

Material Safety Data Sheet

MEDICAL OXYGEN, COMPRESSED (O2)

Infosafe™ No. 6ACE6 **Issue Date** September 2006 **Status** ISSUED by AIRLIQH **BS:** 1.9.40

Not classified as hazardous

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING

Product Name MEDICAL OXYGEN, COMPRESSED (O2)

Product Use Medical Applications in Respiratory Therapy, Anaesthesia, Hyperbaric and high altitude breathing.

Company Name Air Liquide Healthcare Pty Limited (ABN 41002 653045)

Address Unit 5, 476 Gardeners Road Alexandria
NSW 2015

Emergency Tel. (AH) 1800 812 588

Telephone Number/Fax Tel: (02) 9364 7474
Fax: (02) 8338 9797

Other Names Not Available

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	Name	CAS	Proportion
	Oxygen	7782-44-7	99.5-100 %

3. HAZARDS IDENTIFICATION

Chronic Effects

No health effects have been observed in humans when exposed to concentrations up to 80% volume for several hours or up to 50% volume for 24 hours. Hyperoxia may occur after 2 to 6 hours when exposed at pressures above 1 atmosphere. Exposure at normal or elevated pressure may cause severe thickening and scarring of lung tissues. Not carcinogenic or mutagenic.

Inhalation	Gas is non-toxic. Breathing high concentrations of oxygen may cause symptoms of hyperoxia including cramps, nausea, dizziness, hypothermia, amblyopia (loss of vision), respiratory difficulties, bradycardia, fainting spells and convulsions capable of leading to death.
Ingestion	Not applicable to gases.
Skin	Under certain circumstances, may cause redness, itching and irritation.
Eye	Under certain circumstances, may cause eye irritation, tearing, stinging, blurred vision, and redness.

4. FIRST AID MEASURES

Inhalation	If inhaled, remove from contaminated area. Apply Expired Air resuscitation if not breathing. If symptoms develop seek medical attention.
Ingestion	Not applicable to gases.
Skin	Not applicable.
Eye	Not applicable.
First Aid Facilities	Normal washroom facilities, Air-Viva or similar.
Advice to Doctor	Treatment for hyperoxia.

5. FIRE FIGHTING MEASURES

Extinguishing Media	Use extinguishing media suitable for surrounding environment.
Specific Methods	Move cylinders from fire if safe to do so. Cool cylinders with water from a protected location. If unable to keep cylinders cool, evacuate area. Notify Air Liquide Healthcare that you will be returning faulty/heat effected cylinders.
Specific Hazards	Oxygen is non-flammable, but vigorously supports combustion. Container may rupture when heated.
Hazardous Combustion Products	Under fire conditions this product will emit toxic and/or irritating fumes.
Precautions in connection with Fire	Fire-fighters should wear full protective clothing and self contained breathing apparatus (SCBA).
Flash Point	Non flammable
Flammable Limits UEL	Non flammable
Flammable Limits LEL	Non flammable
Flammability	Non-flammable product but vigorously supports combustion of materials which will not usually burn in air. Concentrations of 25 volume %

oxygen will significantly increase the rate of combustion for some materials. Fires may start easily due to the reduced temperatures required to ignite materials in oxygen enriched atmospheres.

6. ACCIDENTAL RELEASE MEASURES

Restrict access to area until completion of clean-up. Ensure clean-up is conducted by trained personnel only. Wear adequate personal protective equipment. Ventilate area.

CLEAN-UP: Prevent material from entering confined spaces. Stop or reduce leak if safe to do so. Allow gas to dissipate into the atmosphere. Use self-contained breathing apparatus (SCBA) for large spills or releases. Never attempt to repair a damaged or leaking cylinder valve. Leak checking may be done by pressure drop test or by using oxygen compatible leak detecting solution on joints and outlets. Mark empty cylinders 'defective'. Return all faulty cylinders to Air Liquide Healthcare. Dispose of according to federal, Environmental Protection Authority and state regulations. If large quantities of this material enter the environment contact the Environmental Protection Authority, or your local Waste Management Authority.

7. HANDLING AND STORAGE

Handling

DO NOT use near welding operations, flames, or hot surfaces such as furnaces or heaters. Move cylinders by hand-truck or cart designed for that purpose. DO NOT lift cylinders by their caps. DO NOT handle them with oily hands. Secure cylinders in place in an upright position at all times. DO NOT drop cylinders or permit them to bang against each other. Leave valve cap on cylinder until cylinder is secured and ready for use. Check for leaks after pressurising system and prior to starting any operating. Only experienced and properly trained people should use this product. Open valve slowly.

Storage

Cylinders shall be stored in a cool, dry, well ventilated area out of direct sunlight and away from heat and ignition sources. Store away from emergency exits and heavy traffic areas. Outside or detached storage is preferred. No part of cylinders shall be exposed to temperatures above 55°C. Cylinders shall be stored upright on a level, fireproof floor, secure in position and protected from damage. Full cylinders shall be stored separately from empties. Keep cylinder valve cover on. Label empty cylinders and store full cylinders separately from empty ones. Comply with all applicable regulations for the storage and handling of compressed gases.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

National Exposure Standards No exposure standards have been established for this material by the National Occupational Health And Safety Commission (NOHSC).

Respiratory Protection

Not applicable.

