



ULTRA COOL PRODUCTS
889 BARTON ST. UNIT #1
STONEY CREEK, ON L8E 5V1
www.ultracool.ca
905-643-0060

PRODUCT: Oxygen

CODE: UF-4943

SECTION 01: IDENTIFICATION

Product Identifier..... Oxygen
Other means of Identification..... UF-4943
Chemical Family..... Oxygen.
Recommended use and restrictions..... Not specified.
Initial Supplier Identifier..... Ultra Cool Products
889 Barton St. Unit #1
Stoney Creek, ON L8E 5V1
Tel: 905-643-0060
Fax: 905-828-8070
Emergency telephone number and any ... Ultra Cool Products: 905-643-0060 (9:00 - 5:00; M-F) . In the event of a transport
restrictions on the use of that number emergency contact CANUTEC at (613) 996-6666. .

SECTION 02: HAZARD IDENTIFICATION



Signal Word..... DANGER.
Hazard Classification..... Oxidizing Gases — Category 1. Gases Under Pressure — Compressed Gas.
Hazard Statements..... H270 May cause or intensify fire; oxidizer . H280 Contains gas under pressure; may
explode if heated .
Prevention..... P220 Keep away from clothing and other combustible materials. P244 Keep valves and
fittings free from oil and grease .
Response..... P370 + P376 In case of fire: Stop leak if safe to do so .
Storage..... P410 + P403 Protect from sunlight. Store in a well-ventilated place .
Disposal..... Dispose of contents and empty containers in accordance with local regulations.
Other hazards..... Not applicable.
Mixture Statement..... This product has been classified based upon the information provided by the supplier.

SECTION 03: COMPOSITION / INFORMATION ON INGREDIENTS

CHEMICAL NAME AND SYNONYMS	CAS #	WT. %
Oxygen	7782-44-7	>= 99.5

SECTION 04: FIRST-AID MEASURES

FIRST AID MEASURES:
Skin Contact..... In case of contact with liquid, warm frozen tissues slowly with lukewarm water and get
medical attention. Do not rub affected area.
Eye Contact..... When frostbitten, apply lukewarm water. See a doctor.
Ingestion..... Ingestion of liquid can cause burns similar to frostbite. If frostbite occurs, get medical
attention.
Inhalation..... Keep patient calm, remove to fresh air. Assist in breathing if necessary. Consult a
physician.
Symptoms and effects..... Inhalation of pure oxygen (<2 atm pressure): irritation of the respiratory tract, progressive
reduction of vital capacity, coughing, feeling of tightness, pain, pneumonitis (pulmonary
congestion, edema, cellular damage); inhalation of hyperbaric oxygen (pressure > 2 atm.):
nausea, vomiting, vertigo, muscle spasm, visual impairment, convulsions, loss of
consciousness. Dermal contact with rapidly evaporating liquid could result in freezing of the
tissues or frostbite.
Medical attention and special treatment.... Treat symptomatically. Adverse symptoms may include frostbite. In the event of an incident
involving this product ensure that medical authorities are provided a copy of this safety
data sheet.

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SECTION 05: FIRE-FIGHTING MEASURES

- Suitable and unsuitable extinguishing media Use an extinguishing agent suitable for the surrounding fire.
- Specific hazards arising from the hazardous product, such as the nature of any hazardous combustion products Gas under pressure. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.
- Special protective equipment and precautions for fire-fighters Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Cool fire-exposed containers with cold water spray. Heat will cause pressure build up and may cause explosive rupture. When the maneuver is safe, remove the containers from the burned area. Cool exposed containers with cold water. Stay upwind of the wind in relation to the incident.

SECTION 06: ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures Ventilate properly, otherwise wear appropriate respiratory equipment. Wear an eye protection device. Avoid contact with the skin. Handle away from any source of ignition. Handle away from combustible materials. Do not smoke during use. Use non-metallic tools.
- Methods and materials for containment and cleaning up Eliminate all sources of ignition. Close the cylinder valve. Open the windows or put a forced ventilation. Reduce the concentration of vapors with water spray.

SECTION 07: HANDLING AND STORAGE

- Precautions for safe handling Contains gas under pressure. This product is a strong oxidant, it must be handled away from combustible or easily oxidizable materials. Exposure to this product requires prior training and information. Read the information on the label and the safety data sheet before handling this product. Close valve after each use and when empty. Protect cylinders from physical damage; do not drag, roll, slide or drop.
- Conditions for safe storage, including any incompatibilities Contents under pressure. Store in accordance with local regulations. Store in a segregated and approved area. Keep away from combustible materials. Keep in a well-ventilated place. Keep in a cool place, away from sources of ignition. Protect against physical damage.

