	SAFETY DATA SHEET	Version: 4 Revision date: 2025-04-24
	SULPHUR DIOXIDE Compressed	PG-SDS-010




This SDS conforms to the Globally Harmonised System (GHS), South African Regulations on Hazardous Chemical Agents, and SANS 10234, SANS 11014 & SANS 10228.


SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product name	Sulphur Dioxide
Chemical Name	Sulphur Dioxide (SO ₂)
Other means of identification	Sulfur Oxide, Sulfurous acid anhydride, Sulfur oxide, Sulfurous anhydride, Sulfurous oxide Refrigerant gas R764
Recommended Intended Purpose	Various. Industrial and food/beverage preservation. Wine and cider making.
Company Information	Puregas (Pty) Ltd PO Box 123884, Alrode, 1451, Gauteng, South Africa Tel: (011) 903 9760 Fax: (011) 903 9766 Cellphone: 082 889 6946 (1 st) 082 885 7475 (2 nd) Email: info@puregas.co.za Website: www.puregas.co.za
Emergency Telephone	0800 172 743 Rapid Spill Response - 24 hours, 7 days a week

SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance - GHS classification as published through ECHA

Hazard Classification	Category	Hazard Statement	
Gases under pressure (Comp.)	2.2	H280	Contains gas under pressure; may explode if heated.
Skin corrosion / irritation	1	H314	Causes severe skin burns and eye damage.
Acute toxicity, inhalation	6.1	H331	Toxic if inhaled.
Hazard Pictograms	<div></div> <div></div> <div></div> <div>GHS04GHS05GHS06</div>		
Signal Word	Danger		
Precautionary Statements			
General:	P101 P102 P103	If medical advice is needed, have product container or label at hand Keep out of reach of children Read carefully and follow all instructions	
Prevention	P202 P280 + P284 P261 P262 P264	Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing, eye protection, respiratory protection, and/or face protection. Do not breathe gas. Do not get in eyes, on skin, or on clothing Wash exposed skin thoroughly after handling	
Response	P303 + P361 + P353 + P363 P311 P310 P336 + P304 + P340 P305 + P351 +	IF ON SKIN OR (HAIR): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. Immediately call a POISON CENTER/doctor. Thaw frosted parts with lukewarm water. Do not rub affected area. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove	

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	P338	contact lenses, if present and easy to do. Continue rinsing. Contact an ophthalmologist immediately
Storage	P271 + P403 P405	Use and store only outdoors or in a well-ventilated place. Store locked up
Disposal	P501	Dispose of contents/ container to an approved waste disposal plant.
Main Hazard	This substance causes severe skin burns and eye damage and is toxic if inhaled.	
Other Hazards	This substance contains gas under pressure and may explode if heated.	

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS


Substance

CAS No	EC No	Name
7446-09-5	231-195-2	Sulphur dioxide
UN Number:	1079	

See Section 8 for Exposure Guidelines and Section 15 for Regulatory Classifications.

SECTION 4. FIRST AID MEASURES

General information	Move the victim out of the danger zone. Position and transport the victim on their side. In case of respiratory distress, bring into a semi-upright, seated position. Remove contaminated clothing immediately and dispose of it safely. Put the victim at rest, cover with a blanket, and keep warm. Do not leave the victim unattended. In case of an accident or if you feel unwell, seek medical advice immediately (show safety data sheet if possible).
In the case of inhalation	Provide fresh air. In case of breathing difficulties administer oxygen. No mouth-to-mouth or mouth-to-nose resuscitation. Use a respiratory bag or oxygen resuscitation apparatus.
In case of eye contact	Rinse immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently, consult an ophthalmologist.
In case of skin contact	Remove contaminated clothing immediately and dispose of it safely. After contact with the skin, wash immediately with plenty of water. In cases of frostbite rinse with ample water. Do not remove clothing.
In case of ingestion	Rinse mouth thoroughly with water. Let water be swallowed in little sips (dilution effect). Do not allow a neutralization agent to be drunk. Do not induce vomiting.
First aid assistant	Pay attention to self-protection! No mouth-to-mouth or mouth-to-nose resuscitation. Use a respiratory bag or oxygen resuscitation apparatus.
Treatment (Advice to doctor)	Symptoms of poisoning may develop several hours following exposure. The victim should be under medical observation for at least 48 hours after exposure. The substance can be absorbed into the body by inhalation. Effects of short-term exposure: <ul style="list-style-type: none"> • Rapid evaporation of the liquid may cause frostbite. The substance is irritating to the eyes and the respiratory tract. • Inhalation may cause asthma-like reactions. Effects of long-term or repeated exposure: <ul style="list-style-type: none"> • Repeated or prolonged inhalation exposure may cause asthma. In case of inhalation: Cough. Shortness of breath. Sore throat. Laboured breathing.

