



# Safety Data Sheet

## Oxygen, Refrigerated Liquid

SDS# 1000000022

[www.arc3gases.com](http://www.arc3gases.com)

### Section 1: Product and Company Identification

#### Arc3 Gases

Arc3 Gases - North  
1700 Chamberlayne Ave.  
Richmond, VA 23222  
phone: (804) 388-0302  
fax: (804) 788-8904

Arc3 Gases - South  
1660 US Highway 301 South  
P.O. Box 1708  
Dunn, NC 28335  
phone: (910) 892-4016  
fax: (910) 892-3575

Emergency contact: INFOTRAC 1-800-535-5053

Product Code: Oxygen, Refrigerated Liquid  
Part Number: SDS# 1000000022

### Section 2: Hazards Identification



#### Hazard Classification:

Gases Under Pressure  
Oxidizing Gas (Category 1)

#### Hazard Statements:

Contains gas under pressure; may explode if heated  
May cause or intensify fire; oxidizer

#### Precautionary Statements

##### Prevention:

Keep reduction valves/valves and fittings free from oil and grease.  
Keep and store away from clothing and combustible materials.

##### Response:

In case of fire: Stop leak if safe to do so.

##### Storage:

Protect from sunlight.  
Store in well-ventilated place.

### Section 3: Composition/Information on Ingredients

<b>CAS #</b>
7782-44-7

Chemical Substance	Chemical Family	Trade Names
OXYGEN, LIQUID	inorganic, gas	LIQUID OXYGEN; LOX; OXYGEN; OXYGEN, PRESSURIZED LIQUID; UN 1073; O2; OXYGEN (CRYOGENIC LIQUID)

### Section 4: First Aid Measures

Skin Contact	Eye Contact	Ingestion	Inhalation	Note to Physicians
Immediately flush with plenty of lukewarm water, or wrap affected area in blankets. Get immediate medical attention.	Flush eyes with plenty of water for at least 15 minutes. Get medical attention.	Get medical attention.	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
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>

### Section 6: Accidental Release Measures

Personal Precautions	Environmental Precautions	Methods for Containment
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
Stop leak and ventilate	None

### Section 7: Handling and Storage

Handling	Storage
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

OXYGEN, LIQUID: No occupational exposure limits established.

### Engineering Controls

Handle only in fully enclosed systems.

Eye Protection	Skin Protection	Respiratory Protection
Wear splash resistant safety goggles.	Wear appropriate protective, cold insulating clothing.	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
Gas	Clear	Blue	N/A	Gas	Odorless	Tasteless

Flash Point	Flammability	Partition Coefficient	Autoignition Temperature	Upper Explosive Limits	Lower Explosive Limits
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
-297 F (-183 C)	-360 F (-218 C)	760 mmHg @ -183 C	1.1 (Air=1)	1.1407 @ -183 C	3.2% @ 25 C	Not applicable	Not available	Not applicable	0.156 cP @ -173 C

Molecular Weight	Molecular Formula	Density	Weight per Gallon	Volatility by Volume	Volatility	Solvent Solubility
31.9988	O <sub>2</sub>	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
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
Miscellaneous decomposition products	Will not polymerize.

## Section 11: Toxicology Information

### Acute Effects

Oral LD50	Dermal LD50	Inhalation
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
Frostbite, blurred vision	Blisters, frostbite	No significant target effects reported.

**Chronic Effects**

Carcinogenicity	Mutagenicity	Reproductive Effects	Developmental Effects
Not known.	Available.	Available.	No data

**Section 12: Ecological Information****Fate and Transport**

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

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**

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
Oxygen, refrigerated liquid	UN1073	2.2	Not available	2.2; 5.1	Forbidden	Forbidden	N/A

**Canadian Transportation of Dangerous Goods**

Shipping Name	UN Number	Class	Packing Group / Risk Group
Oxygen, refrigerated liquid	UN1073	2.2; 5.1	Not applicable

**Section 15: Regulatory Information****U.S. Regulations**

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

**SARA 370.21**

Acute	Chronic	Fire	Reactive	Sudden Release
No	No	Yes	No	Yes

**SARA 372.65**

Not regulated.

**OSHA Process Safety**

Not regulated.

**State Regulations**

CA Proposition 65
Not regulated.

**Canadian Regulations****WHMIS Classification**

Not determined.

**National Inventory Status**

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

**Section 16: Other Information****NFPA Rating**

HEALTH=3 FIRE=0 REACTIVITY=0

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