PUREGAS	SAFETY DATA SHEET	Version: 4 Revision date: 2025-04-25
	Shielding Gases Ar+CO_2 Compressed	PG-SDS-19

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

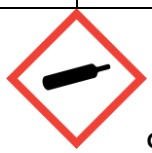
Product name	Shielding Gases
Chemical Name	Ar, CO2
Other means of identification	Gas mixture, Welding Gas
Recommended Intended Purpose	The product is used in various applications and may include – Industrial used. Always use as intended.
Company Information	**Puregas (Pty) Ltd** PO Box 123884, Alrode, 1451, Gauteng, South Africa **Tel:** (011) 903 9760 **Fax:** (011) 903 9766 **Cellphone:** 082 889 6946 (1st) 082 885 7475 (2nd) **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 mixture - 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



GHS04

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 P280	Do not handle until all safety precautions have been read and understood. Wear protective gloves/eye protection/face protection
Response		None
Storage	P403	Store in a well-ventilated place.
Disposal		None
Main Hazard	Contains gas under pressure; may explode if heated.	
Other Hazards	Asphyxiant in high concentrations.	

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

CAS No	EC No	Name	%
124-38-9	204-696-9	Carbon Dioxide	10 to 30

7440-37-1	231-147-0	Argon, Compressed	>60
UN Number:	1956		

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

SECTION 4. FIRST AID MEASURES

In the case of inhalation	Remove the victim to fresh air and keep at rest in a position comfortable for breathing. Simple asphyxiant. Maintain oxygen levels at or above 19.5%.
In case of skin contact	Not an expected route of exposure. Contact with rapidly expanding gas near the point of release may cause frostbite Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes.
In case of eye contact	Not an expected route of exposure. Contact with rapidly expanding gas near the point of release may cause frostbite. Flush eyes with plenty of water for 10 to 15 minutes
In case of ingestion	Not an expected route of exposure
Treatment (Advice to doctor)	High concentrations may cause asphyxia from lack of oxygen or act as a narcotic causing central nervous system depression. Symptoms of overexposure are dizziness, headache, tiredness, nausea, unconsciousness, and cessation of breathing. Oxygen deficiency may occur in the presence of high concentrations resulting in asphyxiation.

SECTION 5. FIRE-FIGHTING MEASURES

Fire / Explosion hazard:	The material will not burn. Pressurized containers may rupture or explode if exposed to heat.
Suitable extinguishing media	In case of fire in the surroundings: use an appropriate extinguishing agent. Use spray water to keep containers cool.
Unsuitable extinguishing media	None Known
Special protective equipment for fire-fighters	Wear full protective firefighting gear including self-contained breathing apparatus (SCBA) as the product is an asphyxiant.
Special hazards arising from the substance	In case of fire: Stop the leak if safe to do so. Continue water spray from a protected position until the container stays cool. Use extinguishers to contain the fire.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Wear personal protective clothing and equipment, see Section 8. No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Avoid breathing gas. Provide adequate ventilation. Wear an appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
Environmental precautions	Keep unnecessary people away, isolate hazard areas, and deny entry. Ensure emergency procedures to deal with accidental gas releases are in place to avoid contamination of the environment. Inform the relevant

	authorities if the product has caused environmental pollution (sewers, waterways, soil, or air).
Methods and material for containment and cleaning up	Immediately contact emergency personnel. Stop leak if without risk. Provide adequate ventilation.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling	Avoid breathing gas. Use only with adequate ventilation Put on appropriate personal protective equipment (see Section 8). Contains gas under pressure. Do not puncture or incinerate the container. Use equipment rated for cylinder pressure. Close the valve after each use and when empty. Protect cylinders from physical damage; do not drag, roll, slide, or drop. Empty containers retain product residue and can be hazardous.
Hygiene	Eating, drinking, and smoking should be prohibited in areas where this material is handled, stored, and processed. Workers should wash their hands and face before eating, drinking, and smoking.
Requirements for storage rooms and vessels	Store and handle in accordance with all current regulations and standards. Protect from sunlight. Store in a well–ventilated area. Keep separated from incompatible substances. Outside or detached storage is preferred. Protect from physical damage. Cylinders should be stored upright with a valve protection cap in place and firmly secured to prevent falling. Keep at temperatures below 52°C / 125°F. Full and empty cylinders should be segregated. Use a "first in first out" inventory system to prevent full cylinders from being stored for excessive periods of time.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

No exposure limits are available

Respiratory protection	Occupational As the mixture is a simple asphyxiant, avoid exposure hazards in any areas where spillage has taken place. Only enter once testing has proved the atmosphere to be safe and remember that the gas is heavier than air. Self-contained breathing apparatus should always be worn when entering an area where oxygen depletion may have occurred.
Hand protection	Glove
Eye protection	Safety goggles
Skin and body protection	Safety shoes or boots should be worn when handling containers.
Engineering Controls	Engineering control measures are preferred to reduce exposure to oxygen-depleted atmospheres. General methods include forced-draft ventilation, separate from other exhaust ventilation systems. Ensure that sufficient fresh air enters at or near floor level.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Colourless liquified gas
Colour	Colourless

Odour	Odourless
Taste	Tasteless
pH	Not available
Melting point	Not available
Boiling point	Not Available
Auto-ignition temperature	Not applicable
Vapour pressure	Permanent gas
Vapour density (air=1)	1.672 @ 20°C
Relative density	1.36 @ 20 °C

SECTION 10. STABILITY AND REACTIVITY

Reactivity	None
Chemical Stability	Stable under normal conditions
Conditions to avoid	The dilution of oxygen concentration in the atmosphere to levels that cannot support life. Never expose the cylinders to excessive heat, as this may cause sufficient build-up of pressure to rupture the cylinders.
Incompatible materials	None known
Hazardous decomposition products.	Will not decompose

SECTION 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute toxicity:	Not classified
Germ cell mutagenicity:	Not classified
Carcinogenicity:	Not classified
Reproductive toxicity:	Not classified

SECTION 12. ECOLOGICAL INFORMATION

No ecological damage was caused by this product.

SECTION 13. DISPOSAL CONSIDERATIONS

Waste treatment methods: Disposal of the gas should only be handled by the gas supplier.
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. 1956, Shipping Name P10, Class 2.2, Subsidiary Risk Non-flammable, non-toxic gases.

Marine transport IMDG
MDG 1956, Shipping Name P10, Class 2.2, Subsidiary Risk Non-flammable, non-toxic gases.

Air transport ICAO/IATA-DGR
ICAO/IATA Code 1956, 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.