

### 1. Identification of the substance/mixture and Of the Company

**Product Name :** OXYGEN, Compressed.  
**Chemical formula :** O<sub>2</sub>  
**UN Number :** UN1072  
**Uses :** Industrial and professional. Perform risk assessment prior to use.  
Contact Supplier for more information

**Company Identification :** Gaz Carbonique Ltd  
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**Contact Person :** Mr. Arnaud Rougier Lagane  
Chief Operating Manager

### 2. Hazards Identification

#### Classification of the substance or mixture

#### Hazard Class and Category Code Regulation EC 1272/2008 (CLP/GHS)

Oxidizing gases - Category 1 - Danger - (CLP : OX. Gas 1) - H270

Gases under pressure - Compressed gas - Warning - (CLP: Press. Gas) - H280

#### Classification EC 67/548 or EC 1999/45

O; R8 - Contact with combustible material may cause fire

#### Label Elements

#### Labelling regulation EC 1272/2008 (CLP)

#### - Hazard Pictograms



**Hazard Pictograms code :** GHS03 - GHS04

**Signal word :** Danger

**Hazard Statement :** H270 - May cause or intensify fire ; oxidizer  
H280 - Contains gas under pressure ; may explode if heated.

#### Precautionary Statements :

- **Prevention :** P220 -Keep away from combustible materials  
P244 -Keep valves and fittings free from oil and grease
- **Response :** P370+P376 - In case of fire : Stop leak if safe to do so.
- **Storage :** P403 - Store in a well-ventilated place.

### 3. Composition/Information on Ingredients

<b>Substance/Mixture :</b>	Substance
<b>Substance Name :</b>	Oxygen, Compressed.
<b>CAS NO. :</b>	7782-44-7
<b>Index-Nr. :</b>	008-001-00-8
<b>EC No :</b>	231-956-9
<b>REACH Registration Number :</b>	Listed in Annex IV/V of REACH, exempted from registration. Registration deadline not expired. Registration not required : Substance manufacture or imported < 1t/y

Contains no other components or impurities which will influence the classification of the product

### 4. First Aid measures

<b>Inhalation :</b>	Remove victim to uncontaminated area. Continuous inhalation of concentrations higher than 75% may cause nausea, dizziness, respiratory difficulty and convulsion. Keep victim warm and rested. Call a doctor.
<b>Skin/Eye contact :</b>	Adverse effects not expected from this product
<b>Ingestion :</b>	Ingestion is not considered a potential route of exposure.

### 5. Fire Fighting Measures

<b>Special extinguishing media :</b>	All known extinguishants can be used
<b>Specific Hazards :</b>	Exposure to fire may cause containers to rupture/explode. Supports combustion.
<b>Hazardous combustion products :</b>	None.
<b>Specific methods :</b>	Coordinate fire measure to the surrounding fire. Cool endangered containers with water spray jet from a protected position. Do not empty contaminated fire water into drains. If possible, stop flow of product.
<b>Special protective equipment for fire fighters :</b>	None.

### 6. Accidental Release Measures

<b>Personal precautions :</b>	Try to stop release. Evacuate area. Ensure adequate air ventilation. Eliminate Ignition sources. Monitor concentration of released product. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous.
<b>Environmental precautions :</b>	Try to stop release.
<b>Clean up methods :</b>	Ventilate area.

## 7. Handling and Storage

### Safe Use of the product :

Use no oil and grease.

Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Contact your gas supplier if in doubt.

Use only oxygen approved lubricants and oxygen approved sealings.

Use only with equipment cleaned for oxygen service and rated for cylinder pressure. Keep equipment free from oil and grease.

Only experienced and properly instructed persons should handle gases under pressure.

The product must be handled in accordance with good industrial hygiene and safety procedures.

Do not smoke while handling product.

Ensure the complete gas system was (or is regularly) checks for leaks before use.

### Safe handling of the gas receptacle :

Do not allow backfeed into the container.

Open valve slowly to avoid pressure shock.

Suck back of water into the container must be prevented.

Protect cylinders from physical damage ; do not drag, roll, slide or drop. Leave valve protection caps in place until the container has been secured against either a wall or bench or placed in a container stand and is ready for use.

If user experiences any difficulty operating cylinder valve discontinue use and contact supplier.

Never attempt to repair or modify container valves or safety relief devices.

Keep container valve outlets clean and free from contaminates particularly oil and water.

Close cylinder valve after each use and when empty, even if still connected to equipment.

Replace valve outlet caps or plugs and container caps where supplied as soon as container is disconnected from equipment.

Never attempt to transfer gases from one cylinder to another.

Never use direct flame or electrical heating devices to raise the pressure of a container.

Do not remove or deface labels provided by the supplier for the identification of the cylinder contents.

### Handling :

Use no oil and grease

Open valve slowly to avoid pressure shock.

Suck back of water into the container must be prevented.

Keep away from ignition sources (including static discharges).

### Storage :

Keep container below 50°C in a well-ventilated place.

Keep away from combustible materials.

Segregate from flammable gases and other flammable materials in store.

