

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Argon, refrigerated liquid

Chemical formula	Ar
CAS number	7440-37-1
Transport identifier	UN 1951

1.2 Relevant identified uses

Industrial and professional cryogenic uses, including cooling, inerting, laboratory and controlled process applications. Perform a task-specific risk assessment before use.

Uses advised against	Intentional inhalation and any use not supported by a task-specific risk assessment.
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1.3 Supplier

SG TRADING L.L.C-FZ

Address	Meydan Grandstand, 6th Floor, Meydan Road, Nad Al Sheba, Dubai, United Arab Emirates
Telephone	+971 4 422 4811
Email	info@sgtrading.biz
Website	https://www.sgtrading.biz

1.4 Emergency and safety contact (WhatsApp)

+1 832 525 5066, available 07:00–22:00 (UTC+3).

SECTION 2: Hazards identification

2.1. Classification of the hazardous chemical

Classification according to Industry Code of Practice on chemicals classification and hazard communication (2014) Press. Gas (Ref. Liq.) H281

2.2. Label elements

Labelling according to Industry Code of Practice on chemicals classification and hazard communication (2014) Hazard pictograms (GHS MY) :

GHS04

Signal word (GHS MY)	Warning
Hazard statements (GHS MY)	H281 - Contains refrigerated gas; may cause cryogenic burns or injury Precautionary statements (GHS MY)

- Prevention : P282 - Wear cold insulating gloves/face shield/eye protection
- Response : P315 - Get immediate medical advice/attention. P336 - Thaw frosted parts with lukewarm water. Do not rub affected area
- Storage : P403 - Store in a well-ventilated place 0



Gas cylinder

2.3. Other hazards not contributing to the classification

Other hazards which do not result in classification	Asphyxiant in high concentrations.
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SECTION 3: Composition/information on ingredients

3.1. Substances

Name Product identifier %

(Main constituent) (CAS-No.) 7440-37-1 100

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3.2. Mixtures

Not applicable

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures after inhalation	Remove person to fresh air and keep comfortable for breathing. Remove victim to uncontaminated area wearing self contained breathing apparatus. Keep victim warm and rested. Call a doctor. Perform cardiopulmonary resuscitation if breathing stopped.
First-aid measures after skin contact	In case of frostbite spray with water for at least 15 minutes. Apply a sterile dressing. Obtain medical assistance. Wash skin with plenty of water.
First-aid measures after eye contact	Immediately flush eyes thoroughly with water for at least 15 minutes. Rinse eyes with water as a precaution.
First-aid measures after ingestion	Ingestion is not considered a potential route of exposure. Call a poison center or a doctor if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Most important symptoms and effects, both acute and delayed	In high concentrations may cause asphyxiation. Symptoms may include loss of mobility/consciousness. Victim may not be aware of asphyxiation. See section 11.
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4.3. Indication of any immediate medical attention and special treatment needed

Other medical advice or treatment	None.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Water spray or fog. Water spray. Dry powder. Foam.
Unsuitable extinguishing media	Do not use water jet to extinguish.

5.2. Special hazards arising from the substance or mixture

Reactivity	No reactivity hazard other than the effects described in sub-sections below.
Reactivity in case of fire	No reactivity hazard other than the effects described in sub-sections below.

5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting	Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing. Special protective equipment for fire fighters : In confined space use self-contained breathing apparatus. Standard protective clothing and equipment (Self Contained Breathing Apparatus) for fire fighters. Standard EN 137 - Self-contained open-circuit compressed air breathing apparatus with full face mask. Standard EN 469 - Protective clothing for
firefighters. Standard - EN 659	Protective gloves for firefighters.
Specific methods	Use fire control measures appropriate for the surrounding fire. Exposure to fire and heat radiation may cause gas receptacles to rupture. Cool endangered receptacles with water spray jet from a protected position. Prevent water used in emergency cases from entering sewers and drainage systems. If possible, stop flow of product. Use water spray or fog to knock down fire fumes if possible. If leaking do not spray water onto container. Water surrounding area (from protected position) to contain fire. Move containers away from the fire area if this can be done without risk.
EAC code	2T

