Lordell Trading Pty Ltd
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Safety Data Sheet

according to
the Preparation of SDS for Hazardous Chemicals
Code of Practice February 2016 – Safe Work Australia

SECTION 1: Identification of the substance / mixture and of the company / undertaking

1.1 Product Identifier:

Trade name: OXYGEN, COMPRESSED

1.2 Relevant identified uses of the substance or mixture and uses advised against

Uses: Chemical Reagent, Combustion Aid, Fuel Additive, Industrial Applications, Laser Applications

1.3 Details of the supplier for the safety data sheet

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1.4 Emergency Telephone: 1800 653 572 (24/7) (Australia only)

SECTION 2: Hazards Identification

2.1 Classification of the substance or mixture:

FLAMMABLE GASES – Category 1

GASES UNDER PRESSURE – Compressed Gas

2.2 Label Elements

GHS02 Flame

GHS04 Pressurised Gas

2.3 Label Elements

Labelling elements we prepared according to Code of Practice on Preparation of Safety Data Sheets for Hazardous Chemicals (Safe Work Australia, December 2011)

Hazard statements:

H270 – May cause or intensify fire; oxidizer.

H280 – Contains gas under pressure; may explode if heated.

Precautionary statements:

Prevention:

P220 – Keep/Store away from clothing/incompatible materials/combustible materials.

P244 – Keep reduction valves free from grease and oil.

Response:

P370 + P376 – In case of fire: Stop leak if safe to do so.

Storage:

P410 + P403 – Protect from sunlight. Store in a well-ventilated space.

Disposal: Dispose in accordance with all applicable local regulations.

SECTION 3: Composition/information on ingredients

Chemical identity	CAS Number	EC Number	Content (v/v)
OXYGEN	7782-44-7	231-956-9	>99.5%

SECTION 4: First aid measures

4.1 Description of first aid measures: In all cases, seek medical attention.

Eye – Adverse effects not expected from this product.

Inhalation – If inhaled, remove from contaminated area. Apply artificial respiration if not breathing. For advice, contact a Poison Information Centre on 13 11 26 (Australia Wide) or a doctor.

After skin contact – Adverse effects not expected from this product.

Ingestion – Due to product form and application, ingestion is considered unlikely.

First aid facilities – No information provided.

4.2 Most important symptoms and effects:

Continuous inhalation of concentrations higher than 75% may cause nausea, dizziness, respiratory difficulty and convulsion.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment for hyperoxia.

SECTION 5: Firefighting measures

5.1 Extinquishing media

Use water fog to cool containers from protected area.

5.2 Special hazards arising from the substance or mixture:

Non flammable – oxidising agent. Supports combustion and may cause fire/explosion in contact with incompatible substances, strong acids, reducing agents, combustibles and flammables. Materials which burn in air, will burn more vigorously in oxygen enriched atmospheres.

5.3 Advice for firefighters

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 product will be disposed of when the cylinder is returned.

5.4 HAZCHEM CODE:

2S

2 – Fine Water Spray.

S – Risk of violent reaction or explosion. Wear full fire kit and breathing apparatus. Dilute spill and run-off.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

If the cylinder is leaking, evacuate area of personnel. Inform manufacturer/supplier of leak. Use Personal Protective Equipment (PPE) as detailed in Section 8 of the SDS.

6.2 Environmental precautions:

Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous.

6.3 Methods and material for containment and cleaning up:

Carefully move material to a well ventilated remote area, then allow to discharge if safe to do so. Do not attempt to repair leaking valve or cylinder safety devices.

6.4 References to other sections

See Sections 8 and 13 for exposure controls and disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling:

Use of safe work practices are recommended to avoid inhalation. Do not drag, drop slide or roll cylinders. The uncontrolled release of a gas under pressure may cause physical harm. Use a suitable hand truck for cylinder movement.

7.2 Conditions for safe storage, including any incompatibilities

Do not store near sources of ignition or incompatible materials. Cylinders should be store below 45^{o}C in a secure area, upright and restrained to prevent cylinders from falling. Cylinders 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.

7.3 Specific end use(s)

No further relevant information available.

SECTION 8: Exposure and controls/personal protection

8.1 Control Parameters

Exposure standards:

No exposure standards have been entered for this product.

Biological limits:

No biological limit values have been entered for this product.

8.2 Exposure controls

Engineering controls:

No special precautions are normally required when handling this product.

PPE

Eye / Face: Wear safety glasses.

Hands: Wear Leather gloves.

Body: Wear safety boots.

