

## 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

### 1.1 Product identifier

**Product name** OXYGEN, COMPRESSED (NZ)  
**Synonym(s)** 0051 - SDS NUMBER • BOC OXYGEN, COMPRESSED • COMPRESSED OXYGEN • OXYGEN COMPRESSED • PRODUCT CODES: 018, 075, 077, 100, 101, 103, 104

### 1.2 Uses and uses advised against

**Use(s)** CHEMICAL REAGENT • COMBUSTION AID • INDUSTRIAL APPLICATIONS

### 1.3 Details of the supplier of the product

**Supplier name** BOC LIMITED (NEW ZEALAND)  
**Address** 988 Great South Road, Penrose, Auckland, NEW ZEALAND  
**Telephone** +64 9 525 5600  
**Fax** +64 9 525 7889  
**Email** [customer.servicenz@boc.com](mailto:customer.servicenz@boc.com)  
**Website** <http://www.boc.co.nz>

### 1.4 Emergency telephone number(s)

**Emergency** 0800 111 333 (NZ only)

## 2. HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture

CLASSIFIED AS HAZARDOUS ACCORDING TO HAZARDOUS SUBSTANCES [CLASSIFICATION] REGULATIONS 2001

#### HSNO classification(s)

5.1.2A Oxidising substances that are gases.  
Compressed gases Contains gas under pressure; may explode if heated.

### 2.2 Label elements

**Signal word** DANGER

#### Pictogram(s)



#### Hazard statement(s)

H270 May cause or intensify fire; oxidizer.  
H280 Contains gas under pressure; may explode if heated.

#### Prevention statement(s)

P103 Read label before use.  
P220 Keep/Store away from clothing/incompatible materials/combustible materials.  
P244 Keep reduction valves free from grease and oil.

#### Response statement(s)

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

#### Storage statement(s)

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

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**Disposal statement(s)**

None allocated.

**2.3 Other hazards**

No information provided.

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**3. COMPOSITION/ INFORMATION ON INGREDIENTS**

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**3.1 Substances / Mixtures**

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

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**4. FIRST AID MEASURES**

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**4.1 Description of first aid measures**

**Eye** Adverse effects not expected from this product.  
**Inhalation** If inhaled, remove from contaminated area. Apply artificial respiration if not breathing.  
**Skin** Adverse effects not expected from this product.  
**Ingestion** Ingestion is not considered a potential route of exposure.  
**First aid facilities** None allocated.

**4.2 Most important symptoms and effects, both acute and delayed**

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

**4.3 Immediate medical attention and special treatment needed**

Treatment for hyperoxia.

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**5. FIRE FIGHTING MEASURES**

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**5.1 Extinguishing 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.

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**6. ACCIDENTAL RELEASE MEASURES**

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**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 of 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.

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### 6.4 Reference to other sections

See Sections 8 and 13 for exposure controls and disposal.

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## 7. HANDLING AND STORAGE

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### 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 stored below 45°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 information provided.

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## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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### 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

<b>Eye / Face</b>	Wear safety glasses.
<b>Hands</b>	Wear leather gloves.
<b>Body</b>	Wear safety boots.
<b>Respiratory</b>	Not required under normal conditions of use.



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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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### 9.1 Information on basic physical and chemical properties

<b>Appearance</b>	COLOURLESS GAS
<b>Odour</b>	ODOURLESS
<b>Flammability</b>	NON FLAMMABLE
<b>Flash point</b>	NOT RELEVANT
<b>Boiling point</b>	-183°C
<b>Melting point</b>	NOT AVAILABLE
<b>Evaporation rate</b>	NOT APPLICABLE
<b>pH</b>	NOT APPLICABLE
<b>Vapour density</b>	NOT AVAILABLE
<b>Specific gravity</b>	NOT APPLICABLE
<b>Solubility (water)</b>	0.032 cm <sup>3</sup> /cm <sup>3</sup>
<b>Vapour pressure</b>	NOT AVAILABLE
<b>Upper explosion limit</b>	NOT RELEVANT
<b>Lower explosion limit</b>	NOT RELEVANT
<b>Partition coefficient</b>	NOT AVAILABLE
<b>Autoignition temperature</b>	NOT AVAILABLE
<b>Decomposition temperature</b>	NOT AVAILABLE

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**9.1 Information on basic physical and chemical properties**

Viscosity	NOT AVAILABLE
Explosive properties	NOT AVAILABLE
Oxidising properties	OXIDISING GAS
Odour threshold	NOT AVAILABLE

**9.2 Other information**

% Volatiles	100 %
Critical temperature	-118.4°C
Density	1141.1 kg/m <sup>3</sup>

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**10. STABILITY AND REACTIVITY**

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**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.

