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	Argon Bulk & Compressed	PG-SDS-07


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	Argon
Chemical Name	Argon
Other means of identification	Shielding gas, Argon 40, Extendapak Argon, Advance Argon 5.0
Recommended Intended Purpose	The product is used in various applications and may include - Technical processes, the Food Industry, and the Medical Industry. 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
Gases under Pressure (Ref. Liq)		2.2	H281	Contains refrigerated gas, may cause cryogenic burns or injury
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 P280	Do not handle until all safety precautions have been read and understood. 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	P403	Store in a well-ventilated place.		
Disposal		None		
Main Hazard	Contains gas under pressure; may explode if heated.			
Flammability	Non-Flammable			
Health Hazard	nausea, vomiting, tingling sensation, suffocation, coma, headache, drowsiness, dizziness, loss of coordination, unconsciousness, fatigue, impairment of judgment, irregular heartbeat.			

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Other Hazards | Asphyxiant in high concentrations. May cause frostbite or freezing of skin.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

CAS No	EC No	Name
7440-37-1	231-147-0	Argon, Compressed
UN Number:	1006	Compressed
	1951	refrigerated liquid argon

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

SECTION 4. FIRST AID MEASURES


In the case of inhalation	If adverse effects occur, remove them to an uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. Get immediate medical attention
In case of skin contact	Wash exposed skin with soap and water.
In case of eye contact	Flush your eyes with plenty of water.
In case of ingestion	If a large amount is swallowed, get medical attention.
Treatment (Advice to doctor)	For Inhalation, consider oxygen

SECTION 5. FIRE-FIGHTING MEASURES

Fire / Explosion hazard:	Negligible fire hazard. Pressurized containers may rupture or explode if exposed to heat.
Suitable extinguishing media	Use extinguishing agents appropriate for surrounding fire. Use spray water to keep containers cool.
Unsuitable extinguishing media	None Known
Special hazards arising from the substance	Wear full protective firefighting gear including self-contained breathing apparatus (SCBA) for protection against possible exposure.
Special protective equipment for fire-fighters	Move the container from the fire area if it can be without risk. Cool containers with water spray until well after the fire is out. Stay away from the ends of tanks. Withdraw immediately in case of rising sound from the venting safety device or any discoloration of tanks due to fire. For tanks, rail cars, or tank trucks, the evacuation radius: is 800 meters. Use extinguishing agents appropriate for surrounding fire. Cool containers with water spray until well after the fire is out. Apply water from a protected location or from a safe distance. Do not get water directly on the material. Reduce vapors with water spray. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas. Consider downwind evacuation if the material is leaking.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Wear personal protective clothing and equipment, see Section 8.
Environmental precautions	Keep unnecessary people away, isolate hazard areas, and deny entry.
Methods and material for	Avoid release to the environment. Avoid heat. Ventilate closed spaces before

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containment and cleaning up	entering. Damaged cylinders should be handled only by specialists.
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SECTION 7. HANDLING AND STORAGE

Precautions for safe handling	Avoid breathing gas. Use only with adequate ventilation
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.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

No exposure limits available

Respiratory protection	Keep self-contained breathing apparatus readily available for emergency use. In case of rescue and maintenance activities in storage containers use environment-independent breathing apparatus because of the risk of suffocation by edging out of air oxygen
Hand protection	Leather gloves – suitable for freezing conditions
Eye protection	Safety goggles.
Skin and body protection	Safety shoes with steel toes. Long sleeves and pants.
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	None
Molecular Weight	39.948
Molecular Formula	Ar
Melting point	Not applicable
Boiling point	- 186 °C
Freezing point	- 189 °C
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Flammability (solid, gas)	Not applicable
Vapour pressure	500 MMHG@ -190 °C
Vapour density	1.380
Density	1.784 G/L @ 0 °C
Solubility : Water	3.36% @ 20 °C
Viscosity	0.0225 Cp @ 25 °C

SECTION 10. STABILITY AND REACTIVITY

Reactivity	No reactivity hazard other than the effects described in sub-sections below Stable under normal conditions
Chemical Stability	Stable under normal conditions.
Possibility of Hazardous reactions	Do not subject storage containers to rapid heating or excessive temperatures.

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Conditions to avoid	The dilution of oxygen in the atmosphere to levels that cannot support life. Never use cylinders as rollers or supports or for any other purpose than storing argon. Never expose the cylinders to excessive heat, as this may cause a sufficient build-up of pressure to rupture the cylinders
Incompatible materials	Using this product in welding and cutting may create additional hazards. The arc from electric arc welding may form gaseous reaction products such as carbon monoxide and carbon dioxide. Ozone and nitrogen oxides may be formed by the radiation from the arc. Other decomposition products of arc welding and cutting originate from the volatilization, reaction, and oxidization of the material being worked.
Hazardous decomposition products.	None

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:

Small amounts may be blown into the atmosphere under controlled conditions. Large amounts 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. 1006 (compressed argon) and 1951 (refrigerated liquid argon), Shipping Name Argon, Class 2.2, Subsidiary Risk Non-flammable, non-toxic gases, Hazchem Warning 2C Non-flammable Gas.

Marine transport IMDG

MDG 1006 (compressed argon) and 1951 (refrigerated liquid argon), Shipping Name Argon, Class 2.2, Subsidiary Risk Non-flammable, non-toxic gases, Label Non-flammable Gas.

Air transport ICAO/IATA-DGR

ICAO/IATA Code 1006 (compressed argon) and 1951 (refrigerated liquid argon), Class 2.2, Packing Group: - Packaging instructions - Cargo: allowed - Passenger: allowed

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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 to 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.