

Product Name OXYGEN (LIQUID)
1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Supplier Name COREGAS PTY LTD
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Web Site http://www.coregas.com/
Synonym(s) 70831005 - MSDS NUMBER
Use(s) INDUSTRIAL APPLICATIONS
MSDS Date 22 Sep 2009

2. HAZARDS IDENTIFICATION

NOT CLASSIFIED AS HAZARDOUS ACCORDING TO ASCC CRITERIA

CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE

UN No.	1073	DG Class	2.2	Subsidiary Risk(s)	5.1
Packing Group	None Allocated	Hazchem Code	2P	EPG	2C7

3. COMPOSITION/ INFORMATION ON INGREDIENTS

Ingredient	Formula	CAS No.	Content
OXYGEN	O2	7782-44-7	100%

4. FIRST AID MEASURES

Eye Cold burns: Immediately flush with tepid water or with sterile saline solution. Hold eyelids apart and irrigate for 15 minutes. Seek medical attention.
Inhalation Due to product form / nature of use, an inhalation hazard is not anticipated.
Skin Cold burns: Remove contaminated clothing and gently flush affected areas with warm water (30°C) for 15 minutes. Apply sterile dressing and treat as for a thermal burn. For large burns, immerse in warm water for 15 minutes. DO NOT apply any form of direct heat. Seek immediate medical attention.
Ingestion Not considered a potential route of exposure.
Advice to Doctor Treat symptomatically

5. FIRE FIGHTING MEASURES

Flammability Non flammable - oxidising agent. Supports combustion and may cause fire/explosion in contact with incompatible substances strong acids, reducing agents, combustibles and flammables.
Fire and Explosion Temperatures in a fire may cause cylinders to rupture and internal pressure relief devices to be activated. Cool cylinders or containers exposed to fire by applying water from a protected location. Do not approach cylinders or containers suspected of being hot. Remove cool cylinders from the path of the fire if safe to do so. Ensure working area is well ventilated before re-use Notify the manufacturer that you will be returning a faulty cylinder. Residual

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product will be disposed of when the cylinder is returned.

Extinguishing Use water fog to cool containers from protected area.

Hazchem Code 2P

6. ACCIDENTAL RELEASE MEASURES

Spillage Release of liquid to atmosphere will generate vapour fog clouds which can travel considerable distances and affect visibility. These clouds should be treated as oxygen enriched atmospheres as the evaporated liquid will have displaced air. Refer to vessel operating instructions. In an emergency allow liquid and gas to escape to atmosphere. Contact manufacturer for guidance. Leak checking may be done by pressure drop test or soapy water at joints and outlets. Shut liquid and gas supply valves to stop leak if possible and safe to do so.

7. STORAGE AND HANDLING

Storage Do not store near incompatible materials. Portable liquid container should be stored below 45°C in a secure area and upright to prevent from falling. Portable liquid containers should also be stored in a dry, well ventilated area constructed of non-combustible material with firm level floor (preferably concrete), away from areas of heavy traffic and emergency exits.

Handling Before use carefully read the product label. Use of safe work practices are recommended to avoid eye or skin contact and inhalation. Observe good personal hygiene, including washing hands before eating. Prohibit eating, drinking and smoking in contaminated areas.

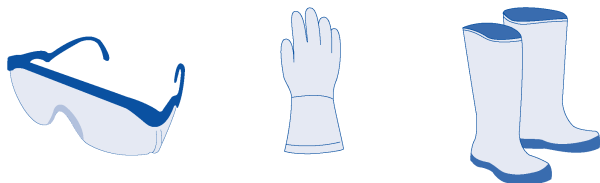
8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

Exposure Stds No exposure standard(s) allocated.

Biological Limits No biological limit allocated.

Engineering Controls No special precautions are normally required when handling this product.

PPE Wear safety boots, insulated or leather gloves and safety glasses.