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	Try to stop release. Evacuate area. Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe. Use protective clothing. Ensure adequate air ventilation. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous. Act in accordance with local emergency plan. Stay upwind. Oxygen detectors should be used when asphyxiating gases may be released.
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6.1.1. For non-emergency personnel

Emergency procedures	Ventilate spillage area.
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6.1.2. For emergency responders

Protective equipment	Do not attempt to take action without suitable protective equipment. For further information refer to
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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	Ensure good ventilation of the work station. Wear personal protective equipment.
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Hygiene measures	Do not eat, drink or smoke when using this product. Always wash hands after handling the product.
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Safe handling of the gas receptacle	Refer to supplier's container handling instructions. Do not allow backfeed into the container. Protect containers from physical damage; do not drag, roll, slide or drop. When moving cylinders, even for short distances, use a cart (trolley, hand truck, etc.) designed to transport cylinders. Leave valve protection caps in place until the container has been secured against either a wall or bench or placed in a container stand and is ready for use. If user experiences any difficulty operating valve discontinue use and contact supplier. Never attempt to repair or modify container valves or safety relief devices. Damaged valves should be reported immediately to the supplier. Keep container valve outlets clean and free from contaminants particularly oil and water. Replace valve outlet caps or plugs and container caps where supplied as soon as container is disconnected from equipment. Close container valve after each use and when empty, even if still connected to equipment. Never attempt to transfer gases from one cylinder/container to another. Never use direct flame or electrical heating devices to raise the pressure of a container. Do not remove or deface labels provided by the supplier for the identification of the content of the container. Suck back of water into the container must be prevented. Open valve slowly to avoid pressure shock.
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Safe use of the product	Do not breathe gas. Avoid release of product into work area. The product must be handled in accordance with good industrial hygiene and safety procedures. Only experienced and properly instructed persons should handle gases under pressure. Consider pressure relief device(s) in gas installations. Ensure the complete gas system was (or is regularly) checked for leaks before use. Do not smoke while handling product. Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Contact your gas supplier if in doubt. Avoid suck back of water, acid and alkalis.
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7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	Store in a well-ventilated place. Keep cool. Conditions for safe storage, including any incompatibilities : Observe all regulations and local requirements regarding storage of containers. Containers should not be stored in conditions likely to encourage corrosion. Container valve guards or caps should be in place. Containers should be stored in the vertical position and properly secured to prevent them from falling over. Stored containers should be periodically checked for general condition and leakage. Keep container below 50°C in a well ventilated place. Store containers in location free from fire risk and away from sources of heat and ignition. Keep away from combustible materials.
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SECTION 8: Exposure controls/personal protection

6.2. Environmental precautions

Avoid release to the environment. Try to stop release. Liquid spillages can cause embrittlement of structural materials.

6.3. Methods and material for containment and cleaning up

Methods and material for
containment and cleaning up

Ventilate area.

SECTION 9: Physical and chemical properties

Physical state	Gas
Appearance	No data available
Colour	Colourless.
Odour	Odourless.
Odour threshold	Odour threshold is subjective and inadequate to warn of overexposure.
pH	Not applicable for gases and gas mixtures.
Melting point, Freezing point	Melting point: -189 °C
Freezing point	-189 °C
Boiling point	-186 °C
Flash point	Not applicable for gases and gas mixtures.
Critical temperature	-122 °C
Auto-ignition temperature	Non flammable.
Decomposition temperature	Not applicable.
Flammability	Non flammable.
Vapour pressure	Vapour pressure: Not applicable.
Vapour pressure at 50°C	Not applicable.
Evaporation rate	Relative evaporation rate (ether=1): Not applicable for gases and gas mixtures.
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Explosive limits	Non flammable.
Lower explosion limit	No data available
Upper explosion limit	No data available
Explosive properties	Not applicable.
Minimum ignition energy	No data available
Solubility	Water: 67.3 mg/l
Density	Relative density: 1.4
Relative density	Relative vapour density at 20°C: Not applicable.
Relative gas density	1.38
Viscosity	Viscosity, dynamic: No reliable data available.
Viscosity, kinematic	1.38No reliable data available.
Critical pressure	4898 kPa
Gas group	Press. Gas (Ref. Liq.) Partition coefficient n-octanol/water (Log Pow) : Not applicable for inorganic products.
Molecular mass	40 g/mol
Oxidising properties	Not applicable.

