Material Safety Data Sheet

Argon, Liquid

1. MATERIAL IDENTIFICATION AND SUPPLIER

Supplier name: Supagas 2009 limited
Address: 141 Roscommon Road, Manukau, Auckland, New Zealand
Telephone: 09 278 0145
Fax: 09 278 5672
Emergency: 111
Email: **enquiries@supagas.co.nz**
Web Site http://www.supagas.co.nz
Use(s) Shielding gas for welding, gas chromatography, industrial applications, metal refining.
Synonym(s) ARGON, Liquid
MSDS Date 15 June 2010

2. HAZARDS IDENTIFICATION

CLASSIFIED AS HAZARDOUS ACCORDING TO THE CRITERIA IN THE HS (MIN DEG OF HAZARD) REGS 2001

HAZARD CLASSIFICATION
Hazardous

SUBSIDIARY RISK
Contains refrigerated gas, may cause cryogenic burns or injury.

CLASSIFIED AS A DANGEROUS GOOD ACCORDING TO NZS 5433
UN No. 1951

Pkg Group: None Allocated

DG Class: 2.2

Hazchem Code: 2RE

Hazard Risk(s): Ruptured cylinders may rocket.

3. COMPOSITION

Ingredients	Formula	CAS no.	Content
Argon	Ar	7440-37-1	100%

4. FIRST AID MEASURES

Eye	Immediately flush eyes thoroughly with unheated tap water for at least 15 minutes. Obtain medical assistance.
Skin	Cold burns, remove contaminated clothing and gently flush affected areas with warm water (30ºc) for 15 minutes. Apply sterile dressing and treat as for a thermal burn. For large burns, immerse in warm water for 15 minutes. DO NOT apply any form of direct heat. Seek immediate medical attention.
Inhalation	In high concentration may cause asphyxiation. Symptoms may include loss of mobility/consciousness. Remove victim to uncontaminated area whilst wearing self contained breathing apparatus. Victim may not be aware of asphyxiation. Keep victim warm and rested. Call a doctor. Apply artificial respiration if breathing stopped. Continued treatment should be symptomatic and supportive.
Ingestion	Ingestion is considered unlikely. However, should ingestion occur, contact a Poison Information Centre on 0800764 766 (0800 POISON) or +643 479 7248 or a doctor.
Advice to Doctor	Advise the doctor that the victim has been exposed to an oxygen deficient atmosphere and has received cryogenic burns. Treat symptomatically.

5. FIRE FIGHTING MEASURES

Fire and Explosion

Non flammable gas. Temperatures in a fire may cause tank to rupture/explode. Call fire brigade. Do not approach tank suspected to be hot. Large quantities of argon may be released upon rupture which will serve to extinguish the fire.

Extinguishing

Non flammable. Use appropriate media to extinguish source of surrounding fire.

Flammability

Non flammable

Hazchem Code 2RE

6. ACCIDENTAL RELEASE MEASURES

Spillage: Release of liquid to atmosphere will generate vapour fog clouds which can travel considerable distances and affect visibility. These clouds should be treated as asphyxiating atmospheres as the evaporated liquid will have displaced air. Refer to vessel operating instructions. In an emergency allow liquid and gas to escape to atmosphere. Monitor oxygen levels in confined areas. Contact manufacturer for guidance. Leak checking may be done by pressure drop test or soapy water at joints and outlets. Shut liquid and gas supply valves to stop leak if possible and safe to do so.

Personal protection: Wear safety footwear, splash proof goggles and leather or insulated gloves, a faceshield is recommended in cases where splashing may occur. Full cover overalls are recommended. All personal protective equipment must be free from oil and grease. In areas where high exposure of argon ensure you have adequate ventilation and have correct respiratory equipment on hand.

7. STORAGE AND HANDLING

Storage
Do not store near sources of ignition or incompatible materials. Portable liquid Container should be stored below 45ºc in a secure area and upright to prevent from falling. Portable Liquid containers should also be stored in a dry, well ventilated area constructed of non-combustible material with firm level floor (preferably concrete) away from areas of heavy traffic and emergency exits.

Handling
Before use read the product label. Use of safe work practices are recommended to avoid eye or skin contact and inhalation. Only experienced and properly instructed personnel should handle Bulk liquid gases, should you need instruction please contact Supagas immediately.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Standards	Argon is a simple asphyxiant. Liquid argon is extremely cold and can cause cold burns.
Engineering Controls	Provide suitable extraction and ventilation for the influenced areas, oxygen levels should not be less than 19%. Cryogenic liquids embrittle many materials on contact. Thermal insulation of components in direct contact with liquid argon.
Personal Protection Equipment	Wear safety glasses, leather gloves and safety boots. Where an inhalation risk is evident wear the correct respiratory gear.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Colourless/Tasteless Liquid	**Solubility (Water) :** 0.054 m3/kg
Odour: odourless	**Specific gravity:** Not Available
PH: Not Available	**% Volatiles :** Not available
Vapour pressure: Not Available	**Flammability:** Non Flammable
Vapour Density: Not Available	**Flash point:** Not Relevant
Boiling point: -185.9°C	**Upper explosion limit:** Not Relevant
Melting point: not available	**Lower explosion limit:** not Relevant
Evaporation rate; not available	**Autoignition Temperature:** not available
Critical Temperature: -122.29°C	**Density:** 1393 kg/m3

