

	SAFETY DATA SHEET	Version: 4 Revision date: 2025-04-24
	SULPHUR HEXAFLUORIDE Compressed	PG-SDS-15


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 Hexafluoride - SF ₆
Chemical Name	Sulphur Hexafluoride
Other means of identification	SF ₆
Recommended Intended Purpose	Industrial. Always use as intended.
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
Hazard Pictograms	<div></div> <div>GHS04</div>		
Signal Word	Warning		
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 P262 P280	Do not handle until all safety precautions have been read and understood. Do not get in eyes, on skin, or on clothing. Wear protective gloves/protective clothing/eye protection/face protection.	
Response	P304 + P340 + P313	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Get medical advice/attention	
Storage	P271 + P403	Use and store only outdoors or in a well-ventilated place.	
Disposal		None	
Main Hazard	Asphyxiant in high concentrations. Contact with liquid may cause cold burns/frostbite		
Flammability	Non-Flammable		
Other Hazards	None		

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SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

CAS No	EC No	Name	%
2551-62-4	219-854-2	Sulphur hexafluoride	100
UN Number:	1080		

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

SECTION 4. FIRST AID MEASURES

In case of eye contact	N/A
In case of skin contact	N/A.
In the case of inhalation	Remove to fresh air. Oxygen or artificial respiration if needed.
In case of ingestion	Ingestion is not considered a potential route of exposure.
Treatment (Advice to doctor)	None

SECTION 5. FIRE-FIGHTING MEASURES

Fire / Explosion hazard:	Non-Flammable
Extinguishing medium:	In case of fire in close proximity, all means of extinguishing are suitable
Special hazards arising from the substance	The container may explode if heated. Heating can release hazardous gases.
Special protective equipment for fire-fighters	Self-contained breathing apparatus, full protective suite. Wear chemical resistant over suit Protect the intervention team with a water spray as they approach the fire. Clean contaminated surfaces thoroughly
Other information	Approach from upwind. Evacuate personnel to safe areas. Keep containers and surroundings cool with water spray. After the fire, proceed rapidly with cleaning surfaces exposed to the fumes in order to limit equipment damage.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Wear self-contained breathing apparatus in medium confinement /insufficient oxygen/in case of large uncontrolled emissions/in all circumstances when the mask and cartridge do not give adequate protection. Use only respiratory protection that conforms to international/ national standards. In the case of vapour formation use a respirator with an approved filter. Approach from upwind. Suppress (knock down) gases/vapours/mists with a water spray jet. Avoid spraying the leak source. Try to re-position leaking containers, to have the leak in the gaseous phase. Vapours are heavier than air and can cause suffocation by reducing oxygen available for breathing. Prevent further leakage or spillage if safe to do so.
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Environmental precautions	Keep away from open flames, hot surfaces and sources of ignition. Keep away from incompatible products
Methods and material for containment and cleaning up	Avoid release into the environment Allow to evaporate - prevent the product from entering drains

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling	Use in the closed system Use only in well-ventilated areas Use only equipment and materials which are compatible with the product. Prevent product vapours decomposition from electric arc action (welding). Prevent product vapours decomposition from contacting hot spots. Keep away from heat sources.
Requirements for storage rooms and vessels	Keep in a cool, well-ventilated place. Keep only in the original container at a temperature not exceeding 40 °C. Store in a receptacle equipped with a vent. Store in an upright position only. Packaging material: Steel drums

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure Limit:

8-h TWA TLV (ACGIH): 1,000 ppm. (American Conference of Governmental Industrial Hygienists.)

Engineering control measures	Provide a local exhaust ventilation system. Ensure compliance with applicable exposure limits.
Personal protection – respiratory	Under conditions of frequent use and heavy exposure, respiratory protection may be needed. Respiratory protection is ranked in order from minimum to maximum. Consider properties before use.
Personal protection – eye/face	For the gas. Eye protection is not required but recommended. For the liquid: Wear splash-resistant safety goggles. Contact lenses should not be worn. Provide an emergency eye wash and quick drench shower in the immediate work area.
Clothing	For the gas. Protective clothing is not required. For the liquid: wear appropriate protective, cold insulating clothing.
Gloves	Wear insulated gloves
Protective Material	Leather
For Unknown Concentrations or Immediate Dangerous to Life or Health	Any supplied-air respirator with a full facepiece that is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained breathing apparatus operated in pressure-demand or other positive-pressure mode. Any self-contained breathing apparatus that has a full-face piece and is operated in a pressure-demand or other positive-pressure mode.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Colourless gas
Colour	Colourless

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Odour Taste pH Melting / Freezing point Boiling point Auto-ignition temperature Decomposition temperature Flammability (solid, gas) Vapour pressure Vapour Density (air = 1) Henry's Law Constant Specific Gravity (water=1) KOW KOC Viscosity Volatility Molecular Weight Sublimation Point Solubility: Water	Odourless Tasteless Not available - 50.5°C 63.9 °C @ 101.3 kPa Not available Not available Not flammable 16548 mmHg @ 20°C 5.1 4.52 1.68 47.867 195 (estimated) 0.0156 cP @ 25 °C 100% 146.06 -63.9 °C Slightly Soluble
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SECTION 10. STABILITY AND REACTIVITY

Stability	Stable under recommended storage conditions. Strong oxidizers, alkali metals and alkaline earth metals may cause fires or explosions. Vapours are heavier than air and may spread along floors. Hazardous Polymerization/Polymerization: no
Conditions to avoid	Heating
Incompatible materials	Oxidizing agents
Hazardous decomposition products.	Sulphur oxides, Sulphur compounds: Thionyl difluoride, Disulfur decafluoride Gaseous hydrogen fluoride (HF).

SECTION 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects	
Acute toxicity: Germ cell mutagenicity: Carcinogenicity: Reproductive toxicity:	Not classified Not classified Not classified Not classified

SECTION 12. ECOLOGICAL INFORMATION

Bioaccumulative potential	Partition coefficient n-octanol/water (Log Pow) 1.68
Mobility in soil	Because of its high volatility, the product is unlikely to cause ground or water pollution
Global warming potential	[CO2=1] : 22200 Contains Fluorinated greenhouse gases covered by the Kyoto Protocol.

SECTION 13. DISPOSAL CONSIDERATIONS

Waste treatment methods: In accordance with local and national regulations. Refer to manufacturer/supplier for information on recovery/recycling.

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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. 1080, Shipping Name Sulphur hexafluoride, Class 2.2, Subsidiary Risk Non-flammable, non-toxic gases, Hazchem Warning 2 Non-flammable Gas.

Marine transport IMDG

MDG 1080, Shipping Name Sulphur hexafluoride, Class 2.2, Subsidiary Risk Non-flammable, non-toxic gases, Label Non-flammable Gas.

Air transport ICAO/IATA-DGR

ICAO/IATA Code 1080, Class 2.2

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.