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	In case of skin contact: ON CONTACT WITH LIQUID: FROSTBITE. In case of eye contact: Redness. Pain.
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SECTION 5. FIRE-FIGHTING MEASURES


Suitable extinguishing media	Coordinate fire-fighting measures to the fire surroundings.
Special hazards arising from the substance	In case of fire may be liberated: Sulphur dioxide (SO ₂). Sulphur trioxide.
Special protective equipment for fire-fighters	Wear a self-contained breathing apparatus and chemical protective clothing. In case of fire: use acidproof devices
Further Informative.	<p>PUBLIC SAFETY HAZARD - Warn people nearby to stay indoors with doors and windows closed. Stop any ventilation. Consider evacuation of people in immediate danger. Keep upwind. Put on protective equipment before entering a dangerous area. Minimise the number of personnel in the risk area. Warn people to leave and not to re-enter basements, sewers, or other confined spaces. Keep upwind. Put on protective equipment before entering a dangerous area.</p> <p>Intervention Actions-Fire (involving the substance) - May react in a fire to produce toxic or irritant gases or fumes. Heating of container(s) will cause a pressure rise with risk of bursting and immediate release of expanding toxic and corrosive vapour cloud creating a pressure wave. Contact with liquid will cause frostbite and severe damage to the eyes.</p> <p>May attack metals and produce hydrogen gas which may form an explosive mixture with air. The gas may be invisible and may enter sewers, basements, or confined spaces.</p> <p>Keep container(s) cool with water. Work from a protected position to reduce risk to personnel. Use unmanned monitors or lances. Use water spray to knock down fire fumes if possible. Avoid unnecessary run-off of extinguishing media which may cause pollution.</p>

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Wear personal protection equipment.
Environmental Precautions	Stop leaks if possible. Contain spillage by any means available. Cover drains. Do not allow to enter into soil/subsoil. Do not empty into drains or the aquatic environment.
Methods cleaning up	Evacuate the danger area! Personal protection: complete protective clothing including self-contained breathing apparatus. Consult an expert! Ventilation. NEVER direct the water jet on liquid.

SECTION 7. HANDLING AND STORAGE

Safe Handling Advice	Protective measures: Wear personal protection equipment. Refer to chapter 8. Do not eat, drink, smoke or sneeze at the workplace. Dangerous areas must be delimited and marked with appropriate warning and safety signs. In the immediate working surroundings there must be Emergency spray installed - provide eye wash and label its location conspicuously. provide sufficient washing facilities. Fill only into labelled container. Instruction on the hazards and the protective measures using instruction manual are required with
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Advice on protection against Fire and Explosions. Requirements for storage areas and containers.	<p>a signature. Working areas must be arranged in such a manner that they can be cleaned at all times.</p> <p>Usual measures for fire prevention.</p> <p>Keep the container tightly closed. Keep/Store only in the original container. Protect against: Humidity. UV-radiation/sunlight. Keep away from food, drink, and animal feeding stuff. Storage temperature max. 50 °C</p>
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SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ACGIH	ACGIH OEL STEL [ppm]	0.25 ppm
USA OSHA	OSHA PEL TWA [1]	13 mg/m ³
USA OSHA	OSHA PEL TWA [2]	5 ppm
USA IDLH	IDLH [ppm]	100 ppm
Respiratory protection	When workplace conditions warrant respirator use, follow a respiratory protection program that meets or exceeds the requirements of the appropriate Health and Safety Regulations. Use an air-supplied or air-purifying cartridge if the action level is exceeded. Ensure that the respirator has the appropriate protection factor for the exposure level. If cartridge-type respirators are used, the cartridge must be appropriate for the chemical exposure. For emergencies or instances with unknown exposure levels, use a self-contained breathing apparatus (SCBA).	
Hand protection	Wear cold insulating gloves when transfilling or breaking transfer connections.	
Eye protection	Provide readily accessible eye wash stations and safety showers. Wear safety glasses when handling cylinders; vapor-proof goggles and a face shield during cylinder changeout or whenever contact with the product is possible.	
Skin and body protection	Wear metatarsal shoes and work gloves for cylinder handling, and protective clothing where needed. Wear appropriate chemical gloves during cylinder changeout or wherever contact with the product is possible	
Engineering Controls	Appropriate engineering controls. Engineering methods are preferred to reduce exposure. General methods include mechanical ventilation, process or personal enclosure, and control of process conditions. Administrative controls and personal protective equipment may also be required.	