Eye Protection

Safety glasses with side shields, goggles or full-face shield as appropriate recommended. Final choice of appropriate eye/face protection will vary according to individual circumstances i.e. methods of handling or engineering controls and according to risk assessments undertaken. Eye protection should conform with Australian/New Zealand Standard AS/NZS 1337 - Eye Protectors for Industrial Applications.

Hand Protection	Wear gloves of impervious material such as leather when moving and connecting cylinders. Final choice of appropriate gloves will vary according to individual circumstances i.e. methods of handling or according to risk assessments undertaken. Reference should be made to AS/NZS 2161.1: Occupational protective gloves - Selection, use and maintenance.
Body Protection	Wear appropriate clothing including chemical resistant apron where clothing is likely to be contaminated. It is advisable that a local supplier of personal protective clothing is consulted regarding the choice of material.
Eng. Controls	Use with good general ventilation. If gases are produced local exhaust ventilation should be used.
Biological Limit Values	No biological limit allocated.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Colourless, tasteless gas.
Odour	Odourless.
Melting Point	Not available.
Boiling Point	- 183°C @ 101.32 kPa
Solubility in Water	0.0489 m ³ /kg @ 0°C
Specific Gravity (H₂O=1)	Not available.
Vapour Pressure	(kPa at 25°C): No liquid phase
Vapour Density (Air=1)	1.105 @ 0°C, 101.3 kPa, (Air = 1)
Flash Point	Non flammable
Flammability	Non-flammable product but vigorously supports combustion of materials which will not usually burn in air. Concentrations of 25 volume % oxygen will significantly increase the rate of combustion for some materials. Fires may start easily due to the reduced temperatures required to ignite materials in oxygen enriched atmospheres.
Flammable Limits LEL	Non flammable
Flammable Limits UEL	Non flammable
Molecular Weight	32.00
Other Information	Critical temperature: - 118.6°C. Density of gas (101.3 Kpa, 15°C): 1.35 kg/m ³ Relative Density (@15°C), (Air=1): 1.105

10. STABILITY AND REACTIVITY

Stability	Stable under normal conditions of storage and handling.
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Materials to Avoid	Not available.
Hazardous Decomposition Products	Not available.
Conditions to Avoid	Extremes of temperature and direct sunlight.

11. TOXICOLOGICAL INFORMATION

Toxicology Information	No toxicity data available for this product.
Inhalation	Gas is non-toxic. Breathing high concentrations of oxygen may cause symptoms of hyperoxia including cramps, nausea, dizziness, hypothermia, amblyopia (loss of vision), respiratory difficulties, bradycardia, fainting spells and convulsions capable of leading to death.
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12. ECOLOGICAL INFORMATION

Environment Protection	Prevent this material entering waterways, drains and sewers.
Mobility	Not available.
Persistence / Degradability	Not available.
Ecotoxicity	No ecological data available for this product.

13. DISPOSAL CONSIDERATIONS

Dispose of waste according to federal, EPA and state regulations.

14. TRANSPORT INFORMATION

This material is classified as a Class 2.2 (Non-flammable Non-toxic Gas) Dangerous Good according to the Australian Code for the Transport

of Dangerous Goods by Road and Rail. Dangerous goods of Class 2.2 (Non-flammable Non-toxic Gas) are incompatible in a placard load with any of the following:

- Class 1, Explosive
- Class 4.2, Spontaneously Combustible Substance
- Class 5.2, Organic Peroxide

U.N. Number 1072

Proper Shipping Name OXYGEN, COMPRESSED

DG Class 2.2

Sub.Risk 5.1

Hazchem Code 2[S]

Packaging Method 3.8.2

Packing Group

EPG Number 2C6

IERG Number 11

15. REGULATORY INFORMATION

Risk Phrase

Poisons Schedule Not Scheduled

16. OTHER INFORMATION

Contact Person/Point

24 HOUR EMERGENCY CONTACT: The Operator: 1800 812 588

Regional Offices:

Victoria

40 Bunnett Street, North Sunshine 3020. Tel. (03) 9290 1100 Fax (03) 9290 1199

New South Wales

43-47 Pine Road, Fairfield 2165. Tel. (02) 9892 9777 Fax (02) 9892 1454

4 Kullara Close, Beresfield. 2322. Tel (02) 4949 1700 Fax (02) 4949 1750

Lot 5, Shellharbour Road, Port Kembla 2505. Tel. (02) 4274 4044 Fax (02) 4276 3879

South Australia

164 Philip Highway, Elizabeth 5112. Tel. (08) 8209 3600 Fax (08) 8255 9885

Queensland

759 Progress Road, Wacol 4076. Tel. (07) 3246 6363 Fax (07) 3271 2589
Ingham Road, Cnr. Dundee Street,

Bohle, Townsville, 4818

Tel. (07) 4774 8276 Fax (07) 4774 8313

Featherstone Street, Parkhurst

Rockhampton, 4702. Tel. (07) 4936 1066 Fax (07) 4936 1024

68 Bunda Street, Cairns 4870. Tel. (07) 4031 1566 Fax (07) 4051 4293

Tasmania

11 Windsor Street, Invermay 7248. Tel. (03) 6334 9666 Fax (03) 6334 9600

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SDS History MSDS Reviewed: September 2006
 MSDS Created: October 2001

Poisons Schedule Not Scheduled

Molecular Weight 32.00

End of MSDS

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