ARGON • MIXES • CO^2 • NITROGEN • OXYGEN • BEER GAS

49 Chard Road, Brookvale, NSW, 2100
Phone 02 9907 7999 - Fax 02 9907 7666

Oxygen

Safety Data Sheet

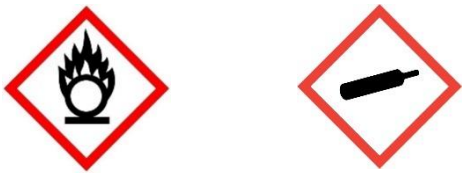
Section 1: IDENTIFICATION of the MATERIAL and SUPPLIER

GHS Product Identifier	Oxygen
Product Name:	Oxygen, compressed
Chemical Name:	Oxygen
Synonym(s):	OXYGEN; COMPRESSED OXYGEN
Uses:	Industrial Applications, Laser Applications, Combustion Aid, Fuel Additive.
Supplier Name:	Speed Gas Pty Ltd
Address:	49 Chard Road, Brookvale, NSW 2100
Telephone:	1300 GAS NOW, 02 9907 7999
Fax:	02 9907 7666
Emergency:	**24hr EMERGENCY TELEPHONE No. (Australia Only) 0412 010 299**
Emergency:	**DIAL 000**
Website:	www.speedgas.com.au

Section 2: HAZARD(S) IDENTIFICATION

CLASSIFIED AS HAZARDOUS ACCORDING TO SAFE WORK AUSTRALIA CRITERIA
CLASSIFIED AS DANGEROUS GOODS BY THE CRITERIA OF THE ADG CODE

GHS Classification: Oxidising Gases: Category 1. Gases Under Pressure: Compressed Gas
Label Elements:
Signal Word: DANGER
Pictogram(s):



Hazard Statements:	H270	May cause of intensify fire. Oxidiser.
	H280	Contains gas under pressure; May explode if heated.
Prevention Statements:	P220	Keep/Store away from clothing/incompatible materials/combustible materials.
	P244	Keep reduction valves free from grease and oil.
Response Statements:	P370 + P376	In case of fire: Stop leak if safe to do so.
Storage Statements:	P410 + P403	Protect from sunlight. Store in a well-ventilated place.
Disposal Statements:	None allocated	
Other Hazards:	No information provided.	

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

Substances / Mixtures

Ingredient	CAS Number	EC Number	Content
OXYGEN	7782-44-7	231-956-9	>99.99%

Section 4: FIRST AID MEASURES

Description of First Aid Measures

Eyes: Not applicable.

Inhaled: Remove from exposure, apply artificial respiration if not breathing, preferably using an automated oxygen resuscitator.

Skin: Not applicable.

Ingestion: Ingestion is not considered a potential route of exposure.

First Aid Facilities: No information provided

Most important symptoms and effects, both acute and delayed.

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

Immediate medical attention and special treatment needed.

Treatment for hyperoxia.

Section 5: FIRE FIGHTING MEASURES

Extinguishing Media: Use water fog to cool containers from protected area.

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.

Advice for Firefighters: Temperatures in a fire may cause cylinders to rupture. Cool cylinders or containers exposed to fire by applying water from a protected location. Remove cool cylinders from the path of the fire. Evacuate the area if unable to keep cylinders cool. Do not approach cylinders or containers suspected of being hot.

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

Personal precautions, protective equipment and emergency procedures.

Non-emergency personnel:	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Provide adequate ventilation. 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.
Environmental Precautions:	Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous.
Methods of cleaning up:	Carefully move to a well ventilated area. Allow gas to escape to atmosphere, preferably in an open remote location. Do not attempt to repair leaking valve or cylinder safety devices.
Reference to other sections:	See Section 8 for Exposure Controls and Section 13 for disposal considerations

Section 7: HANDLING AND STORAGE

Precautions for Safe Handling.

Use safe work practices to avoid inhalation. Use appropriate personal protective equipment (see Section 8). Protect cylinders from physical damage; do not drag, roll, slide, or drop. Use a suitable hand truck for cylinder movement. Contains gas under pressure. Avoid contact with eyes, skin and clothing. Use equipment rated for cylinder pressure. Close valve after each use and when empty. The uncontrolled release of a gas under pressure may cause physical harm.