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Product form Appearance Odour Odour threshold Melting point/freezing point Freezing point Boiling point Flash point Flammability (solid, gas) Vapour pressure Relative vapour density @ 20°C Relative density (liquid) Solubility – water Explosive properties	Liquid Colourless liquefied gas Pungent, choking 0.8 – 8mg/M3 -76°C No data available -10°C Not applicable Not applicable 321kPa @ 20°C 2.3 (air = 1) 1.4 @ 20°C Water soluble Not applicable
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Explosive limits Oxidising properties Molecular mass	Not applicable No data available 64.063
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SECTION 10. STABILITY AND REACTIVITY

Reactivity	The product is non-reactive under recommended conditions of use, storage, and transport
Chemical stability	Stable under recommended conditions of use, storage, and transport
Possibility of hazardous reactions	None under recommended processing conditions
Conditions to avoid	Incompatible products, excess heat, exposure to moist air or water
Incompatible materials	Reacts with halogens, metal nitrates, chlorates, metal oxides, acetylides and hydrides, zinc and its alloys, manganese. Reacts with water. May react violently with alkalis. Reacts with most metals in the presence of moisture-liberating hydrogen, an extremely flammable gas. Reacts with water to form acids, causing rapid corrosion of some metals in wet conditions
Hazardous decomposition products	None known

SECTION 11. TOXICOLOGICAL INFORMATION


Acute toxicity Rat inhalation Skin corrosion/irritation Respiratory or skin sensitization Carcinogenicity Mutagenicity Germ cell mutagenicity Specific target organ toxicity-single exposure Specific target organ toxicity-repeated exposure Reproductive toxicity Aspiration hazard	Toxic if inhaled Inhalation LC50 Rat 1 260ppmV (4 hour) Causes severe skin burns and eye damage Not classified Not classified Not classified Not classified Not classified Not classified Not classified Not classified
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SECTION 12. ECOLOGICAL INFORMATION

General	Harmful to aquatic life. Release of a large amount may cause severe pH changes which damages aqueous ecological systems.
Aquatic toxicity – fish	LC50 fish (Leuciscus idus) 1hr 220 – 480mg/l
Aquatic toxicity – daphnia	EC50 (invertebrates) (Daphnia Magna) 48hr 89mg/l
Aquatic toxicity – algae	EC50 algae 72hr 48mg/l
Biodegradability	Not applicable for inorganic gases
Bioaccumulation	Not applicable for inorganic gases
Mobility	Low mobility

SECTION 13. DISPOSAL CONSIDERATIONS

Waste treatment methods: Dispose of in accordance with local regulations. Do not attempt to dispose of residual or unused quantities.

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Packaging: The disposal of cylinders must only be handled by the gas supplier.

SECTION 14. TRANSPORT INFORMATION

UN Pictogram



Land and inland navigation transport ADR/RID

UN No. 1079, Shipping Name Sulphur Dioxide, 2.3 - Class 2.3 - Poisonous gas

Marine transport IMDG

MDG 1079, Shipping Name Sulphur Dioxide, 2.3 - Class 2.3 - Poisonous gas.

Air transport ICAO/IATA-DGR

ICAO/IATA Code 1079, Class 2.3 & 8

Special precautions for user

The protective measures listed in Sections 6, 7, and 8 of the Safety Data Sheet have to be considered.

SECTION 15. REGULATORY INFORMATION

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

Occupational Health and Safety Act, Hazardous Chemical Agents Regulations

SANS 11014:2010 Edition 1

SANS 10228:2012 Edition 6

SANS 10234:2019 Edition 2

SUPPLEMENT TO SANS 10234 Edition 1

National Road Traffic Act

Dangerous Goods Regulations

SECTION 16. OTHER INFORMATION

SELECTED BIBLIOGRAPHY

1. Data sheets as supplied by various Suppliers and Manufacturers
2. Emergency Response Handbook - Annex A of SABS 0232-3
3. GHS Purple booklet
4. ECHA
5. Occupational Health and Safety Act, Hazardous Chemical Agents Regulations
6. SANS 11014:2010 Edition 1
7. SANS 10228:2012 Edition 6
8. SANS 10234:2019 Edition 2
9. SUPPLEMENT TO SANS 10234 Edition 1
10. National Road Traffic Act
11. Dangerous Goods Regulations

Disclaimer:

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety, and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.