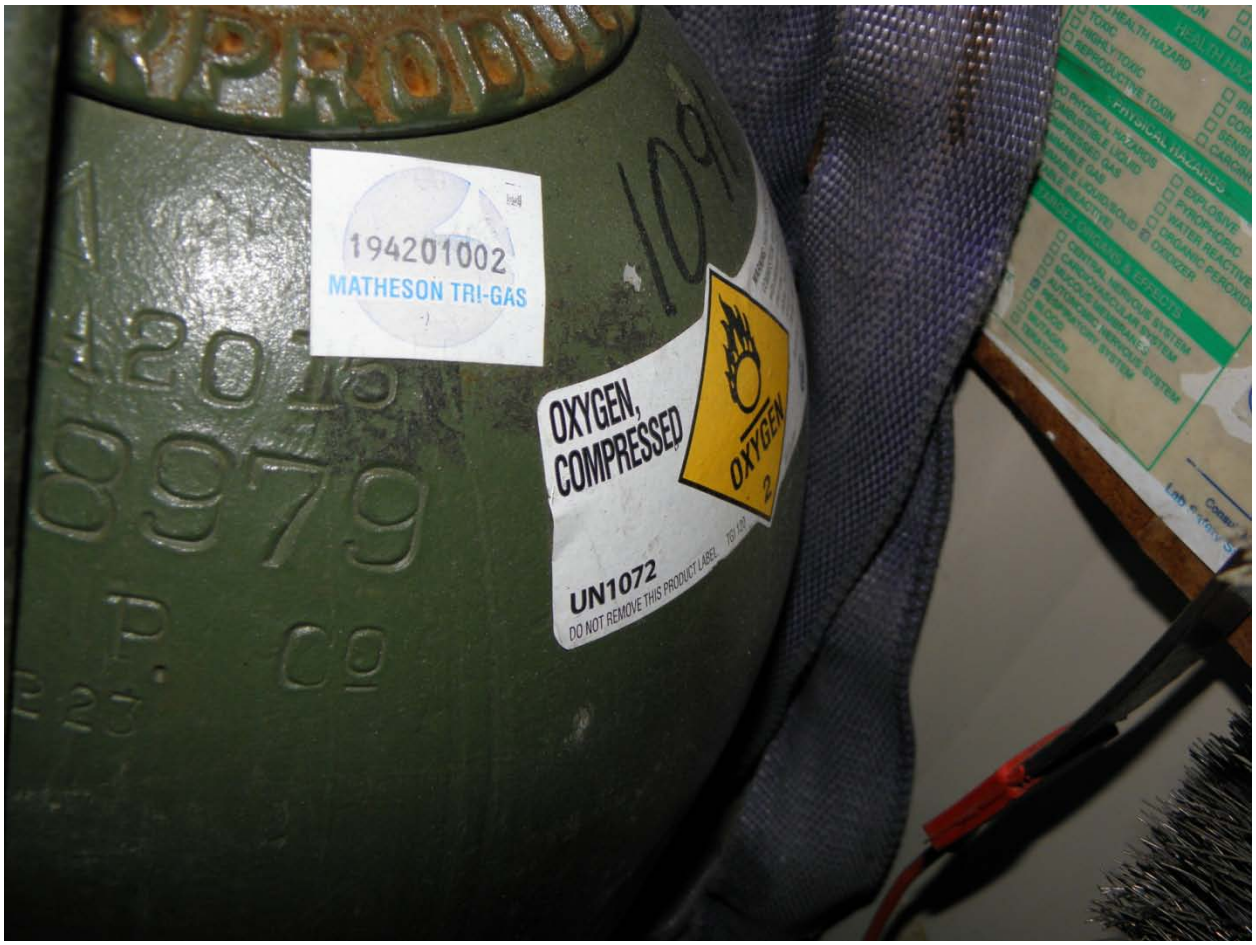

Chemical Name: Oxygen

Manufacturer: Matheson Tri-Gas

Container Size: NA

Location: VLA

Disposal: Electronic Safety Procedure.

iSOC® Technology

Material Safety Data Sheet: Oxygen

Product Name: Oxygen	**CAS:** 7782-44-7
Oxygen; Oxygen, compressed (D.O.T.)	**DOT I.D No.:** UN 1072
Chemical Name and Synonyms: Oxygen	**DOT Hazard Class:** Division 2.2
Formula: O_2	**Chemical Family:** Oxidizer

HEALTH HAZARD DATA

Time Weighted Average Exposure Limit:

None established (ACGIH 1994-1995). Oxygen is the “vital element” in the atmosphere in which we live and breathe.

Symptoms of Exposure:

Breathing high concentrations (greater than 75 molar percent) causes symptoms of hyperoxia which includes cramps, nausea, dizziness, hypothermia, amblyopia, respiratory difficulties, bradycardia, fainting spells, and convulsions capable of leading to death. For additional information on hyperoxia, see Compressed Gas Association’s Pamphlet P-14.

Toxicological Properties:

- The property is that hyperoxia which leads to pneumonia. Concentrations between 25 and 75 molar percent present a risk of inflammation of organic matte in the body.
- Oxygen is not listed in the LARC, NTP or by OSHA as a carcinogen or potential carcinogen.
- Persons in ill health where such illness would be aggravated by exposure to oxygen should not be allowed to work with or handle this product.