Additional information

Gas/vapour heavier than air. May accumulate in confined spaces, particularly at or below ground level.

SECTION 10: Stability and reactivity

Chemical stability	Stable under normal conditions.
Conditions to avoid	Avoid moisture in installation systems.
Hazardous decomposition products	None.
Incompatible materials	For additional information on compatibility refer to ISO 11114. Materials such as carbon steel, low alloy carbon steel and plastic become brittle at low temperatures and are subject to failure. Use appropriate materials compatible with the cryogenic conditions present in refrigerated liquefied gas systems.
Possibility of hazardous reactions	None.
Reactivity	No reactivity hazard other than the effects described in sub-sections below.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	Not classified
Acute toxicity (dermal)	Not classified
Acute toxicity (inhalation)	Not classified
Skin corrosion or irritation	Not classified
pH	Not applicable for gases and gas mixtures.
Serious eye damage or eye irritation	Not classified
Respiratory or skin sensitisation	Not classified
Germ cell mutagenicity	Not classified
Carcinogenicity	Not classified
Reproductive toxicity	Not classified Specific target organ toxicity (STOT) – single exposure : Not classified
Specific target organ toxicity (STOT) – repeated exposure	Not classified
Aspiration hazard	Not classified
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SDS_MY - MY000543 i) Argon, Refrigerated Liquid ii) PCC Argon, Refrigerated Liquid (7440-37-1) Viscosity, kinematic (calculated value) (40 °C) No reliable data available.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	No data available. Hazardous to the aquatic environment, short-term (acute) : Not classified Hazardous to the aquatic environment, long-term (chronic) : Not classified
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i) Argon, Refrigerated Liquid ii) PCC Argon, Refrigerated Liquid (7440-37-1) Partition coefficient n-octanol/water (Log Kow) Not applicable for gas mixtures. Partition coefficient n-octanol/water (Log Pow) Not applicable for inorganic products.

12.2. Persistence and degradability

i) Argon, Refrigerated Liquid ii) PCC Argon, Refrigerated Liquid (7440-37-1) Persistence and degradability No data available.

12.3. Bioaccumulative potential

i) Argon, Refrigerated Liquid ii) PCC Argon, Refrigerated Liquid (7440-37-1) Partition coefficient n-octanol/water (Log Pow) See section 12.1 on ecotoxicology Not applicable for inorganic products. Partition coefficient n-octanol/water (Log Kow) See section 12.1 on ecotoxicology Not applicable for gas mixtures. Bioaccumulative potential No data available.

12.4. Mobility in soil

i) Argon, Refrigerated Liquid ii) PCC Argon, Refrigerated Liquid (7440-37-1) Mobility in soil No additional information available
Partition coefficient n-octanol/water (Log Pow) See section 12.1 on ecotoxicology Not applicable for inorganic products. Partition coefficient n-octanol/water (Log Kow) See section 12.1 on ecotoxicology Not applicable for gas mixtures. Ecology - soil Because of its high volatility, the product is unlikely to cause ground or water pollution. Partition into soil is unlikely.

12.5. Other adverse effects

Ozone	Not classified
Effect on global warming	No known effects from this product.
Effect on the ozone layer	None.
Other adverse effects	Can cause frost damage to vegetation.