10. STABILITY AND REACTIVITY

Reactivity
Incompatible with oxidising agents, acids, heat and ignition sources. Do not use natural rubber flexible hoses. Also incompatible with oxygen, halogens and metal halides. Hazardous by products may be produced when this gas/gas mixture is used in welding, cutting and associated processes.

Decomposition Products
May evolve toxic gases if heated to decompose structural materials.

11. TOXICOLOGICAL INFORMATION

Health Hazard

Summary

Asphyxiant gas. Symptoms of exposure are directly related to displacement of oxygen from air. As the influence of the gas is increased and oxygen levels begin to diminish the pulse rate will accelerate and the rate of breathing will increase. The ability to maintain attention and think clearly is diminished, muscular co-ordination is disturbed. As the exposure is increased and oxygen is decreased poor judgement becomes evident and severe injuries may occur, the ability to feel pain will be lost. Further reduction may cause nausea and vomiting. Below 10 % oxygen levels may cause death.

Eye

Non irritating.

Inhalation

Non-irritant – Asphyxiant. Effects are proportional to oxygen displacement.

Skin

Non irritating, however contact may result in frost bite with sever tissue damage.

Ingestion

Due to product form, ingestion is considered highly unlikely.

Toxicity Data

No LD50 data available for this product.

12. ECOLOGICAL INFORMATION

Environment

Atmospheric gas, Argon is an inert gas and will not contribute to ozone depletion or global warming. Argon is a natural component of the atmosphere. If released to Soil or water argon will immediately begin evaporating to the atmosphere. Not toxic to plants or animals except at extremely high levels. Fumes from the welding process which use this gas/gas mixture may be harmful to the environment. Argon in high concentration can cause frost damage to vegetation.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Do not discharge into any place where it is accumulation could be dangerous, contact the supplier to dispose of the contents.

Legislation Dispose of in accordance with relevant local legislation.

14. TRANSPORT INFORMATION

Transport

Transport on open top vehicles in accordance with local legislation.

CLASSIFIED AS A DANGEROUS GOOD ACCORDING TO NZS 5433

Shipping Name :Argon, Refrigerated liquid

UN No. 1951	**DG Class: 2.2**	**Subsidiary Risk(s): None Allocated**
Pkg Group: None Allocated	**Hazchem Code: 2T**	**EPG:None allocated**

15. REGULATORY INFORMATION

Group Name: Argon

Approved Fillers are required for the transfer of liquid to other storage containers. It is not necessary to be a approved handler, Compressed Gases (Non-hazardous) Group Standard 2006

The ”HASNO” act 1996 and hazardous substances (compressed gases) regulations 2004

16. OTHER INFORMATION

Additional Information

ABBREVIATIONS:

mg/m3 - Milligrams per cubic metre
ppm - Parts Per Million
TWA/ES - Time Weighted Average or Exposure Standard.
CNS - Central Nervous System
NOS - Not Otherwise Specified
pH - relates to hydrogen ion concentration - this value will relate to a scale of 0 - 14, where 0 is highly acidic and 14 is highly alkaline.
CAS# - Chemical Abstract Service number - used to uniquely identify chemical compounds.
M - moles per litre, a unit of concentration.
IARC - International Agency for Research on Cancer.
HSNO –Hazardous substances and new organisms act 1996.

PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:
The recommendation for protective equipment contained within this report is provided as a guide only. Factors such as method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment is made.

HEALTH EFFECTS FROM EXPOSURE:
It should be noted that the effects from exposure to this product will depend on several factors including: frequency and duration of use; quantity used; effectiveness of control measures; protective equipment used and method of application. Given that it is impractical to prepare a report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

This MSDS summarises to our best knowledge, at the date of issue, the health and safety hazard information regarding this product and general guidance on how to safely handle

the product in the workplace. All due care has been taken to include accurate and up-to-date information in this MSDS.
Each user should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace in conjunction with other products. If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact Supagas 2009 Ltd. As far as lawfully possible, no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this MSDS can be accepted. Our responsibility for products sold is subject to our standard terms and conditions, a copy of which is available on request. This MSDS has been prepared in accordance with NZCIC Code of Practice – Preparation of Safety Data Sheets. This MSDS is subject to change without notice, for the latest version of this MSDS visit www.supagas.co.nz

Reviewed 9 June 2010.