Conditions for safe storage, including any incompatibilities.

Do not store near sources of ignition or incompatible materials. Store cylinders below 45ºC upright in a secure enclosure, preferably outside of buildings, protected from direct sunlight. Cylinders should also be stored in a dry, well ventilated area constructed of non-combustible material with firm level floor (preferably concrete). Secure cylinders by chains or similar device to prevent falling over. Keep away from flammable or combustible materials. Keep away from vehicular traffic and other thoroughfares.

Specific end use(s): No information provided.

Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

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.

Exposure Controls.

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

PPE

Eye/Face	Wear Safety Glasses
Hands	Chemical-resistant, impervious gloves complying with an approved standard should be worn.
Body	Personal protective equipment for the body and appropriate footwear should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Respiratory	Not required under normal conditions of use.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties.

Appearance:	Colourless gas
Odour:	Odourless
Flammability:	Not Flammable.
Flash Point:	Not Relevant
Boiling Point:	-183ºC
Melting Point:	Not available
Evaporation Rate:	Not applicable
pH:	Not applicable.
Specific gravity:	Not applicable.
Solubility in Water	0.032 cm^3/cm^3
Vapour Pressure:	Not available
Upper explosion limit:	Not Relevant
Lower explosion limit:	Not Relevant
Partition Coefficient:	Not available
Auto-Ignition Temperature:	Not available
Decomposition Temperature:	Not available
Viscosity	Not available
Explosive Properties	Not available
Oxidising Properties	Oxidising Gas
Odour Threshold	Not available

Other Information

Critical Pressure:	5043 kPa
Cylinder Pressure (when full):	13000 kPa to 25000 kPa @ 15ºC
Vapour Density:	1.105 @ 0ºC (Air=1)
Volatiles:	100%
Critical Temperature:	-118.6ºC (Permanent Gas)

Section 10: STABILITY AND REACTIVITY

Reactivity.
No specific test data related to reactivity available for this product or its ingredients. Carefully review all information provided in sections below.

Chemical Stability.
Stable under recommended conditions of storage.

Possibility of Hazardous Reactions.
Under normal conditions of storage and use, hazardous reactions will not occur.

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

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.

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

Section 11: TOXICOLOGICAL INFORMATION

Information on Toxicological Effects.

Acute Toxicity:	Swallowed: No liquid phase.
Skin:	Not irritating to the skin.
Eyes:	Not irritating to the eye.
Sensitisation:	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 damage 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

Toxicity.	No ecological damage caused by this product.
Persistence and Degradability.	Not available.
Bioaccumulative Potential.	Not available.
Mobility in Soil	No information provided
Other Adverse Effects	No information provided

Section 13: DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Waste disposal	Cylinders should be returned to the manufacturer or supplier for disposal of contents.
Legislation	Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Section 14: TRANSPORT INFORMATION

CLASSIFIED AS DANGEROUS GOODS BY THE CRITERIA OF THE ADG CODE

	LAND TRANSPORT (ADG)	SEA TRANSPORT (IMDG / IMO)	AIR TRANSPORT (IATA / ICAO)
UN Number	1072	1072	1072
Proper Shipping Name	OXYGEN, COMPRESSED	OXYGEN, COMPRESSED	OXYGEN, COMPRESSED
Transport Hazard Classes	2.2, 5.1	2.2, 5.1	2.2, 5.1
Packing Group	None Allocated	None Allocated	None Allocated

Environmental Hazards. No information provided

Special Precautions for User.

Hazchem Code	2S
GTEPG	2C6
EMS	F-C, S-W

Other Information: Ensure cylinder is separated from driver and foodstuffs and that the outlet relief device is not obstructed.

Section 15: REGULATORY INFORMATION

Safety, Health and Environmental Regulations / Legislation Specific for the Substance or Mixture.

Poison 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 Handling of Gases in Cylinders.
Risk assessments should be made for each activity to identify and quantify the individual hazards involved.

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 Harmonised System
	GTEPG	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 hydrogen 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

[End of SDS]