Recommended First Aid Treatment:

Prompt medical attention is mandatory in all cases of overexposure to oxygen. Rescue personnel should be cognizant of extreme fire hazard associated with oxygen-rich atmosphere.

Conscious persons should be assisted to an uncontaminated area and breathe fresh air. They should be kept warm and quiet. The physician should be informed that the victim is experiencing hyperoxia.

Unconscious persons should be moved to an uncontaminated area and given assisted respiration. When breathing has been restored, treatment should be as above. Continues treatment should be symptomatic and supportive.

Hazardous Mixtures of other Liquids, Solids or Gases: Oxygen vigorously accelerates combustion. Contact with all flammable materials should be avoided. Some materials that are not flammable in air will burn in pure oxygen or oxygen-enriched atmospheres.

PHYSICAL DATA	
Boiling Point: -297.3°F (-182.9°C)	**Liquid Density at Boiling Point:** 71.23 lb/ft3 (1141 kg/m3)
Vapor Pressure @ 70°F (21.1°C) = Above the critical temperature of -181.1°F (-118.4°C)	**Gas Density at 70°F. 1 atm** .0725 lb/ft3 (1.161 kq/m3)
Solubility in Water: Slightly	**Freezing Point:** -361.8°F (-218.8°C)
Evaporation Rate: N/A (Gas)	**Specific Gravity (AIR=1)** @ 70°F (21.1°C) = 1.11
Appearance and Odor: Colorless, odorless gas	

FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method used): N/A Gas	**Auto Ignition Temperature:** N/A	**Flammable Limits % by Volume:** LEL N/A UEL N/A
Extinguishing Media: Copious quantities of water for fires with oxygen as the oxidizer. l		**Electrical Classification:** Nonhazardous
Special Fire fighting Procedures: If possible, stop the flow of oxygen, which is supporting the fire. If cylinders are involved in a fire, safely relocate or keep cool with water spray.		
Unusual Fire and Explosion Hazards: Vigorously accelerates combustion.		

REACTIVITY DATA

Stability: Stable

Incompatibility (Materials to Avoid): None

Hazardous Decomposition Products: All flammable materials

Hazardous Polymerization: Will not occur

Conditions to Avoid: None

SPILL OR LEAK PROCEDURES

Steps to be taken in case material is released or spilled:

Evacuate all personnel from affected area. Use appropriate protective equipment. If leak is in user's equipment, be certain to purge piping with an inert gas to attempting repairs. If leak is in container or container valve, contact your closest supplier location or call the emergency telephone number listed herein.

Waste disposal methods:

Do not attempt to dispose of waste or unused quantities. Return in the shipping container properly labeled, with any valve outlet plugs or caps secured and valve protection cap in place to your supplier. For emergency disposal assistance, contact your closest supplier location or call the emergency telephone number listed herein.

SPECIAL PROTECTION INFORMATION

Respiratory Protection (Specify type): Positive pressure air line with mask or self-contained breathing apparatus should be available for emergency use.

Ventilation: See Local Exhaust

Local Exhaust: To prevent accumulation above 25 molar percent.

Protective Gloves: As required; any material

Eye Protection: Safety goggles or glasses

Other Protective Equipment: Safety shoes, safety shower

SPECIAL PRECAUTIONS

Special Labeling Information:

DOT Shipping Name: Oxygen, Compressed
DOT Hazard Class: Division 2.2
DOT Shipping Label: Nonflammable Gas
I.D. No.: UN 1072

Special Handling Recommendation:

Use only in well-ventilated areas. Valve protection caps and valve outlet threaded plugs must remain in place unless container is secured with valve outlet piped to use point. Do not drag, slide or roll cylinders. Use a suitable hand truck for cylinder movement. Use a pressure-reducing regulator when connecting cylinder to lower pressure (<3,000 psig) piping or systems. Do not heat cylinder by any means to increase the discharge rate of product from the cylinder. Use a check valve or trap in the discharge line to prevent hazardous back flow into the cylinder. For additional handling recommendations, consult Compressed Gas Association's Pamphlets P-1, P-14, and G-4.

Special Storage Recommendations:

Protect cylinders from physical damage. Store in cool, dry, well-ventilated area away from heavily trafficked areas and emergency exits and away from full or empty stored cylinders which contain flammable products. Do not allow the temperature where cylinders are stored to exceed 125F (52C). Cylinders should be stored upright and firmly secured to prevent falling or being knocked over. Full and empty cylinders should be segregated. Use a "first in -first out" inventory system to prevent full cylinders being stored for excessive periods of time. For additional storage recommendations, consult Compressed Gas Association's Pamphlets P-1, P-i4, and G-4.

Other Recommendations or Precautions:

Oxygen should not be used as a substitute for compressed air in pneumatic equipment since this type generally contains flammable lubricants. Equipment to contain oxygen must be "cleaned for oxygen service." See Compressed Gas Association Pamphlet G-4.1. Compressed gas cylinders should not be refilled except by qualified producers of compressed gases.

Special Packaging Recommendations:

Carbon steels and low alloy steels are acceptable for use at lower pressures. For high pressure applications use stainless steels, copper and its alloys, nickel and its alloys, brass, bronze, silicon alloys, Monel®, Inconel®, or beryllium. Lead and silver or lead and tin alloys are good gasketing materials. Teflon® and Kel-F® are the preferred nonmetal gaskets. Special Note: It should be recognized that the ignition temperature of metals and nonmetals in pure oxygen service decreases with increasing oxygen pressure.