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**11. TOXICOLOGICAL INFORMATION**

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**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.
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.

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**12. ECOLOGICAL INFORMATION**

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**12.1 Toxicity**

No ecological damage caused by this product.

**12.2 Persistence and degradability**

No information provided.

**12.3 Bioaccumulative potential**

No information provided.

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**12.4 Mobility in soil**

No information provided.

**12.5 Other adverse effects**

No information provided.

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**13. DISPOSAL CONSIDERATIONS**

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**13.1 Waste treatment 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.

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**14. TRANSPORT INFORMATION**

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**CLASSIFIED AS A DANGEROUS GOOD ACCORDING TO LAND TRANSPORT RULE: DANGEROUS GOODS 2005; NZS 5433:2012, UN, IMDG OR IATA**



	LAND TRANSPORT (NZS 5433)	SEA TRANSPORT (IMDG / IMO)	AIR TRANSPORT (IATA / ICAO)
<b>14.1 UN Number</b>	1072	1072	1072
<b>14.2 Proper Shipping Name</b>	OXYGEN, COMPRESSED	OXYGEN, COMPRESSED	OXYGEN, COMPRESSED
<b>14.3 Transport hazard classes</b>	2.2, 5.1	2.2, 5.1	2.2, 5.1
<b>14.4 Packing Group</b>	None allocated.	None allocated.	None allocated.

**14.5 Environmental hazards**

No information provided.

**14.6 Special precautions for user**

**Hazchem code** 2S

**EMS** F-C, S-W

**Other information** Ensure cylinder is separated from driver and foodstuffs.

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**15. REGULATORY INFORMATION**

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

**Approval code** HSR001029

**Group standard** Oxygen

**Inventory listing(s)** **NEW ZEALAND: NZIoC (New Zealand Inventory of Chemicals)**  
All components are listed on the NZIoC inventory, or are exempt.

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**16. OTHER INFORMATION**

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**Additional information** This product is used in the manufacturer of steel, glass, ethylene oxides, methanol, acrolein, titanium dioxide, vinyl acetate and synthesis gas. In combination with a fuel gas such as acetylene, hydrogen or LPG, it is used in welding, cutting, hardening, scarfing, fame cleaning and heating. Oxygen can be considered for use in any chemical reaction where air is used to give faster reaction time and higher yields. A typical use would be in the treatment of bulk refuse and effluent. High purity oxygen is used in laboratories, in process control operations and in metals analysis equipment.

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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 form of product, 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: form of product; 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
CCID	Chemical Classification and Information Database (HSNO)
CNS	Central Nervous System
EC No.	EC No - European Community Number
EMS	Emergency Schedules (Emergency Procedures for Ships Carrying Dangerous Goods)
EPA	Environmental Protection Authority [New Zealand]
GHS	Globally Harmonized System
HSNO	Hazardous Substances and New Organisms
IARC	International Agency for Research on Cancer
LC50	Lethal Concentration, 50% / Median Lethal Concentration
LD50	Lethal Dose, 50% / Median Lethal Dose
mg/m <sup>3</sup>	Milligrams per Cubic Metre
OEL	Occupational Exposure Limit
pH	relates to hydrogen ion concentration using a scale of 0 (highly 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)
TLV	Threshold Limit Value
TWA	Time Weighted Average

**Report status**

This document has been compiled by RMT on behalf of the manufacturer, importer or supplier of the product and serves as their Safety Data Sheet ('SDS').

It is based on information concerning the product which has been provided to RMT by the manufacturer, importer or supplier 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, importer or supplier.

While RMT has taken all due care to include accurate and up-to-date information in this SDS, 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 SDS.

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