SECTION 08: EXPOSURE CONTROLS / PERSONAL PROTECTION

INGREDIENTS	TWA	ACGIH TLV STEL	PEL	OSHA PEL STEL	REL	NIOSH
Oxygen						Not determined
Appropriate engineering controls.....	Use local exhaust ventilation to maintain airborne concentrations below the TLV. Suitable respiratory equipment should be used in cases of insufficient ventilation or where operational procedures demand it. For guidance on engineering control measures refer to publications such as the ACGIH current edition of 'Industrial Ventilation, a manual of Recommended Practice.					
Individual protection measures, such as personal protective equipment						
Eye/Type.....	Prevent eye contact, wear safety glasses in the event that eye contact is possible.					
Gloves/Type.....	Wear skin protection equipment. The selection of skin protection equipment depends on the nature of the work to be performed. Wear chemical resistant gloves to prevent skin contact. Contact glove supplier for additional information.					
Footwear/Type.....	Wear safety boots per local regulations.					
Clothing/Type.....	Wear adequate protective clothing to prevent skin contact.					
Respiratory/Type.....	Wear respiratory protection if ventilation is inadequate. Respiratory protection in case of vapour/aerosol release.					
Other/Type.....	Handle in accordance with good industrial hygiene and safety practice. Take off immediately all contaminated clothing. Wash contaminated clothing before reuse. Emergency eye wash station and shower should be available. Anyone handling this product should wash their hands and face before eating, drinking or using tobacco products. NO SMOKING.					

SECTION 09: PHYSICAL AND CHEMICAL PROPERTIES

- Appearance / physical state Gas, compressed.
- Colour..... Colorless.
- Odour..... No odour.
- Odour Threshold (ppm)..... Not available.
- pH..... Not applicable.
- Melting/Freezing Point..... Not available.
- Initial Boiling Point/Boiling Range..... -182.99 C @ 1013 hPa.
- Flash Point (deg C), Method..... Not applicable.

PRODUCT: Oxygen**CODE: UF-4943****SECTION 09: PHYSICAL AND CHEMICAL PROPERTIES**

Evaporation Rate.....	Not available.
Flammability (solid/gas).....	Oxygen is an oxidizing material, that is, it causes or promotes the combustion of other materials.
Upper Flammable Limit (% Vol).....	Not applicable.
Lower Flammable Limit (% Vol).....	Not applicable.
Vapour Pressure (mm Hg).....	Not available.
Vapour Density (Air=1).....	Not available.
Relative Density/Specific Gravity.....	Not available.
Solubility.....	Not available.
Coefficient of Water/Oil Distribution.....	Not available.
Auto Ignition Temperature (deg C).....	Not applicable.
Decomposition temperature.....	Not available.
Viscosity.....	Not applicable.

SECTION 10: STABILITY AND REACTIVITY

Reactivity.....	Contains gas under pressure; may explode if heated.
Chemical stability.....	Stable at normal temperatures and pressures.
Possibility of hazardous reactions.....	Will not polymerize.
Conditions to avoid, including static discharge, shock or vibration.....	Avoid temperatures >50°C.
Incompatible materials.....	Phosphorus. Organic materials. Powdered metals.
Hazardous decomposition products.....	No hazardous decomposition products if stored and handled as prescribed/indicated. Ozone production by ultraviolet radiation .

SECTION 11: TOXICOLOGICAL INFORMATION

INGREDIENTS	LC50	LD50
Oxygen	Not determined	Not determined
Route of Exposure.....	Skin contact, eye contact, inhalation.	
ATES.....	Not determined.	
Symptoms related to the physical, chemical and toxicological characteristics		
Effects of Acute Exposure.....	Inhalation of pure oxygen (<2 atm pressure): irritation of the respiratory tract, progressive reduction of vital capacity, coughing, feeling of tightness, pain, pneumonitis (pulmonary congestion, edema, cellular damage); inhalation of hyperbaric oxygen (pressure > 2 atm.): nausea, vomiting, vertigo, muscle spasm, visual impairment, convulsions, loss of consciousness. This product is not irritating but there is possibility of frostbite in contact with the liquefied gas.	
Effects of Chronic Exposure.....	Intentional misuse by deliberately concentrating and inhaling this product may be harmful or fatal. Possibility of frostbite on contact with liquefied gas.	
Sensitization.....	None expected.	
Mutagenicity.....	No known mutagenicity effects.	
Reproductive Effects.....	No known reproductive effects. .	
Carcinogenicity of Material.....	None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA OR ACGIH as a carcinogen.	
Specific Target Organ Toxicity - single exposure	This information, if applicable, can be found in Section 2.	
Specific Target Organ Toxicity - repeated exposure	This information, if applicable, can be found in Section 2.	

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity.....	Product data not available.
Persistence and degradability.....	Product data not available.
Bioaccumulation Potential.....	Product data not available.
Mobility in soil.....	Product data not available.
Other adverse effects.....	Product data not available.

SECTION 13: DISPOSAL CONSIDERATIONS

Information on safe handling for disposal and methods of disposal, including any contaminated packaging	Dispose of waste in accordance with all applicable Federal, Provincial/State and local regulations. DO NOT HEAT OR CUT EMPTY CONTAINERS WITH ELECTRIC OR GAS TORCH.
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SECTION 14: TRANSPORT INFORMATION

TDG Classification..... UN1072 - OXYGEN, COMPRESSED, 2.2(5.1). Limited Quantity: 0.125 L . Refer to Part 1 of Transportation of Dangerous Goods Regulations for additional information.

Transport in bulk / IBC Code..... No data available.

SECTION 15: REGULATORY INFORMATION

CEPA Status..... Not reviewed.

TSCA Inventory Status..... Not reviewed.

SECTION 16: OTHER INFORMATION

Prepared by Trivalent Data Systems Ltd. <http://www.trivalent.com> . Information based on suppliers SDS.

Disclaimer..... Information for this material safety data sheet was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries for consequential damages, which may result from the use or reliance on any information contained in this form. .

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data sheet