Observe all regulations and local requirements regarding storage of cylinders/containers.

Containers should not be stored in conditions likely to encourage corrosion.

Containers should be stored in vertical position, and properly secured to prevent toppling.

Stored containers should be periodically checked for general condition and leakage.

Stored containers in location free from fire risk and away from sources of heat and ignition.

Cylinder valve guards or caps should be in place.

## 8. Exposure Controls/Personal Protection

### Control parameters :

**DNEL : Derived no effect level :** None available

**PNEC : Predicted no effect concentration :** None available

### Engineering controls :

System under pressure should be regularly checked for leakages.  
Provide adequate general and local exhaust ventilation.  
Avoid oxygen rich (>21%) atmospheres.  
Gas detectors should be used when oxidising gases may be released.  
Consider work permit system e.g. for maintenance activities.

### Personal protection & Protective

#### Equipment :

Conduct and document risk assessment in each work area to assess the risks related to the use of the product and select the appropriate PPEs. The following recommendations should be considered:  
Wear leather safety gloves and safety shoes when handling cylinders.  
Wear safety glasses with side shields.  
Wear suitable hand, body and head protection.  
Wear goggles with suitable filter lenses when use in cutting/welding.

### Environmental exposure controls :

None necessary.

## 9. Physical and Chemical Properties

### General Information

**Appearance/Colour :**

Colourless gas

**Odour :**

No odour warning properties.

**Odour threshold :**

Odour threshold is subjective and inadequate to warn for overexposure.

**Molar Mass :**

32 g/mol

**Melting point:**

-219°C

**Boiling point:**

-183°C

**Critical temperature:**

-118°C

**Auto-ignition temperature:**

Not applicable

**Flash point (°C) :**

Not applicable for gases and gas-mixtures.

**Evaporation rate (ether=1) :**

Not applicable for gases and gas-mixtures.

**Flammability range :**

Non flammable

**Vapour pressure (20°C) :**

Not applicable

**Relative density, gas (air=1) :**

1.1

**Relative density, liquid (water=1) :**

1.1

**Solubility in water :**

39 mg/l

**Partition coefficient n-octanol/water :**

Not applicable for inorganic gases.

**Oxidising properties :**

Oxidiser

### Other data:

Gas/vapour heavier than air, may accumulate in confined spaces, particularly at or below ground level.

## 10. Stability and reactivity

<b>Reactivity :</b>	No reactivity hazard other than the effects described in sub-sections below.
<b>Chemical Stability :</b>	Stable under normal conditions.
<b>Possibility of hazardous reactions :</b>	Violently oxidises organic material.
<b>Conditions to avoid :</b>	None under recommended storage and handling conditions (see section 7)
<b>Incompatible materials :</b>	Consider potential toxicity hazard due to the presence of chlorinated or fluorinated polymers in high pressure (>30 bars) oxygen lines in case of combustion. May react violently with combustible materials. May react violently with reducing agents. Keep equipment free from oil and grease.

## 11. Toxicological Information

### General

No known toxicological effects from this product.

## 12. Ecological Information

### General

No ecological damage caused by this product

## 13. Disposal Considerations

### General

May be vented to atmosphere in a well ventilated place.

Do not discharge into any place where its accumulation could be dangerous.

Contact supplier if guidance is required.

## 14. Transport Information

<b>UN number :</b>	1072
<b>UN proper shipping Name :</b>	OXYGEN, COMPRESSED
<b>Labelling ADR, IMDG, IATA :</b>	



:	2.2 : Non Flammable. non toxic gas.
:	5.1 : Oxidising substances.

### Land Transport (ADR/RID)

Hazard number :	225
Packing instruction :	P200

### Sea Transport (IMDG)

Class :	2.2
Packing Instruction :	P200
Emergency Schedule(EmS) Fire :	F-C
Emergency Schedule(EmS) Spillage :	S-W

## 14. Transport Information (continued)

### Air Transport (IATA-DGR, ICAO-TI)

Class :	2.2
Packing Instruction :	P200
Passenger and Cargo Aircraft :	Allowed
Cargo Aircraft Only :	Allowed.

<b>Special precautions for user :</b>	Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency. Avoid transport on vehicles where the load space is not separated from the driver's compartment. Before transporting product containers : <ul style="list-style-type: none"><li>— Ensure that containers are firmly secured.</li><li>— Ensure cylinder valve is closed and not leaking.</li><li>— Ensure valve outlet cap nut or plug (where provided) is correctly fitted.</li><li>— Ensure valve protection device (where provided) is correctly fitted.</li><li>— Ensure there is adequate ventilation.</li></ul>
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## 15. Regulatory Information

<b>EU legislation :</b>	None.
<b>National legislation :</b>	Ensure all national/local regulations are observed.

## 16. Other Information

<b>DISCLAIMER OF LIABILITY :</b>	Before using this product in any new process or experiment, a thorough material compatibility and safety study should be carried out. Details given in this document are believed to be correct at the time of going to press. Whilst proper care has been taken in the preparation of this document, no liability for injury or damage resulting from its use can be accepted.
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