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods	Dispose of contents/container in accordance with licensed collector's sorting instructions. Do not discharge into any place where its accumulation could be dangerous. May be vented to atmosphere in a well ventilated place. Return unused product in original container to supplier.
Additional information	External treatment and disposal of waste should comply with applicable local and/or national regulations. { Refer to the EIGA code of practice (Doc.30 "Disposal of Gases", downloadable at http://www.eiga.org) for more guidance on suitable disposal methods. Dispose of container via supplier only. Discharge, treatment, or disposal may be subject to national, state, or local laws.
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SECTION 14: Transport information

14.1. UN number

UN-No.(UN RTDG)	1951
UN-No. (IMDG)	1951
UN-No. (IATA)	1951

14.2. Proper Shipping Name

Proper Shipping Name (UN RTDG)	ARGON, REFRIGERATED LIQUID
Proper Shipping Name (IMDG)	ARGON, REFRIGERATED LIQUID
Proper Shipping Name (IATA)	Argon, refrigerated liquid

14.3. Transport hazard class(es)

UN RTDG

Transport hazard class(es) (UN RTDG)	2.2
Danger labels (UN RTDG)	2.2

IMDG

Transport hazard class(es) (IMDG)	2.2
Danger labels (IMDG)	2.2

IATA

Transport hazard class(es) (IATA)	2.2
Danger labels (IATA)	2.2

14.4. Packing group

Packing group (UN RTDG) Not applicable

Packing group (IMDG) Not applicable

Packing group (IATA) Not applicable

14.5. Environmental hazards

Dangerous for the environment No

Marine pollutant No

Other information No supplementary information available

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14.6. Special precautions for user

Special transport precautions 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 there is adequate ventilation, - Ensure that containers are firmly secured, - Ensure valve is closed and not leaking, - Ensure valve outlet cap nut or plug (where provided) is correctly fitted, - Ensure valve protection device (where provided) is correctly fitted.

• UN RTDG

Limited quantities (UN RTDG) 120 ml

Excepted quantities (UN RTDG) E1

Packing instruction (UN RTDG) P203 Portable tank and bulk container special instructions (UN RTDG) : T75 Portable tank and bulk container special provisions (UN RTDG) : TP5

• IMDG

Limited quantities (IMDG) 120 ml

Excepted quantities (IMDG) E1

Packing instructions (IMDG) P203

Tank instructions (IMDG) T75

Tank special provisions (IMDG) TP5

EmS-No. (Fire) F-C - FIRE SCHEDULE Charlie - NON-FLAMMABLE GASES

EmS-No. (Spillage) S-V - SPILLAGE SCHEDULE Victor - GASES (NON-FLAMMABLE, NON-TOXIC)

Stowage category (IMDG) D

Properties and observations (IMDG) Liquefied, inert gas. Heavier than air (1.4).

MFAG-No 120

• IATA

PCA Excepted quantities (IATA) E1

PCA Limited quantities (IATA) Forbidden PCA limited quantity max net quantity (IATA) : Forbidden

PCA packing instructions (IATA) 202

PCA max net quantity (IATA) 50kg

CAO packing instructions (IATA) 202

CAO max net quantity (IATA) 500kg

ERG code (IATA) 2L

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

14.8. 14.8. Hazchem or Emergency Action Code

EAC code 2T.

SECTION 15: Regulatory information

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

Occupational Safety and Health Act 1994 and relevant regulations:

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SDS_MY - MY000543 Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health) Regulations 2000. Environment Quality Act 1974 & regulations: Environment Quality (Clean Air) Regulations 2014. Environmental Quality (Scheduled Wastes) Regulations 2005.

15.2. Chemical safety assessment

SECTION 16: Other information

Version	2.1
Issue date	16/01/2013
Revision date	26/05/2023
Supersedes	05/03/2022
Abbreviations and acronyms	ATE - Acute Toxicity Estimate CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008 REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No EINECS - European Inventory of Existing Commercial Chemical Substances CAS# - Chemical Abstract Service number PPE - Personal Protection Equipment LC50 - Lethal Concentration to 50 % of a test population RMM - Risk Management Measures PBT - Persistent, Bioaccumulative and Toxic vPvB - Very Persistent and Very Bioaccumulative
STOT- SE	Specific Target Organ Toxicity - Single Exposure CSA - Chemical Safety Assessment EN - European Standard UN - United Nations ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road IATA - International Air Transport Association IMDG code - International Maritime Dangerous Goods RID - Regulations concerning the International Carriage of Dangerous Goods by Rail WGK - Water Hazard Class
STOT - RE	Specific Target Organ Toxicity - Repeated Exposure
Training advice	The hazard of asphyxiation is often overlooked and must be stressed during operator training.

This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.