this product.

12.3. Bioaccumulative potential

Log Pow	Not applicable
Log Kow	Not applicable
Bioaccumulative potential	No ecological damage caused by this product.

12.4. Mobility in soil

Log Pow	Not applicable
Log Kow	Not applicable
Ecology – soil	No ecological damage caused by this product.

12.5. Other adverse effects

Effect on the ozone layer	None
Effect on global warming	None

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods	: Contact supplier if guidance is required. Do not discharge into any place where its accumulation could be dangerous.
Additional information	: None.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT	
Transport document description	: UN1006 Argon, compressed (Argon), 2.2, Limited Quantity
UN-No.(DOT)	: UN1006
Proper Shipping Name (DOT)	: Argon, compressed
Transport hazard class(es) (DOT)	: 2.2 - Class 2.2 - Non-flammable Non-hazardous Limited Quantity per 49 CFR 173.306
Limited Quantity requirements	: 49 CFR 173.306, Limited Quantities of Compressed Gases, per 173.306 a(3) and 49CFR173.306.a(3)i and 49CFR173.306.a(3)ii. Bloxygen is packaged in a metal aerosol container, a gas for which exceptions are noted in 172.101, conforming to requirements of 173.27, less than 30 kg gross weight, in a DOT 2Q container and at or below 160 psig at 70°F.
DOT Packaging Non Bulk (49 CFR 173.xxx)	: 302
DOT Packaging Bulk (49 CFR 173.xxx)	: 314; 315
DOT Packaging Exceptions (49 CFR 173.xxx)	: 306; 307
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: 75 kg
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 150 kg
DOT Vessel Stowage Location	: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.
Other information	: No supplementary information available.
Labeling	: Limited Quantity per 49CFR173.306(a)3



TDG

No additional information available

Transport by sea

UN-No. (IMDG) : 1006
 Proper Shipping Name (IMDG) : ARGON, COMPRESSED
 Class (IMDG) : 2.2 - Non-flammable, non-toxic gases
 Packing Instruction : P200
 Label : 2.2 (Non-Flammable Gas)



Packing Instructions : Emergency Schedule (EMS) Fire = F-C, Spillage = S-V.

IATA

UN-No. (IATA) : 1006
 Proper Shipping Name (IATA) : ARGON, COMPRESSED
 Class (IATA) : 2
 Packing Instructions : P200. Passenger aircraft quantity limitation: 75 kg, Cargo aircraft limitation: 150 kg.
 Labeling : Limited Quantity per 49CFR173.306(a)3



SECTION 15: Regulatory information

15.1. US Federal regulations

This product is not listed under SARA sections 302/304 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), or TSCA 12(b). This product does not require an OSHA process safety plan. Argon is not on the California Proposition 65 list.

U.S. SARA REPORTING REQUIREMENTS: This gas is not subject to the reporting requirements of Sections 302, 304 and 313 of Title III of the Superfund Amendments and Reauthorization Act., as follows:

U.S. SARA THRESHOLD PLANNING QUANTITY: There are no specific Threshold Planning Quantities for this gas. The default Federal MSDS submission and inventory requirement filing threshold of 10,000 lb (4,540 kg) may apply, per 40 CFR 370.20.

U.S. TSCA INVENTORY STATUS: Argon is listed on the TSCA Inventory.

U.S. CERCLA REPORTABLE QUANTITIES (RQ): Not applicable.

15.2. International regulations

CANADA

Not listed.

Other Regulations

Argon, Compressed, 7440-37-1

US	CA	EU	AU	PH	JP- ENCS	KR- KECI/KECL	KR- TCCA	CN	NZ	MX	TW
Yes	DSL	EIN	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes



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15.3. US State regulations

Alaska - Designated Toxic and Hazardous Substances: Argon.
California - Permissible Exposure Limits for Chemical Contaminants: Argon.
Florida - Substance List: Argon.
Illinois - Toxic Substance List: Argon.
Kansas - Section 302/313 List: No.
Massachusetts - Substance List: Argon.
Michigan - Critical Materials Register: No.
Minnesota - List of Hazardous Substances: Argon.
Missouri - Employer Information/Toxic Substance List: Argon.
New Jersey - Right to Know Hazardous Substance List: Argon.
North Dakota - List of Hazardous Chemicals, Reportable Quantities: No.
Pennsylvania - Hazardous Substance List: Argon.
Rhode Island - Hazardous Substance List: Argon.
Texas - Hazardous Substance List: No.
West Virginia - Hazardous Substance List: No.
Wisconsin - Toxic and Hazardous Substances: No.

SECTION 16: Other information

Indication of changes : Revised safety data sheet in accordance with OSHA final rule on GHS implementation promulgated March 26, 2012.

Other information : This Safety Data Sheet is offered pursuant to OSHA's Hazard Communication Standard, 29 CFR, 1910.1200. Other government regulations must be reviewed for applicability to this product.

Full text of H-phrases:

Compressed gas	Gases under pressure Compressed gas
H280	Contains gas under pressure; may explode if heated

SDS US (GHS HazCom 2012)

This Safety Data Sheet is offered pursuant to OSHA's Hazard Communication Standard, 29 CFR, 1910.1200. Other government regulations must be reviewed for applicability to this product. To the best of IronWood Design's knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability or completeness are not guaranteed and no warranties of any type, either express or implied, are provided. The information contained herein relates only to this specific product. If this product is combined with other materials, all component properties must be considered. Data may be changed from time to time. Be sure to consult the latest edition.