Material Safety Data Sheet

1. Product and Company Identification

Product name : **Oxygen, Compressed Gas**

Chemical formula : O2

Synonyms : Oxygen; Dioxygen; Molecular Oxygen; Oxygen Molecule; Pure Oxygen; LOX; Hyperoxia, UN 1072

Company : Med-Tech Gases, inc.
20 Hall Street
Medford, MA 02155

Telephone : 800-FINE-GAS

Emergency : 800-424-9300

2. Composition/Information on Ingredients

Components	CAS Number	% Volume
Oxygen, Compressed Gas	7782-44-7	100%

3. Hazards Identification

Emergency Overview

Containers may rupture or explode if exposed to heat. May ignite combustibles.

Potential Health Effects

Inhalation : Irritation, changes in body temperature, nausea, difficulty breathing, irregular heartbeat, dizziness, disorientation, hallucinations, mood swings, pain in extremities, tremors, lung congestion, convulsions. May cause irritation, cough, chest pain, lung damage in long term exposure.

Eye contact : Irritation, frostbite, blurred vision.

Skin contact : Blisters, frostbite.

Ingestion : Ingestion of a gas is unlikely.

Chronic Health Hazard : None known.

4. First Aid Measures

General advice : None.

Eye contact : Contact with liquid: Immediately flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.

Skin contact : If frostbite or freezing occur, immediately flush with plenty of lukewarm water (105 – 115°F; 41 – 46°C). DO NOT USE HOT WATER. If warm water is not available, gently wrap affected parts in blankets. Get immediate medical attention.

Ingestion : If a large amount is swallowed, get medical attention.

Inhalation : If adverse effects occur, remove to uncontaminated area. Get immediate medical attention.

5. Fire-Fighting Measures

Suitable extinguishing media	:	Carbon dioxide, regular dry chemical. Large fires: Use regular foam or flood with fine water spray.
Specific hazards	:	Negligible fire hazard. Oxidizer. May ignite or explode on contact with combustible materials. Containers may rupture or explode if exposed to heat.
Fire fighting	:	Move container from fire area if it can be done without risk. Cool containers with water spray until well after fire is out. Stay away from ends of tanks. For fires in cargo or storage area: Cool containers with water from unmanned hose holder or monitor nozzles until well after fire is out. If this is impossible, then take the following precautions: Keep unnecessary people away, isolate hazard area and deny entry. Let the fire burn. Use extinguishing agents appropriate for surrounding fire. Cool containers with water. Apply water from a protected location or from a safe distance.

6. Accidental Release Measures

Occupational spill/release	:	Stop leak if possible without personal risk. Avoid contact with combustible materials. Keep unnecessary people away, isolate hazard area and deny entry. Ventilate closed spaces before entering.
Additional advice	:	None.

7. Handling and Storage

Handling

Secure cylinder when using to protect from falling. Use suitable hand truck to move cylinders.

Storage

Store in accordance with all current regulations and standards. Subject to storage regulations: U.S. OSHA 29 CFR 1910.101. Protect from physical damage. Avoid heat, flames, sparks and other sources of ignition. Keep separated from incompatible materials. Store in a cool, dry place. store outside or in a detached building. Store below 125°F.

8. Exposure Controls / Personal Protection

Engineering measures

Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

Personal protective equipment

Respiratory protection	:	Under conditions of frequent use or heavy exposure, respiratory protection may be needed. Respiratory protection is ranked in order from minimum to maximum. Consider warning properties before use. For unknown concentrations or immediately dangerous to life or health – Any supplied-air respirator with full facepiece that is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary of self-contained breathing apparatus operated in pressure-demand or other positive-pressure mode. Any self-contained breathing apparatus that has a full facepiece and is operated in pressure-demand or other positive-pressure mode.
Hand protection	:	Wear insulated gloves.
Eye protection	:	For the gas: Eye protection not required, but recommended. For the liquid: Wear splash resistant safety goggles. Contact lenses should not be worn. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.
Skin and body protection	:	For the gas: Protective clothing is not required. For the liquid: Wear appropriate, protective, cold insulating clothing.

9. Physical and Chemical Properties

Form	:	Gas.
Color	:	Colorless.
Odor	:	Odorless.
Molecular weight	:	31.9988
Vapor pressure	:	760 mmHg @ -183°C
Vapor density	:	1.43 (air = 1)
Specific gravity	:	1.14 @ -183°C (water = 1)
Boiling point	:	-297.33°F (-182.96°C)
Melting point	:	-361.1°F (-218.4°C)
Water solubility	:	3.2% @ 25°C
Evaporation rate	:	Not applicable.
Solvent solubility	:	Soluble: alcohol

10. Stability and Reactivity

Stability	:	Stable at normal temperatures and pressure.
Conditions to avoid	:	Avoid contact with combustible materials. Protect from physical damage and heat. Containers may rupture or explode if exposed to heat.
Materials to avoid	:	Combustible materials, halo carbons, metals, bases, reducing agents, amines, metal salts, oxidizing materials.
Hazardous decomposition products	:	Thermal decomposition products: miscellaneous decomposition products.

11. Toxicological Information

Component Analysis – LD50/LC50

The components of this material have not been reviewed in various sources and no selected endpoints have been identified.

Component Carcinogenicity

None of this product's components are listed by ACGIH, IARC, NTP, OSHA or DFG.

12. Ecological Information

No LOLI ecotoxicity data are available for this product's components.

13. Disposal Considerations

Waste from residues / unused products	:	Dispose in accordance with all applicable regulations. Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): D001.
Contaminated packaging	:	Return cylinder to supplier.

14. Transport Information

DOT (US only)

Proper shipping name	:	Oxygen, Compressed
Class	:	2.2

UN/ID No.	:	UN1072
Labeling	:	Non-Flammable Gas, Oxidizer

Further information

Cylinders should be transported in a secure upright position in a well ventilated truck.

15. Regulatory Information

U.S. Federal Regulations

None of this product's components are listed under SARA Section 302/304 (40 CFR 355 Appendix A), SARA Section 311/312 (40 CFR 370.21), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), or require an OSHA process safety plan.

SARA 311/312

Acute: Yes
Chronic: No
Fire: Yes
Reactive: No
Pressure: Yes

U.S. State Regulations

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA	RI
OXYGEN, COMPRESSED GAS	7782-44-7	No	Yes	No	Yes	Yes	Yes

Not regulated under California Proposition 65