



Safety Data Sheet

Compressed Gas, N.O.S. (Helium, Oxygen)

www.arc3gases.com

Section 1: Product and Company Identification

Arc3 Gases

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Product Code: Compressed Gas, N.O.S. (Helium, Oxygen)

Synonyms: Helium Balance, Oxygen 12%
Recommended Use: Not Known
Usage Restrictions: Not Known

Section 2: Hazards Identification



Warning

Hazard Classification:

Gases Under Pressure

Hazard Statements:

Contains gas under pressure; may explode if heated

Precautionary Statements

Storage:

Protect from sunlight.
Store in well-ventilated place.

Section 3: Composition/Information on Ingredients

	CAS #	Concentration
Helium	7440-59-7	Balance
Oxygen	7782-44-7	12%

	Chemical Substance	Chemical Family	Trade Names
Helium	HELIUM	inorganic, gas	HELIUM GAS; HELIUM COMPRESSED; HELIUM-4; ATOMIC HELIUM; UN 1046; He
Oxygen	OXYGEN, COMPRESSED GAS	inorganic, gas	OXYGEN; DIOXYGEN; MOLECULAR OXYGEN; OXYGEN MOLECULE; PURE OXYGEN; UN 1072; O2

Section 4: First Aid Measures

	Skin Contact	Eye Contact	Ingestion	Inhalation	Note to Physicians
Helium	Wash exposed skin with soap and water.	Flush eyes with plenty of water.	If a large amount is swallowed, get medical attention.	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.
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

Section 5: Fire Fighting Measures

	Suitable Extinguishing Media	Products of Combustion	Protection of Firefighters
Helium	Non-flammable. Use suitable extinguishing media for surrounding fire.	Non-flammable	<ul style="list-style-type: none"> ▪ Non-flammable ▪ Non-flammable
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"> ▪ Respiratory protection may be needed for frequent or heavy exposure. ▪ None

Section 6: Accidental Release Measures

	Personal Precautions	Environmental Precautions	Methods for Containment
Helium	Keep unnecessary people away, isolate hazard area and deny entry. Stay upwind and keep out of low areas.	Avoid soil, waterways, drains and sewers	Stop leak if possible without personal risk.
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.

	Methods for Cleanup	Other Information
Helium	Stop leak, evacuate area. Contact emergency personnel.	None
Oxygen	Stop leak and ventilate	None

Section 7: Handling and Storage

	Handling	Storage
Helium	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
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.

Section 8: Exposure Controls/Personal Protection

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

Engineering Controls

Handle only in fully enclosed systems.

	Eye Protection	Skin Protection	Respiratory Protection
Helium	Eye protection not required, but recommended.	Protective clothing is not required.	Non-flammable
Oxygen	Eye protection not required, but recommended.	Protective clothing is not required.	Respiratory protection may be needed for frequent or heavy exposure.

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	Taste
Helium	Gas	Colorless	Colorless	N/A	Gas	Odorless	Tasteless
Oxygen	Gas	Clear	Colorless	N/A	Gas	Odorless	Tasteless

	Flash Point	Flammability	Partition Coefficient	Autoignition Temperature	Upper Explosive Limits	Lower Explosive Limits
Helium	Not flammable	Not available	Not available	Nonflammable	Nonflammable	Nonflammable
Oxygen	Not flammable	Not available	Not available	Nonflammable	Nonflammable	Nonflammable

	Boiling Point	Freezing Point	Vapor Pressure	Vapor Density	Specific Gravity	Water Solubility	pH	Odor Threshold	Evaporation Rate	Viscosity
Helium	-452 F (-269 C)	-458 F (-272 C) @ 26 atm	1719 mmHg @ -268 C	0.138 (Air=1)	Not applicable	0.94% @ 0 C	Not applicable	Not available	Not applicable	0.02012 cP @ 26.8 C
Oxygen	-297 F (-183 C)	-360 F (-218 C)	760 mmHg @ -183 C	1.1 (Air=1)	Not applicable	3.2% @ 25 C	Not applicable	Not available	Not applicable	0.02075 cP @ 25 C

