



M a t e r i a l S a f e t y D a t a S h e e t

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OXYGEN

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SECTION #1 - IDENTIFICATION

Product: OXYGEN

CAS Number: 7782-44-7
Product Code: MSDS CODE G-1
Chemical Family: Oxidizer
Chemical Formula: O₂

Synonyms: G-1

NFPA Hazard Rating - Health: 3 High
- Fire: 0 Negligible
- Reactivity: 0 Negligible
- Special: Oxy

SECTION #2 - CHEMICAL COMPONENTS

Component: OXYGEN
CAS Number: 7782-44-7 Percent of Mixture: 99.6000 to 100.0000

SECTION #3 - PHYSICAL DATA

Boiling Point: -297.3°F - 182.9°C
Melting Point: - 361.8°F - 218.8°C
Vapor Pressure: Above critical temp.
Specific Gravity: 1.11 (gas, air=1.0)
Solubility (H₂O): Slightly soluble

Appearance

Colorless gas.

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SECTION #5 - EXPOSURE and EFFECTS - INHALATION Continued...First Aid - Inhalation

Victims should be assisted to an uncontaminated area and inhale fresh air. Quick removal from the contaminated area is most important. Unconscious persons should be moved to an uncontaminated area, and if breathing has stopped, administer artificial resuscitation and supplemental oxygen. Further treatment should be symptomatic and supportive. The physician should be informed that the victim could be experiencing hyperoxia.

SECTION #5 - EXPOSURE and EFFECTS - SKINRoutes of Exposure - Skin

Contact with liquid product may cause tissue freezing.

First Aid - Skin

For dermal contact or frostbite: Remove contaminated clothing and flush affected areas with lukewarm water. DO NOT USE HOT WATER. A physician should see the patient promptly if the cryogenic "burn" has resulted in blistering of the dermal surface or deep tissue freezing.

SECTION #5 - EXPOSURE and EFFECTS - EYESRoutes of Exposure - Eyes

Contact with liquid product may cause tissue freezing.

First Aid - Eyes

Never introduce ointment or oil into the eyes without medical advice! In case of freezing or cryogenic "burns" caused by rapidly evaporating liquid, DO NOT WASH THE EYES WITH HOT OR EVEN TEPID WATER! Remove victim from the source of contamination. Open eyelids wide to allow liquid to evaporate. If pain is present, refer the victim to an ophthalmologist for treatment and follow up. If the victim cannot tolerate light, protect the eyes with a light bandage.

SECTION #5 - MISCELLANEOUS TOXICOLOGICAL INFORMATION

Carcinogenicity: NTP - No

IARC - No

OSHA - No

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SECTION #8 - SPECIAL PROTECTIVE MEASURES Continued...Skin Protection

Loose fitting and insulated.

Other Protection

Safety shoes, safety shower.

SECTION #9 - SPECIAL PRECAUTIONS - STORAGE & HANDLINGStorage & Handling Conditions

Use only in well-ventilated areas. Valve protection caps 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 (<3000 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 system.

Protect cylinders from physical damage. Store in cool, dry, well-ventilated area away from heavily trafficked areas and emergency exits. Do not allow the temperature where cylinders are stored to exceed 130°F (54°C). 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. Post "NO SMOKING OR OPEN FLAMES" signs in the storage area or use area. There should be no sources of ignition in the storage or use area.

For additional storage recommendations, consult Compressed Gas Association's Pamphlets P-1, P-14, and safety bulletin SB-2.

Never carry a compressed gas cylinder or a container of a gas in cryogenic liquid form in an enclosed space such as a car trunk, van or station wagon. A leak can result in a fire, explosion, asphyxiation or a toxic exposure.

SECTION #10 - SHIPPING INFORMATION

Proper Shipping Name: Oxygen or Oxygen, Compressed

Hazard Class: Nonflammable Gas
DOT Identification Number: UN1072
DOT Shipping Label: Oxidizer