



MATERIAL SAFETY DATA SHEET



OXYGEN

1 CHEMICAL PRODUCT & COMPANY IDENTIFICATION

Product name	Oxygen, compressed
Chemical name/formula	Oxygen / O ₂
Company identification	See header and footer
Emergency phone no.	See footer

2 COMPOSITION / INFORMATION ON INGREDIENTS

Substance/Preparation	Substance
Components Impurities	Contains no other components or impurities, which will influence the classification of the product.
CAS No.	7782-44-7

3 HAZARDS IDENTIFICATION

General	<ul style="list-style-type: none">▶ Compressed gas.▶ Oxidant; strongly supports combustion.▶ May react violently with combustible materials.
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4 FIRST-AID MEASURES

Inhalation	<ul style="list-style-type: none">▶ Continuous inhalation of concentrations higher than 75% may cause nausea, dizziness, respiratory difficulty and convulsion.▶ Remove victim to uncontaminated area. Keep victim warm and rested.▶ Call a doctor.
Skin/Eye contact	<ul style="list-style-type: none">▶ No adverse effects anticipated.
Ingestion	<ul style="list-style-type: none">▶ Ingestion is not considered a potential route of exposure.

5 FIRE-FIGHTING MEASURES

Specific hazards	<ul style="list-style-type: none">▶ Supports combustion.▶ Exposure to fire may cause containers to rupture or explode.
Hazardous combustion products	<ul style="list-style-type: none">▶ None
Suitable extinguishing media	<ul style="list-style-type: none">▶ All known extinguishants can be used.
Specific methods	<ul style="list-style-type: none">▶ If possible, stop flow of product.▶ Move container away or cool with water from a protected position.
Special protective equipment (for fire fighters)	<ul style="list-style-type: none">▶ In confined space, use a self-contained breathing apparatus.

6 ACCIDENTAL RELEASE MEASURES

Personal precautions	<ul style="list-style-type: none">▶ Evacuate area.▶ Eliminate ignition sources.▶ Use protective clothing.▶ Ensure adequate air ventilation.
Environmental Precautions	<ul style="list-style-type: none">▶ Try to stop release.▶ Prevent from entering sewers, basements and work pits or any place where its accumulation can be dangerous.
Clean up methods	<ul style="list-style-type: none">▶ Ventilate area

7 HANDLING & STORAGE

General	<ul style="list-style-type: none">▶ Use no oil or grease.▶ Open valve slowly to avoid pressure shock.▶ Segregate from flammable gases and other flammable materials in store.▶ Suck back of water into the container must be prevented.▶ Use only properly specified equipment, which is suitable for this product, its supply pressure and temperature.▶ Keep away from ignition sources (including static discharges).▶ Keep container below 50°C in a well-ventilated place.▶ Refer to "safe handling, transport and storage of compressed gas cylinder" or contact AIG if in doubt.
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8 EXPOSURE CONTROLS & PERSONAL PROTECTION

Exposure limit value	<ul style="list-style-type: none">▶ None
Personal protection	<ul style="list-style-type: none">▶ Do not smoke while handling product.▶ Wear suitable hand, body and head protection.▶ Avoid oxygen rich (>21%) atmospheres.▶ Ensure adequate ventilation

9 PHYSICAL & CHEMICAL PROPERTIES

Molecular weight	32
Melting point	-219°C
Boiling point	-183°C
Critical temperature	-118°C
Relative density, gas	1.1 (air = 1)
Relative density, liquid	1.1 (water = 1)
Vapour pressure @20°C	Not applicable

9 PHYSICAL & CHEMICAL PROPERTIES (continue)

Solubility mg/l water	39 mg/l
Appearance/Colour	Colourless gas
Odour	No odour warning properties
Auto-ignition temperature	Not applicable
Flammability range	Oxidiser
Others	Gas or vapour is heavier than air. May accumulate in confined spaces, at or below ground level.

10 STABILITY & REACTIVITY

General	<ul style="list-style-type: none">▶ May react violently with combustible materials and reducing agents.▶ Violently oxidizes organic material.
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11 TOXICOLOGICAL INFORMATION

General	<ul style="list-style-type: none">▶ No known toxicological effects from this product.
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12 ECOLOGICAL INFORMATION

General	<ul style="list-style-type: none">▶ No known ecological damage caused by this product.
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13 DISPOSAL CONSIDERATIONS

General	<ul style="list-style-type: none">▶ Do not discharge into areas where its accumulation could be dangerous.▶ Vent to atmosphere in a well-ventilated place.▶ Contact AIG if guidance is required.
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14 TRANSPORT INFORMATION

UN No.	1072
Class/Division	2.2 (Non-Flammable Gas)
Subsidiary risk	Oxidiser
UN proper shipping name	Oxygen, compressed
IMO/IATA shipping label	



Other transport information	<ul style="list-style-type: none">▶ Avoid transport on vehicles where the load space is not separated from the driver's compartment.▶ 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.▶ Before transporting product containers, ensure that they are firmly secured and:<ul style="list-style-type: none">▪ compliance with applicable regulations;▪ cylinder valve is closed and not leaking;▪ valve outlet cap nut or plug (where provided) is correctly fitted;▪ valve protection device (where provided) is correctly fitted and▪ there is adequate ventilation.
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15 REGULATORY INFORMATION

General	<ul style="list-style-type: none">▶ Singapore's Factories Act 2000, Sections 14, 34, 44 & 60A.▶ Singapore Standards:<ul style="list-style-type: none">▪ CP 12:2000 Part 1▪ CP 98:2003▪ SS 152:2003▪ SS 286:1984 Part 1 to Part 5
Risk and safety phrases	<ul style="list-style-type: none">▶ R8 – Contact with combustible materials may cause fire.▶ S17 – Keep away from combustible materials.

16 OTHER INFORMATION

General	<ul style="list-style-type: none">▶ Ensure all local regulations or legislations are observed.▶ Ensure operators or users understand the hazard of oxygen enrichment.▶ 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 revising.▶ 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.▶ This safety data sheet is for information purposes only and is subjected to change without notice.
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