	Molecular Weight	Molecular Formula	Density	Weight per Gallon	Volatility by Volume	Volatility	Solvent Solubility
Helium	4.0026	He	0.1785 g/L @ 0 C	Not available	100%	Not applicable	Insoluble: Not available
Oxygen	31.9988	O2	1.309 g/L @ 25 C	Not available	Not applicable	Not applicable	Soluble: Alcohol

Section 10: Stability and Reactivity

	Stability	Conditions to Avoid	Incompatible Materials
Helium	Stable at normal temperatures and pressure.	Stable at normal temperatures and pressure.	No data available.
Oxygen	Stable at normal temperatures and pressure.	Stable at normal temperatures and pressure.	Combustible materials, halo carbons, metals, bases, reducing agents, amines, metal salts, oxidizing materials, alkaline earth and alkali metals

	Hazardous Decomposition Products	Possibility of Hazardous Reactions
Helium	Miscellaneous decomposition products	Will not polymerize.
Oxygen	Miscellaneous decomposition products	Will not polymerize.

Section 11: Toxicology Information

Acute Effects

	Oral LD50	Dermal LD50	Inhalation
Helium	Not available	Not available	Nausea, vomiting, difficulty breathing, irregular heartbeat, headache, fatigue, dizziness, disorientation, emotional disturbances, tingling sensation, loss of coordination, suffocation, convulsions, unconsciousness, coma
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

	Eye Irritation	Skin Irritation	Sensitization
Helium	Liquid: frostbite, blurred vision	Liquid: frostbite	Difficulty breathing
Oxygen	No information on significant adverse effects	No information on significant adverse effects	No significant target effects reported.

Chronic Effects

	Carcinogenicity	Mutagenicity	Reproductive Effects	Developmental Effects
Helium	Not available	Not available	Not available	No data
Oxygen	Not known.	Available.	Available.	No data

Section 12: Ecological Information

Fate and Transport

	Eco toxicity	Persistence / Degradability	Bioaccumulation / Accumulation	Mobility in Environment
Helium	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
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

Section 13: Disposal Considerations

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

Section 14: Transportation Information

U.S. DOT 49 CFR 172.101

DOT Information For This Mixture

Shipping Name	Compressed gas, n.o.s. (Helium, Oxygen)
UN Number	UN1956
Hazard Class	2.2
Hazard Information	Non-Flammable 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
Helium	Helium, compressed	UN1046	2.2	Not applicable	2.2	75 kg or L	150 kg	N/A
Oxygen	Oxygen, compressed	UN1072	2.2	Not available	2.2; 5.1	75 kg or L	150 kg	N/A

Canadian Transportation of Dangerous Goods

	Shipping Name	UN Number	Class	Packing Group / Risk Group
Helium	Helium, compressed	UN1046	2.2	Not applicable
Oxygen	Oxygen, compressed	UN1072	2.2; 5.1	Not applicable

Section 15: Regulatory Information

U.S. Regulations

	CERCLA Sections	SARA 355.30	SARA 355.40
Helium	Not regulated.	Not regulated.	Not regulated.
Oxygen	Not regulated.	Not regulated.	Not regulated.

SARA 370.21

	Acute	Chronic	Fire	Reactive	Sudden Release
Helium	Yes	No	No	No	Yes
Oxygen	No	No	Yes	No	Yes

SARA 372.65

Helium	Not regulated.
Oxygen	Not regulated.

OSHA Process Safety

Helium	Not regulated.
Oxygen	Not regulated.

State Regulations

	CA Proposition 65
Helium	Not regulated.
Oxygen	Not regulated.

Canadian Regulations

	WHMIS Classification
Helium	A
Oxygen	A,C

National Inventory Status

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

Section 16: Other Information

	NFPA Rating
Helium	HEALTH=0 FIRE=0 REACTIVITY=0
Oxygen	HEALTH=0 FIRE=0 REACTIVITY=0

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