9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	PALE BLUE LIQUID	Solubility (Water)	INSOLUBLE
Odour	ODOURLESS	Specific Gravity	NOT AVAILABLE
pH	NOT AVAILABLE	% Volatiles	NOT AVAILABLE
Vapour Pressure	NOT AVAILABLE	Flammability	NON FLAMMABLE
Vapour Density	NOT AVAILABLE	Flash Point	NOT RELEVANT
Boiling Point	-183°C	Upper Explosion Limit	NOT RELEVANT
Melting Point	-219°C	Lower Explosion Limit	NOT RELEVANT
Evaporation Rate	NOT AVAILABLE		

10. STABILITY AND REACTIVITY

Material to Avoid Combustible materials such as oil and grease can spontaneously ignite at low temperatures in oxygen enriched atmospheres. Materials which burn in air, will burn more vigorously in oxygen enriched atmospheres. Metals can be ignited and will continue to burn in pure oxygen atmospheres under specific conditions of temperature and pressure. All non-metals must be oxygen compatible. Low temperature will change mechanical properties of some materials. Aluminium, stainless steel, copper are most commonly used metals. Mild steel should not be used as it becomes brittle.

Hazardous Decomposition Products May evolve toxic gases if heated to decomposition.

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Hazardous Reactions Polymerization will not occur.

11. TOXICOLOGICAL INFORMATION

Health Hazard Summary	Non toxic. Low temperatures created during evaporation may result in hypothermia. Skin may freeze to surfaces cooled by liquid and be torn on removal. The respiratory and central nervous systems are primarily affected by gaseous oxygen. No health effects have been observed in humans exposed to concentrations up to 80% oxygen for a few hours or up to 50% for 24 hours. At pressures above 1 atmosphere hyperoxia may appear after 2 to 6 hours. Over exposure at normal or elevated pressure may result in severe thickening and scarring of lung tissues. Not carcinogenic or mutagenic.
Eye	Non irritant. However, direct contact with evaporating liquid may result in severe cold burns with possible permanent damage.
Inhalation	Non irritant. As the amount of oxygen inhaled is increased chest tightness, burning pains and coughing spasms will occur. Other symptoms of hyperoxia include cramps, nausea, dizziness, hypothermia, amblyopia (loss of vision), bradycardia, fainting spells and convulsions capable of causing death.
Skin	Non irritant. However, direct contact with the liquefied material or escaping compressed gas may cause frostbite injury.
Ingestion	Ingestion is considered unlikely due to product form.
Toxicity Data	No LD50 data available for this product.

12. ECOLOGICAL INFORMATION

Environment Not toxic to aquatic or terrestrial life.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Cylinders should be returned to the manufacturer or supplier for disposal of contents.

Legislation Dispose of in accordance with relevant local legislation.

14. TRANSPORT INFORMATION

Transport Transport on open top vehicles in accordance with local legislation.



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Packing Group	None Allocated	Hazchem Code	2P	EPG	2C7

15. REGULATORY INFORMATION

Poison Schedule A poison schedule number has not been allocated to this product using the criteria in the Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP).

16. OTHER INFORMATION

Additional Information Liquid oxygen is used as the oxidant of liquid fuel for aerospace propulsion, in explosives and in mines rescues. Widely used in enhancing combustion processes, particularly in metals processing such as smelting. Also used in waste water treatment.

APPLICATION METHOD: Gas regulator of suitable pressure and flow rating fitted to cylinder or manifold with low pressure gas distribution to equipment.

ABBREVIATIONS:

ADB - Air-Dry Basis.

BEI - Biological Exposure Indice(s)

CAS# - Chemical Abstract Service number - used to uniquely identify chemical compounds.

CNS - Central Nervous System.

EINECS - European INventory of Existing Commercial chemical Substances.

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IARC - International Agency for Research on Cancer.
M - moles per litre, a unit of concentration.
mg/m³ - Milligrams per cubic metre.
NOS - Not Otherwise Specified.
NTP - National Toxicology Program.
OSHA - Occupational Safety and Health Administration.
pH - relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).
ppm - Parts Per Million.
RTECS - Registry of Toxic Effects of Chemical Substances.
TWA/ES - Time Weighted Average or Exposure Standard.

HEALTH EFFECTS FROM EXPOSURE:

It should be noted that the effects from exposure to this product will depend on several factors including: frequency and duration of use; quantity used; effectiveness of control measures; protective equipment used and method of application. Given that it is impractical to prepare a Chem Alert report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:

The recommendation for protective equipment contained within this Chem Alert report is provided as a guide only. Factors such as method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment is made.

Report Status

This document has been compiled by RMT on behalf of the manufacturer of the product and serves as the manufacturer's Material Safety Data Sheet ('MSDS').

It is based on information concerning the product which has been provided to RMT by the manufacturer or obtained from third party sources and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer.

While RMT has taken all due care to include accurate and up-to-date information in this MSDS, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, RMT accepts no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this MSDS.

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End of Report