Respiratory: Not required under normal conditions of use

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance:	Colourless Gas
Odour:	Odourless
Flammability:	Non Flammable
Flash point:	Not Relevant
Boiling point:	-183^{o}C
Melting point:	NOT AVAILABLE
Evaporation rate:	NOT APPLICABLE
pH:	NOT APPLICABLE
Vapour density:	NOT AVAILABLE
Specific gravity:	NOT APPLICABLE
Solubility (water):	0.032cm^3/cm^3
Vapour pressure:	NOT AVAILABLE
Upper explosion limit:	NOT RELEVANT
Lower explosion limit:	NOT RELEVANT
Partition coefficient:	NOT AVAILABLE
Autoignition temperature:	NOT AVAILABLE
Decompositon temperature:	NOT AVAILABLE
Viscosity:	NOT AVAILABLE
Explosive properties:	NOT AVAILABLE
Oxidising properties:	OXIDISING GAS
Odour threshold:	NOT AVAILABLE

9.2 Other information

Critical pressure:	5,043 kPa
Cylinder pressure (when full):	Refer to Product Manuals
Density:	1.105 (Air = 1)
% Volatiles:	100%
Critical temperature:	-118.6^{o}C (Permanent gas)

SECTION 10: Stability and reactivity

10.1 Reactivity

Unreactive under normal conditions.

10.2 Chemical stability

Stable under recommended conditions of storage.

10.3 Possibility of hazardous reactions

Polymerization will not occur.

10.4 Conditions to avoid:

Avoid heat, sparks, open flames and other ignition sources.

10.5 Incompatible materials:

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.

10.6 Hazardous decomposition products:

This material will not decompose to form hazardous products other than that already present.

SECTION 11: Toxicology information

11.1 Information on toxicological effects

Acute toxicity:	Based on available data, the classification criteria are not met.
Skin:	Not classified as a skin irritant
Eye:	Not classified as an eye irritant.
Sensitization:	Not classified as causing skin or respiratory sensitisation.
Mutagenicity:	Not classified as a mutagen.
Carcinogenicity:	Not classified as a carcinogen.
Reproductive:	Not classified as a reproductive toxin.
STOT – single exposure	Not classified as causing organ effects from single exposure.
STOT – repeated exposure	Continuous inhalation of concentrations higher than 75% may cause nausea, dizziness, respiratory difficulty and convulsion.
Aspiration:	Not classified as causing aspiration.

SECTION 12: Ecological information

12.1 Ecotoxicity: No ecological damage caused by this product.

12.2 Persistence and degradability: No information provided.

12.3 Bioaccumulative potential: No information provided.

12.4 Mobility in soil: No information provided.

12.5 Other adverse effects: No information provided.

SECTION 13: Disposal considerations

13.1 Disposal containers and methods:

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

Legislation: Dispose of in accordance with relevant local legislation.

SECTION 14: Transport information

14.1 UN-Number: 1072

14.2 UN proper shipping name: OXYGEN, COMPRESSED

14.3 Transport hazard class(es): 2.2, 5.1

14.4 Packing group: None allocated.

14.5 Environmental hazards: No information provided

14.6 Special precautions for user:

Hazchem code: 2S

GTEPG: 2C6

EMS: F-C, S-W

14.7 Additional information: Ensure cylinder is separated from driver and foodstuffs. Refer to Commonwealth, State and Territory Dangerous Goods Legislation which contain requirements which affect gas storage and transport.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

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

Classifications: Safework Australia criteria is based on the Globally Harmonised System (GHS) of Classification and Labelling of Chemicals

The classifications and phrases listed below are based on the Approved Criteria for Classifying Hazardous Substances [NOHSC: 1008(2004)].

Hazard Codes: O Oxidising

Risk phrases: R8 Contact with combustible material may cause fire.

Safety phrases: S2 Keep out of reach of children

S17 Keep away from combustible material

Inventory listing(s): **AUSTRALIA: AICS (Australian Inventory of Chemical Substances)**

All components are listed on AICS, or are exempt.

SECTION 16: Other information

Additional information: The storage of significant quantities of gas cylinders must comply with AS4332 The storage and handing of gases in cylinders.

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

PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:
The recommendation for protective equipment contained within this 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.

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 report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

Abbreviations

ACGIH	American Conference of Governmental Industrial Hygienists
CAS #	Chemical abstract Service number – used to uniquely identify chemical compounds
CNS	Central nervous System
EC No.	EC No – European Community Number
EMS	Emergency Schedules (Emergency Procedures for Ships Carrying Dangerous Goods)
GHS	Globally Harmonized System
GTETP	Group Text Emergency Procedure Guide
IARC	International Agency for Research on Cancer
LC50	Lethal Concentration, 50% / Median Lethal Concentration
LD50	Lethal Dose, 50% / Median Lethal Dose
Mg/m^3	Milligrams per Cubic Metre
OEL	Occupational Exposure Limit
pH	relates to hydrongen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).
ppm	Parts Per Million
STEL	Short-Term Exposure Limit
STOT-RE	Specific target organ toxicity (repeated exposure)
STOT-SE	Specific target organ toxicity (single exposure)
SUSMP	Standard for the Uniform Scheduling of Medicines and Poisons

SWA	Safe Work Australia
TLV	Threshold Limit Value
TWA	Time Weighted Average

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.